

24 March 2011, Thursday / 13:30-15:00 Surgical Solutions in Arrhythmia Challenges - Oral Presentations

OP-006 TISSUE DOPPLER ECHOCARDIOGRAPHY IN CLINICAL PRACTICE

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OBJECTIVE: Tissue Doppler echocardiography, since its introduction more than 2 decades ago, had revolutionized echocardiography. In the quest to directly quantify myocardial function, increase sensitivity to detect early subtle myocardial dysfunction and improve ease of use, tissue Doppler echocardiography has evolved from pulsed wave tissue Doppler, to color-coded tissue Doppler and to 2-dimensional (2D) speckle tracking, and from myocardial velocity to strain/strain rate imaging.

METHODS: Over the years, numerous studies have demonstrated the value of tissue Doppler echocardiography in the diagnosis and risk stratification of a wide range of cardiac diseases. However, each generational change in tissue Doppler echocardiography involves technological software advancements that are not directly comparable to previous generations. To extensively present the technical differences between tissue Doppler imaging and speckle tracking analyses, and to review the clinical implications of myocardial velocity, strain and strain rate imaging by Tissue Doppler versus speckle tracking, is well beyond the scope of the present article. Thus, the aim of the present review is to focus on Tissue Doppler imaging, from basic physical principles and technical limitations, to differences in myocardial velocity, strain and strain rate imaging in healthy and diseased states, and finally the prognostic value of Tissue Doppler deformation imaging in predicting adverse cardiac outcomes.

RESULTS: The latest generation of myocardial deformation imaging by 2D speckle tracking is significantly easier to use compared to TDI. Future studies confirming the long term prognostic value of myocardial deformation imaging in all types of cardiac diseases will surely narrow the gap between research application and routine clinical practice for myocardial deformation imaging.

CONCLUSIONS: Tissue Doppler echocardiography has undergone significant changes over the years, from pulsed wave Doppler to color-coded TDI, and from velocity to more site-specific strain and strain rate imaging. It has been applied to various clinical scenarios for the diagnosis and prognosis of cardiac patients.

24 March 2011, Thursday / 13:30-15:00 Hyperlipidemia and Atherosclerosis: From Patophysiology to Risk Assessment - Oral Presentations

OP-022 RESISTANCE TO ASPIRIN AND CLOPIDOGREL THERAPY IN PATIENTS WITH PERIPHERAL ARTERIAL DISEASE

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OBJECTIVE: Although clopidogrel and Acetyl salicylic acid (aspirin) reduce the risk of cardiovascular episodes after coronary events and stenting, a substantial number of incidents continue to occur. In peripheral arterial disease (PAD), responsiveness to clopidogrel and aspirin may play a role in recurrent stenotic events.

METHODS: The antiplatelet effects of clopidogrel and aspirin were studied prospectively in 65 consecutive patients who underwent primary angioplasty, surgery or conservative drug therapy to determine whether there is a variability in response to clopidogrel and aspirin in patients with PAD. Patients were stratified into two groups, based on anti-platelet medication. 34 patients received only aspirin and the remaining were on clopidogrel treatment. Following 5 day treatment with mentioned drugs, blood samples were collected on the 2nd hour of last doses in order to determine the effectiveness of drugs with VerifyNow system which measures platelet function by the rate and extent of light changes in whole blood as platelets aggregate over time in response to agonists that are specific to various antiplatelet medications. Aspirin reaction unit (ARU) and P2Y12 reaction unit (PRU) were studied in addition to percentage inhibition (% inhibition).

RESULTS: Aspirin responsiveness was found as 8.8 % in aspirin group whereas, clopidogrel resistance was 22.6% in clopidogrel patients. Increasing drug doses did not effect the response.

CONCLUSIONS: Anti-platelet therapy resistance measurements became clinically useful for risk stratification. These tests should be easily performed and reproducible to measure platelet aggregation, with standardized definitions of response that correlate with clinical outcomes. As we learn more about the variable response to antiplatelet drugs, will the time soon come for us to think of antiplatelet agents like antibiotics, tailoring therapy when resistance is observed in the laboratory.

OP-023 EFFECT OF PREOPERATIVE STATIN ON ANTICARDIOLIPIN ANTIBODY LEVELS IN CORONARY BYPASS SURGERY

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OBJECTIVE: Myocardial damage during open heart surgery is a multifactorial phenomenon. Direct contact between blood and non-endothelial surfaces of cardiopulmonary bypass machine, activation of

plasma-protein system and activation of inflammatory cell systems all lead to potent defence reactions. Such inflammatory response may affect every tissue and organ in human body. Despite the attenuation of inflammatory response in Off-pump coronary artery surgery but factors like surgical trauma and ischemia-reperfusion damage may stand for the myocardial damage. Recently, many researches confirmed the effect of preoperative statin usage on the reduction of peri- and postoperative morbidity and mortality of open heart surgery. Our study concentrate on the effect of statin on the postoperative levels of anticardiolipin antibody as an indicator of oxidative damage.

METHODS: 30 patients were divided into two equal groups. Group A included those patients who used Atorvastatin (40 mg/day) for at least one week before operation, and the patients who did not use statins were arranged in group B. There were no difference in the standards of the surgical procedures. For tests of IgG and IgM anticardiolipin antibody levels, the blood samples were taken in the preoperative, just after cardiopulmonary pump, postoperative 24., 72. hours and 5. postoperative day. Statistical evaluation performed using SPSS 12.0 computer program.

RESULTS: There were no demographic difference between group A and B. In the other hand, there were no significant difference in LDL mean levels between group A and B. IgG and IgM anticardiolipin antibody levels were found to be significantly lower in group A patients in samples taken during preoperative and cardiopulmonary pump period. In both groups, the IgG and IgM anticardiolipin antibody levels during cardiopulmonary pump and postoperative periods were significantly higher than that of preoperative period.

CONCLUSIONS: The results revealed that statins have oxidative damage attenuating effects beside the cholesterol lowering effect. Accordingly, statins considered one of the medical protective measures in open heart surgery.

OP-024 OFF-PUMP CORONARY ARTERY BYPASS SURGERY VERSUS NONPULSATILE OR PULSATILE CARDIOPULMONARY BYPASS: INFLAMMATORY RESPONSE AND CENTRAL NERVE SYSTEM

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OBJECTIVE: Inflammatory response in cardiopulmonary bypass (CPB) is started with heparinized blood to deal with nonendothelial surfaces. In previous study was shown that CPB was induced inflammatory and increased morbidity. The best of method for decreasing inflammatory response coronary artery bypass grafting (CABG) operation should be off pump. In this study we aimed that compared with the effects of off-pump CABG (OPCABG), pulsatile cardiopulmonary bypass (PCPB), non-pulsatile cardiopulmonary bypass (NPCPB) on the inflammatory response and central nerve system.

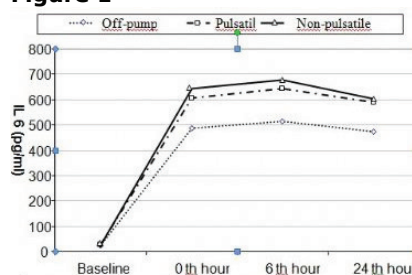
METHODS: Thirty two patients that were undergone elective CABG were incorporated the study. The

patients were arranged in groups according to using perfusion technique during CPB. The groups are following that off-pump CABG (n=10), pulsatile CPB (n=11) and non-pulsatile CPB (n=11). The blood samples were collected for preoperative and postoperative levels of 0, 6 and 24 th hour interleukin-6 (IL-6), interleukin-8 (IL-8), tumor necrosis factor - alpha (TNF- α) and S100 beta (S100 β).

RESULTS: The plasma postoperative levels of IL-6 and IL-8 were lower in OPCABG than the other groups ($p < 0.05$) (figure 1-2). There were no statistically significant difference in levels of TNF- α between the groups. S100 β 's postoperative level which is indicator of cerebral injury was lower in OPCABG than the other groups ($p < 0.05$) (figure 3).

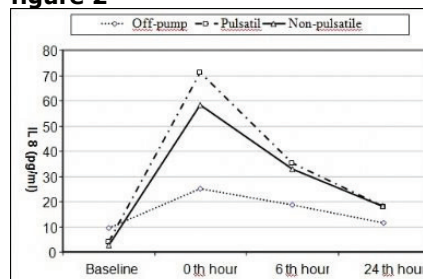
CONCLUSIONS: In our study we established that the negative effects of off-pump CABG the inflammatory response and central nerve system were lower than pulsatile CPB and non-pulsatile CPB.

Figure 1



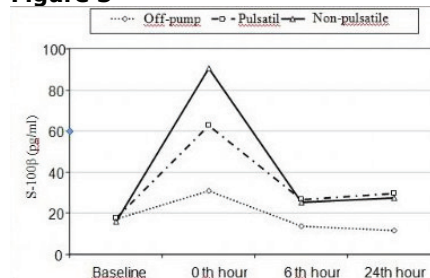
The plasma levels of IL-6 of off-pump, pulsatile ve non-pulsatile CABG groups

figure 2



The plasma levels of IL-8 of off-pump, pulsatile ve non-pulsatile CABG groups

Figure 3



The plasma levels of S-100 β of off-pump, pulsatile ve non-pulsatile CABG groups

OP-030 THE EFFECT OF ANGIOTENSIN-CONVERTING ENZYME INHIBITOR THERAPY ON MORTALITY AND MORBIDITY IN PATIENTS UNDERGOING CORONARY ARTERY BYPASS GRAFTING SURGERY

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OBJECTIVE: The aim of this study is to evaluate the effects of angiotensin-converting enzyme inhibitor (ACEI) therapy on mortality and morbidity in patients undergoing coronary artery bypass grafting operation.

METHODS: We surveyed the files of 400 patients undergoing coronary artery bypass grafting (CABG) surgery between November 2004- June 2010 in our clinic. The age, gender, body mass index, smoking habits, hypertension, diabetes mellitus (DM), hyperlipidemia, preoperative atrial fibrillation, preoperative myocardial infarction (within 90 days), nearly myocardial infarction (last 7 days), ejection fraction, chronic obstructive pulmonary disease (COPD), functional classification of New York Heart Association (NYHA) class 3-4, unstable angina pectoris, postoperative intraaortic balloon pump contrpulsation, postoperative use of inotropic agents, postoperative ventricular tachycardia/fibrillation and postoperative major events were recorded. The patients seperated into two groups according to ACEI use. Patient's data was collected and statistically assessed.

RESULTS: As 42 women and 101 men, totally 143 patients included in the study. There were 65 cases that mean aged 59.8 ± 8.86 years in non-user group and 78 cases that mean aged 58.15 ± 8.59 years in ACEI user group. When preoperative specialties of the groups were evaluated; there were no statistically significant difference for DM, hyperlipidemia, smoking habits, preoperative and nearly MI, COPD and NYHA classification between the groups ($p>0.05$). Hypertension and unstable angina pectoris frequency was statistically significant high in ACEI group ($p>0.05$). When postoperative complications and mortality were evaluted, there was no statistically significant difference among the groups ($p>0.05$). But postoperative major events was higher in ACEI groups than non-users ($p=0.007$). It was found that the duration of stay in intensive care unit was long in 50% of the patients in ACEI group. There was a statistically significant difference for duration of intensive care units among the groups ($p=0.012$).

CONCLUSIONS: There was no statistically significant difference for mortality and morbidity between ACEI used or non-used groups. But, preoperative therapy with ACEI is associated with a prolonged stay in the intensive care units.

**24 March 2011, Thursday / 17:00-18:30
Systemic and Pulmonary Hypertension:
Diagnostic and Therapeutic
Perspectives - Oral Presentations**

OP-056 INHALED ILOPROST TREATMENT OF PULMONARY ARTERIAL HYPERTENSION BEFORE AND AFTER THE SURGICAL REPAIR OF VENTRICULAR SEPTAL DEFECT IN CHILDREN

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OBJECTIVE: The functional and structural status of the pulmonary vascular bed plays a pivotal role in the presentation and outcome of the child with congenital heart disease. Pulmonary arterial hypertension can lead to significant cardiac dysfunction and is considered to be associated with an increased risk of perioperative cardiovascular complications.

METHODS: In this clinical study, 16 children with ventricular septal defect and pulmonary hypertension who had a positive vasoreactivity response in the cardiac catheterization laboratory were administered inhaled iloprost prior to surgical repair and after the operation. We assessed pulmonary vasoreactivity in children with severe PH secondary to congenital heart disease. 16 children aged between 8 months and 17 years (mean 5.1 years) with long-standing and severe PH were studied. The arithmetical mean of systolic and mean PAP at the first presentation were 80 and 58 mm Hg respectively (ranged from 51 to 124 mm Hg for SPAP and ranged from 33 to 89 mm Hg for mean PAP). Inhaled iloprost were administered for a duration ranging between 7 to 90 days (mean 36 days) prior to surgery. We measured the mean PAP just before the surgery and kept on administering inhaled iloprost for 3 days postoperatively and evaluated PH with echocardiography again.

RESULTS: According to the echocardiographic findings, all children had a positive response, resulting in a decrease of 10 mm Hg (ranging between 6 to 32 mm Hg) preoperatively and 32 mm Hg (ranging between 10 to 45 mm Hg) of mean pulmonary arterial pressure after the surgery. There were 2 deaths perioperatively. The other patients recovered well and were discharged from the hospital.

CONCLUSIONS: Inhaled iloprost induced pulmonary vasodilator response varies among children. The use of inhaled iloprost prior to surgical repair and after the operation assures a reduction in pulmonary arterial pressure and thus cardiovascular complications.

OP-059 PULMONARY EMBOLCTOMY IN ORTHOPEDICS THEATRE

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OBJECTIVE: The aim of this presentation is to share our experience of an acute pulmonary embolctomy of a patient who underwent orthopedic surgery for femoral fracture and to indicate the necessity of echocardiography for PE under emergent conditions.

METHODS: A 59 year-old man underwent intramedullary nail fixation for a proximal femoral fracture under spinal anesthesia. He developed acute respiratory distress and cardiac fibrillation just after nailing the femoral bone. He was intubated and CPR was performed. After 5 sequences of cardiac fibrillation he was referred to cardiac surgery. The diagnosis of pulmonary embolism was thought and the patient was decided to have a CT scan. As the patients status was devastated with a sixth fibrillation attack he was resuscitated and an emergent echocardiography was performed. The echocardiography revealed dilatation of right sided heart chambers and free floating thrombi in the right ventricle just beneath the tricuspid valve. Heart-lung machine was transported to the orthopedics room and set for cardiopulmonary bypass. After sternotomy, aortic and bi-caval cannulations were accomplished for cardiopulmonary bypass. After cross-clamping of aorta and cardiac arrest with cold-blood cardioplegia, a longitudinal pulmonary arteriotomy was carried out. Clots were removed from the pulmonary artery by curved forceps and suction. Both pleural cavities were opened, the lungs massaged and milked from periphery to hilus and small clots coming from the periphery were sucked out from the pulmonary artery. The pulmonary arteriotomy was closed, the heart defibrillated, and the patient was weaned off bypass gradually.

RESULTS: The patient was weaned off bypass without inotropic support. The early postoperative period was uneventful. But the patient didn't wake up. Brain CT scans showed diffuse cerebral infarct areas due to hypoperfusion. Patient died 43 days after surgery.

CONCLUSIONS: A possibility of PE should be kept in mind in order not to underestimate the diagnosis, particularly in patients with predisposing factors and sudden hemodynamic deterioration. As the hemodynamic status of patient gets worse emergent pulmonary embolctomy should be performed. For the patients in an emergent status and poor condition transthoracic echocardiography can give valuable information for a possible PE.

25 March 2011, Friday / 15:30-17:00 Novel Solutions for Cardiovascular Medicine - Oral Presentations

OP-060 ONE YEAR EXPERIENCE WITH THE JETSTREAM™ PATHWAY DEVICE FOR FEMORO- POPLITEAL DISEASE

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OBJECTIVE: To report safety and efficacy of Jetstream™ Pathway rotational atherectomy/thrombectomy device for the treatment of femoro-popliteal arterial lesions with special emphasis on rate of re-intervention and intervention free period.

METHODS: Duration of study is from Mar 2008 to Nov 2009 (21Months). Total numbers of patients is 86. Males are 55(64%) & Females are 31(36%). Age range is 36 to 87 Years. All patients underwent Pathway Atherectomy during this time period regardless of their previous status were included. Re intervention in the same limb after atherectomy was endpoint of the study.

RESULTS: TLR (Target Lesion Revascularization) was 15% in patients during follow up period. Re intervention was more common in first 3 months after first intervention. It was more common in TASC II type B lesions and mostly managed by Balloon Angioplasty.

CONCLUSIONS: The JetStream™ Pathway device with thrombectomy and aspiration capabilities has added advantages to femoro-popliteal atherectomy. Adjunctive stenting remains very low in this difficult segment. Long term follow up will definitely be needed for durability and patency.

OP-065 25 March 2011, Friday / 15:30-17:00 ENDOVENOUS LASER TREATMENT (ELT) OF LESSER SAPHENOUS VEIN: OUR EXPERIENCE

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²Department of Vascular Surgery, Carmona Clinic, Messina, Italy

OBJECTIVE: In recent years, endovenous laser treatment (ELT) has been proposed to treat incompetent great saphenous veins (GSV). This study reports the safety and clinical and anatomic effectiveness of ELT for treating lesser saphenous veins (LSV).

METHODS: Since September 2007 to September 2010, ELT procedures have been performed for incompetent LSV segments in 342 patients (298 women, 44 men) with a mean age of 57 years (range, 19 to 81 years) were treated with intraluminal ELT using a 980-nm diode laser LASEmaR1000-Eufoton, Italy) by a kit that includes optical fibers of 600 micron (KIT INVE, Eufoton, Italy). The LSV diameter was measured by Duplex examination in an upright position in two LSV segments (1.5 cm below the saphenopopliteal junction and sural segment). These measurements were used to determine the optimal linear endovenous energy density (LEED) for treatment.

Patients were evaluated clinically and by duplex scanning at 1 and 8 days, 1-3 and 8 months, and at 1 year to assess treatment efficacy and adverse reactions.

RESULTS: A total of 342 LSVs were treated. The mean diameter was 6.5 mm (range, 4.0 to 10.0). The LEED was tuned as a function of the initial LSV diameter measured in the orthostatic position, from 80 J/cm (4.0 mm) up to 140 J/cm (10 mm). At the 1-week follow-up, 11.4% of the patients reported moderate pain. In the immediate postoperative period, the closure rate was 99.9% and remained constant during the 1-year follow-up (86% of all patients) to reach 99.0%. After 1 year, a complete disappearance of the LSV or minimal residual fibrous cord was noted. Major complications have not been detected; in particular, no deep venous thrombosis. Ecchymoses were seen in 26%, transitory paresthesia was observed in 2%. No nerve injury have not been occurred. There was no dyschromia, superficial burns, thrombophlebitis, or palpable indurations. Complementary phlebectomy was done in 89% of patients. No failures occurred.

CONCLUSIONS: ELT of the incompetent LSV with a 980-nm diode laser appears to be an extremely safe technique, particularly when the energy applied is calculated as a function of the LSV diameter. It is associated with only minor effects. Currently, ELT has become the method of choice for treating superficial veins and has almost replaced the treatment of traditional ligation and stripping.

OP-066 ANTOLOGUS BONE MARROW-DERIVED STEM CELL TRANSFER IN PATIENTS WITH CRITICAL LEG ISCHEMIA

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OBJECTIVE: The injection of bone marrow mononuclear cells (BMMC) into the gastrocnemius muscle has given promising results in patients with critical limb ischemia (CLI). In this article, we have assessed whether a less invasive procedure, i.e. intravascular BMMC infusion, could be effective in this population of patients.

METHODS: A total of 28 limbs in 24 patients with CLI were treated. An amount of 276-700 mL of marrow blood was harvested from posterior iliac crests and BMMC were obtained by standard procedure used for bone marrow transplantation. After performance of digital subtraction angiography, BMMC were injected laterally through a 4 Fr sheath. Primary outcome was efficacy of the procedure, angiographic changes and changes in quality of life.

RESULTS: One year after treatment, all patients were alive and only 2 patients have undergone high amputation. Eleven of 14 defects have healed (78%) and Fontaine grade of ischemia has ranged from median grade 3.5 to median grade 2 ($P < 0.0001$). collateral vessel development has improved by mean 1.13 and 1.3 points on a four-point semiquantitative scale in calf and foot, respectively ($P < 0.0001$). There were no grade III-IV adverse events. According to

the SF-36 quality of life questionnaire, 1 year after the procedure patients have reported significant improvement in all measured items.

CONCLUSIONS: Intra-arterial infusion of BMMC can lead to significant and long-lasting subjective and objective improvements in patients with CLI. The results merit validation by randomized controlled studies in patients with less critical limb ischemia.

25 March 2011, Friday / 17:00-18:30 Nursing Course - Oral Presentations

OP-068 COMPARISON OF DIFFERENT OXYGEN DELIVERY METHODS AFTER CARDIAC SURGERY

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OBJECTIVE: In the postoperative period after cardiac surgery, there are two methods for oxygen delivery after recent extubation. The aim of this study is to compare the different oxygen delivery methods after open heart surgery.

METHODS: Forty patients who underwent cardiac surgery consecutively, were enrolled to the study. The patients with any history of pulmonary disease were excluded from the study. The patients divided into two groups. In the Group A ($n = 24$) oxygen delivery was achieved by facemask whereas in the Group B ($n = 16$) it was delivered by nasal prongs after extubation. 4L/minute of oxygen was given to all patients. The blood gas samples in the 1., 3., and 6. hours after extubation were recorded and evaluated for changes in respiratory parameters.

RESULTS: The data were analyzed using univariate analysis. There weren't any significant difference between the two groups ($p > 0.05$).

CONCLUSIONS: We concluded that after cardiac surgery there was no difference between two oxygen delivery methods by the means of respiratory parameters in the blood gas samples.

OP-071 THE TEAMWORK ASSESSMENT: A SINGLE CENTER COMMENT

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¹Department of Cardiovascular Surgery, Ankara University, Ankara, Turkey

OBJECTIVE: Cardiac surgery is one of the complicated divisions of surgery and teamwork is the mainstay of success. We aimed to evaluate the efficacy of the teamwork in a tertiary hospital.

METHODS: The Safety Attitudes Questionnaire was used for evaluating the quality of collaborations and connections between physician, nurse and perfusionists in the operation theatre. All the questionnaires were filled by attending primary surgeon, assistant surgeon, surgical nurse and perfusionists. The data were assessed regarding to

the answers of the same team (Group A, n=12) or answers of an interchanging team (Group B, n=27).

RESULTS: The questionnaire was filled by teams in a total of 39 cases. In the group A, the questionnaire was filled in 12 cases, and in 10 cases the communication and collaboration scale were "very high" for the nurses whereas in the Group B it was "high" for 14 cases ($p<0.05$). It was "very high" in 12 cases in the Group A whereas "high" in 23 cases in the Group B for the perfusionists ($p<0.05$). For the primary surgeon there was significant difference between the two groups in the collaboration and communication between the other healthcare providers ($p<0.05$).

CONCLUSIONS: We concluded that working with the same team increases the quality of communication and collaboration between all steps of the healthcare providers in operation theatre.

25 March 2011, Friday / 08:30-10:00 Arteriovenous Fistulas: Problems, Solutions - Oral Presentations

OP-072 THE EFFECTS OF COMORBIDITIES ON THE FUNCTION OF ARTERIOVENOUS FISTULAS PERFORMED ON PATIENTS WITH CHRONIC RENAL FAILURE (CRF)

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OBJECTIVE: The objective of this study was to evaluate the function of arteriovenous fistulas performed on patients with CRF via objectively taken flow measurements (ml/min) and reveal the effects of comorbidities on flow levels.

METHODS: Considering their comorbidities, 72 patients with CRF were taken into arteriovenous fistula operations. In order to assess the patency rates in the postoperative period, fistula flows were measured at weeks 2 and 4 as well as at months 3 and 6.

RESULTS: Of the patients, 40% (29 cases) were females and 60% (43 cases) were males. The mean age was 57.7 years. As for fistula localizations, snuffbox fistulas were made in 20 cases whereas radiocephalic fistulas in 20 cases and brachiocephalic fistulas in 32 cases were performed. Function losses were identified in 3 cases at week 2, in 2 cases at week 4, in 4 cases at month 3, and in 4 cases at month 6 following the fistula formation. 17 patients had Diabetes Mellitus, 26 cases had Hypertension, and 29 cases had both Diabetes and Hypertension together. While in 14 patients the CRF history was shorter than one year, the CRF histories of the other 58 cases were identified as older. While the fistulas in 14 patients were opened before the start of a dialysis program, the other cases had been attending their dialysis programs via catheter before the opening of fistulas. In fistula-opened patients, the continued patency rates were found to be better in proximal veins as compared with distal veins. The continued patency rates in cases, in which fistulas were opened for the first time, were found to be statistically better as compared with those in which

fistulas were opened repeatedly. When comorbidities were looked at, while the continued fistula patency rates of cases with single morbidity were statistically indistinguishable, the patency rates in patients with more than one morbidity was found to be significantly low. Fistula patency rates in patients with long-lasting chronic renal failure histories were significantly lower when compared with those with less than one year histories.

CONCLUSIONS: While comorbidities significantly affect fistula function in CRF cases, another important factor in fistula patency is the duration of chronic renal disease

OP-073 OUR EXPERIENCES ON INSERTION OF PERMANENT TUNNELED HEMODIALYSIS CATHETERS BY USING SCOPY IN HEMODIALYSIS PATIENTS

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OBJECTIVE: Chronic renal failure is a frequently seen disease which has a high level of mortality and morbidity. The most frequent treatment methods attended for these patients are transplantation, hemodialysis and peritoneo-dialysis. In this article, it's aimed to declare our experiences on permanent tunneled dialysis catheter with taken from the data of the hemodialysis patients.

METHODS: : Between October 2003-January 2009, 475 permanent tunneled dialysis catheters are inserted to the 369 Chronic renal failure patients who are under regular hemodialysis. 231 patients were women (62.6%) and 138 patients were men (37.4%). The patients were aged between 10-82 and average age was 63.4. Five patients were under 18. Splitt, tunneled and cuffed permanent dialysis catheters are used on all of patients. The processes were attempted on 74 (20%) patients for one time and for 16(4%) patients for two times. The catheter had to be changed for one time on 48 patients (13%), two times on 16 patients (4.3%), three times on 6 patients (1.6%), four times on 6 patients (1.6%). In the late term, catheters was changed between 30 days and 2 and a half years.

RESULTS: The permanent tunneled hemodialysis catheters are indicate on the cases in which not to be able to set up a hemodialysis application on the patients who have end stage renal failure, on the cases for which hemodialysis should be applied for the patient who have hemodynamic instability and short life expectation because of the additional diseases. The most suitable application for the insertion of the catheters is the right internal jugular vein by using Doppler USG and scopy. With this method, complication and morbidity rates will be decreased.

OP-074 SELECTION OF ARTERIOVENOUS FISTULA SITE IN CHRONIC DIALYSIS PATIENTS AND PRINCIPLES OF GENERAL APPROACH FOR PREVENTION OF EARLY COMPLICATIONS OF ARTERIOVENOUS FISTULAS

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OBJECTIVE: Presence of a patent arteriovenous (AV) fistula is vitally important in chronic hemodialysis patients. Considering the infections and complications of catheters the presence of a patent AV fistula is very important. Purpose of this study is the selection of fistula site and to investigate the early complications of that requires reoperations.

METHODS: One hundred and fourty eight patients was investigated retrospectively who was operated in Etlik training and research hospital during 28/10/2010 and 30/ 11/2010 dates for AV fistula. Minimum age was 19 and maximum age was 78 and mean age was 51. For AV fistula the preference of arm was following: 103 (69.6%) left arm and 45 (30.4%) right arm. In choosing of the arteries sites were 7 (4.7%) snuff box and 87 (58.8%) radial artery and 54 (%36.5) brachial artery.

RESULTS: Sixty eight (46%) of the 148 patients were women and 80 (54%) of them were men. Incidence of diabetes was 33% which of 14.86% women. Number of patients who required early reoperation were 17 (11.4%) and 10 (6.7%) of them were women and 7 (4.7%) of them were men. Incidence of diabetes in reoperated patients was 5 (50%) and 1 (14.2%) in women and men respectively. The reasons for reoperation in women was fistula thrombosis on 8 (80%), bleeding in 2 (20%) patients and in men 3 (42.8%) patients had fistula thrombosis and 4 (57.2%) patients had bleeding. Autogenous venous graft was used in 10 patients that 5 of them (%50) were women and 5 (%50) were men. Nine (90%) of those were basilic vein and cephalic vein transposition and 1(10%) of them was saphenous vein interposition. In 6 patients polytetrafluoroethylene (PTFE) graft were used 5 (83%) of these patients were women and 1 (17%) of them was man.

CONCLUSIONS: In this retrospective study we determined that the number of male patient were higher but the number of early reoperation was higher in female patients. Early fistula thrombosis and PTFE graft usage was higher in women. Autogenous graft usage frequency is similar in men and women. We conclude as a result of this study that the algorithm of fistula site selection should be reviewed in women and instead of starting from the most distal site and prefer to start more proximal level of radial or brachial artery in the presence of veins that sufficient caliber.

OP-075 REVIEW OF A SINGLE CENTER EXPERIENCE IN 6 YEARS FOR ARTERIOVENOUS FISTULA OPERATION AND HEMODIALYSIS ACCESS

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OBJECTIVE: This review contains our 851 arteriovenous fistula operations and hemodialysis access in 531 patients from the date of February 2004. This summary also implicates postoperative interventions and re-operations.

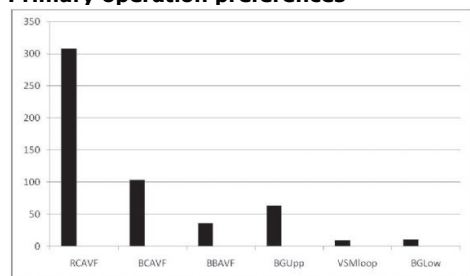
METHODS: Order of preference for AVF was native autologous AVF over synthetic bridging grafts. Preference row for this extremity was as; autologous radial-cephalic, autologous brachial-cephalic and autologous brachial-basilic vein transpositioning anastomoses. Further choices were in a row as; BGs for nondominant upper extremity, BGs for dominant upper extremity, lower extremities great saphenous vein loop to femoral artery and BGs for lower extremities. The latter option was changed by permanent internal jugular vein HD catheters in some cases.

RESULTS: Total operations of this review contained 531 primary cases and 320 further application by 851 operations. Preoperative vein mapping by duplex US was performed in 27% of patients. A total of 147 patients (27.6%) were administered with a prior history of once or multiple attempts for AVFs by other medical centers. Kidney Tx history prior to AVF interferences was observed in 17 patients with a rate of 3.2%. Initial AVF localizations were RCAVF 308 (58%), BCAVF 104 (19.5%), BBAVF 36 (6.7%), BGAVF upper extremity 62 (11.5%), BGAVF lower extremity 10 (1.8%), VSM loop to SFA 9 (1.6%) and engineered tissue BG in 2 (0.3%). Overall primary patency rates including primary assisted cases by interventions such as brunch vein ligation, thrombectomy and revisions by means of more proximally radial artery anastomoses of native RCAVF were 40.3%, in native brachial artery 76.4%, in synthetic PTFE grafts of the upper extremity 80.6% and 80% in lower extremity for their first year. Engineered tissue grafts (n=2, 0.3%) were used for HD uneventful after application. Postoperative aneurysms were operated in 62 autologous and 27 graft cases. PTFE graft thrombectomy operation was performed in 102 cases. Majority of these patients (88, 86.2%) were discharged without further investigations. Rest of the patients from this group (14, 13.8%) were operated for graft renewal and graft excision. Finger amputation was performed in 18 patients, in 12 for upper extremity and 6 in lower extremity. In 36 patients, we closed AVFs. These patients were classified as severe chronic steal syndromes and absence of HD indication.

CONCLUSIONS: We prefer primarily autologous arteriovenous fistulas via distal radiocephalic anastomoses for non-dominant upper extremity. A

duplex ultrasound as a mandatory preoperative mapping technique is not necessary.

Primary operation preferences



RCAVF = Radiocephalic AVF, BCAVF = Brachiocephalic AVF, BBAVF= Brachio basilic AVF, BGUpp = Synthetic bridging graft of upper extremity, VSMloop = Vena saphena magna loop arteriovenous fistula to superficial femoral artery, BGLow = Synthetic bridging graft between superficial femoral artery to femoral vein

OP-076 SHORT AND LONG TERM OUTCOMES AFTER SURGICAL THROMBECTOMY OF ARTERIOVENOUS FISTULA

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OBJECTIVE: Fistula thrombosis in patients on maintenance hemodialysis is an important morbidity factor. Intimal fibromuscular hyperplasia at the venous anastomosis may be an important factor associated with thrombosis. Some other factors include: the presence of diabetes, location of the graft, age of more than 65 years, hypoalbuminemia, elevated lipoprotein and hyperhomocysteinemia. Surgical thrombectomy of recently thrombosed arteriovenous fistula (AVF) is one the methods for AVF salvage. The aim of this study was to evaluate the efficacy of surgical thrombectomy.

METHODS: Seventy seven patients admitted to our clinic for surgical treatment for the salvage of recently thrombosed AVF between 2007 and 2010. AVF thrombectomy was performed with Fogarty catheter. All operations were performed with local anesthesia (%2 lidocaine). For the purpose of thrombectomy, occluded AVF was dissected and venous limb of AVF was opened with transverse venotomy of sufficient size to allow passage of catheter and extraction of thrombus.

RESULTS: There were 43 males (%55.8) and 34 females (%44.2). The mean age was 61.6. The most frequent anatomical localization of AVF was radio cephalic (%44) (Table 1). Fifty one of patients that underwent thrombectomy procedure were salvaged. Patency rates of salvaged AVF, one month after intervention was % 82, six months after was %50.9 and one year after was %39. Twenty six (%33) AVF could not be restored surgically and eighteen of them required new AVF and six patients required reanastomosis. 39 AVF was referred to hospital with rethrombosis between 1 month to 2 years. Eighth of them underwent thrombectomy procedure and 5 AVF were salvaged.

CONCLUSIONS: Surgical thrombectomy of arteriovenous fistula has an acceptable patency rate

in our study. We suggest that surgical treatment for the salvage of acutely thromboses AVF could be a choice before a new AVF restoration.

25 March 2011, Friday / 10:30-12:00 Diseases of Carotid Artery and Aorta: What we Offer to Solve Critical Problems - Oral Presentations

OP-077 CONVENTIONAL AORTIC ARCH REPLACEMENT FOLLOWING DISTAL MIGRATION OF THORACIC ENDOGRAFT

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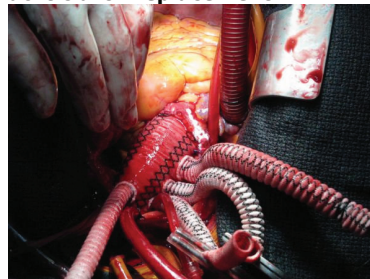
OBJECTIVE: Nowadays diseases of the aorta are more commonly encountered as a result of aging population. Endovascular treatment of aortic diseases provides excellent short and midterm results.

METHODS: In this case report we describe a patient who experienced acute type 3 dissection and had been treated via endovascular stent graft implantation. After 4 years, type 1 endoleak was observed due to migration of the stent graft. Considering the large diameter of the ascending aorta (4 cm), open operation was decided. Aortic arch replacement with integrated cerebral perfusion was carried out. Moderate hypothermia and intermittent retrograde blood cardioplegia was used for myocardial protection. Postoperative period was uneventful.

RESULTS: Endovascular treatment is the method of choice in the acute aortic type 3 dissection and other acute aortic syndromes due to less morbidity and mortality. However, aortic diseases usually involve long segments of the aorta. While endovascular treatment can be used as complementary therapy for open surgery; sometimes open surgery can be used for supplementing the endovascular therapy.

CONCLUSIONS: In this case report the patient was followed about 5 years with endovascular treatment of aortic acute type 3 dissection, and total aortic arch replacement as a second stage procedure. A considerable segment of the aortic pathology has been corrected. Currently, inspections are followed up in the abdominal aorta. Endovascular therapy and open surgical procedures should be used together in aortic diseases instead of large open procedures with high mortality rates.

aortic arch replacement



OP-078 THE USE OF LOCAL ANESTHESIA IN CAROTID ENDARTERECTOMY OPERATIONS: RESULTS OF 34 PATIENTS

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OBJECTIVE: Local anesthesia (deep or superficial cervical plexus block, cervical epidural blockage, local anesthetic infiltration or combinations), carotid endarterectomy operations are commonly used. Complications such as mortality, stroke, myocardial infarction, pulmonary complications, are reduced with the use of local anesthesia.

METHODS: Forty carotid endarterectomy operations were done whereas 34 of them performed under local anesthesia between 2006-2010. For the patients requiring concomitant surgery, such as coronary or peripheral artery bypass procedures general anesthesia was preferred. The age distribution of patients between 87-49 (mean 70.3) and 29 was male and 11 were female. Combination of cervical plexus blockage and local anesthetic infiltration were used.

RESULTS: The patient with known coronary artery disease is died on the 8th postoperative day after myocardial infarction. No intraluminal shunt required during the procedures. Mean hospital stay was 4 days.

CONCLUSIONS: During the carotid endarterectomy procedures patients' clinical neurologic status, motor strength, speech, evaluating the brain activity, an indication for intraoperative shunt use can be determined easily with the patient cooperation under local anesthesia. There is no need for intubation and ventilator support in this method. Cost effectiveness and the short hospital stay are other additional advantages. Local anesthesia for carotid endarterectomy procedures should be the preferred method in most of the cases.

OP-079 LATE EARLY CAROTID ENDARTERECTOMY BE DONE?

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OBJECTIVE: Stroke causes of death 3 ranks. carotid endarterectomy in a protective way to protect stock. So when you done? The purpose of this study was to early carotid endarterectomy (within 2 weeks following the TIA i) late (more than 2 weeks after gecirisinden TIA) should be done to assess retrospectively.

METHODS: Between January 2005 and January 2010. Vakıf Gureba Hospitals heart and vascular surgery was due to carotid stenosis intervened re evaluated 500 patients.. The mean age of patients 57.3 roll. One of 175 female patients, 325 of them were male. Patients, 212 of them right carotid stenosis, 388 of them had left carotid stenosis. Hypertension patients, 154 of them, 252 of them

diabetes, 45 of them in KOAH patients, 58 of them had hiperkolesteremi. The patients were divided into two groups Carotid endarterectomy patients, 150 of them early (within 2 weeks following the TIA i) 350 of them late carotid endarterectomy (TIA gecirisinden 2 weeks later) were performed. Two group mortality, embolism, hemorrhage, MI, cervical nerve injury, were compared in terms of neurological deficits and impaired consciousness.

RESULTS: Patients were followed for 24 months after the operation. (15 days, 1 month, 3 months, 6 months, 12 months, 18 months and 24 months) There was no mortality related to surgery in patients in both groups, embolism was found in both groups, There was no cervical nerve damage in both groups. Tia within two weeks after the intervention of the group: 4 patients had bleeding, and clinical follow-up declined. Neurological deficit was detected in 5 patients, neurological deficit was observed in these patients with the medical treatment, 5 patients had episodes of postoperative 3 days, re-tia, which provided medical treatment in patients with neurological damage to the wound they saw left. When more than 2 weeks after the intervention after TIA in patients with: There was no neurological deficit, bleeding was seen in 10 patients, service follow-up was observed in these patients. Patients having had re-tia.

CONCLUSIONS: TIA patients who were operated on after spending 2 weeks if the carotid thrombus is present in the new post-carotid endarterectomy, this thrombus has stood up and again the risk of an attack of TIA. Therefore, TIA patients will be operated within 2 weeks following the selection of i is of great importance.

OP-080 EARLY RESULT OF AWAKE CAROTID ENDARTERECTOMY

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Darcin

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OBJECTIVE: Carotid artery is a peripheric artery but its disease and surgical/endovascular interventions complication is very fatal or morbidative. It has also be with some comorbide disease like coronary artery disease. So carotid artery stenosis and its surgical treatment needs very attention and different attitude.

METHODS: Between July 2008-August 2010, 21 patients went carotid endarterectomy and patch plasty operation with awake technique. Women/man ratio 4/17, mean age: 71.3 years. 3 patients has previous CABG history and 2 patients went to CABG just 1 week after the carotid procedure. DM: 6 patients, coronary artery disease: 12 patients, COPD: 8 patients, HT: 7 patients, CVA: 4 patients. Operative procedure: all the patients carotid endarterectomy and patch plasty procedure were carried out by cervical blokage and during operation patients mental, motor condition were controlled by verbally.

RESULTS: During operation 1 patient was deteriorated and carotid artery shunt was used at that patient who has a hemiparesis which was totally cured by medical treatment; after surgery. Also 1 patient has a nervus hypoglossus paresis. 1 of the staged carotid-

coronary diseased patient was died due to MI after carotid surgery. Rest of the patients were discharged from hospital with no morbidity or mortality.

CONCLUSIONS: Our early result of carotid endarterectomy and patch plasty operation with awake technique is compatible with general literature. It has an very good advantage for intraoperative mental and motor monitorization and also save from intubation complication especially at very old and COPD patients. So we think that awake carotid surgery can be feasible technique especially for isolated carotid stenosis cases.

OP-081 DOES REALLY THYROID FUNCTION AND CAROTID ARTERY STENOSIS HAVE ANY RELATIONSHIP

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OBJECTIVE: Thyroid dysfunction has been known to be closely associated with increased cardiovascular events. This study was carried out to determine the prevalence of thyroid dysfunction in patients with internal carotid artery stenosis and relationships between normal ranges of thyroid function and internal carotid artery stenosis (ICS).

METHODS: From January 2009 to October 2010, 113 consecutive patients with ICS referred to our institution were analyzed. ICS was defined as greater than 50 % luminal narrowing or complete obstruction in at least 1 internal carotid artery. Thyroid disease was determined by free thyroxine (fT4) and thyroid stimulating hormone (TSH) measurements. After the exclusion of patients with abnormal levels of thyroid hormones, normal ranges of fT4 were classified into 3 groups: low-normal, mid-normal, and high-normal thyroid groups. Comparison was made with a similar group of consecutive 100 patients undergoing coronary artery bypass grafting who were free of any carotid artery lesions.

RESULTS: Both groups were similar for demographic properties, diabetes mellitus, hyperlipidemia and hypertension. There were 31 patients (27.4 %) with thyroid dysfunction in the carotid stenosis group and 11 patients (11 %) in the control group. There was a significantly higher percentage of thyroid dysfunction in the carotid stenosis group ($p < 0.05$). There were 82 patients (72.6 %) with normal fT4 and TSH levels in the carotid stenosis group. Low-normal ($p < 0.05$) and high-normal thyroid function was significantly associated with carotid stenosis when compared to control group.

CONCLUSIONS: In patients with carotid artery stenosis, the prevalence of thyroid dysfunction was higher than general population. Low-normal and high-normal thyroid function was independently associated with a higher percentage of ICS in euthyroid patients. We conclude that thyroid function is associated with the presence of carotid artery stenosis. Periodical screening and early treatment of atherosclerotic risk factors should be performed in these group patients.

OP-082 CAROTID ENDARTERECTOMY A DIFFERENT APPROACH: "Y" SHAPED PATCH TECHNIQUE

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²Department of CVS, International Hospital, Istanbul, Turkey

OBJECTIVE: Endarterectomy of the most common intervention in Carotid surgery, However, during, removal of plaque and, the distal fixation of the intimal flap, more attention is paid to the internal carotid. However, pathologies in the external carotid artery can lead to neurological problems such as aneurysms and etc. The aim of this study is to apply the "Y" patch method. Which can be done, with the distal fixation of the flap and elective external carotid endarterectomy.

METHODS: 26 patients underwent carotid endarterectomy. However, the incision was extended to external carotid artery, after the endarterectomy, Intimal flap, Which is in In both the ICA and ECA, has been fixed to posterior wall. The "Y" shaped patch of saphenous vein were done because of that reason suture line is less in the direction of flow also to narrowing of the common carotid artery thickness in accordance with the physiological contraction of the common carotid artery. Applicable.

CONCLUSIONS: Carotid endarterectomy is still widely used as an effective surgical method. There were a consensus about Indication of surgical method but describes different results. Especially putting shunts, or patches and what kind of patches are still controversial but the common opinion, "The main goal of issue is resolution of the problem in the ICA. However, pathology at the ECA in solution is an important factor about the patient's treatment. Because the intra-cerebral artery from the collateral are links to the ECA. This may cause neurological complications the obstruction of the ECA is an important separate issues. ECA feed Face, tongue, jaw, thyroid tissue Especially with bilateral stenosis of the ECA and / or occlusion may be serious problems. In fact, the interesting pathology in the literature talks about: chin claudication. Some publications suggested the use of synthetic patches. Because pseudoaneurysm development seems to be more in The use of saphenous vein. "Y" patch technique is a method used in synthetic grafts. In the literature, The use of patch prevents early and late restenosis. especially in female patients with a narrow diameter artery. If the bilateral total occlusion of the ICA. the cerebral circulation depends on the vertebral and ECA arteries. If you have stenosis in the ECA in this case endarterectomy has made carefully. However, the development of restenosis affected from shunt usage, patch usage primary closure. Y plasty are usefull and practical method in our opinion

OP-083 EARLY AND MID-TERM OUTCOME AORTIC VALVE SPARING PROCEDURE

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OBJECTIVE: Dilation of the sinotubular junction displaces the commissures of the aortic valve outward and prevents the cusps from coapting during diastole. Serious aortic insufficiency and dilatation of the ascending aorta increase the complication risks. Aortic valve-sparing operations are very effective procedures to replace all diseased ascending aorta tissues with preservation of the aortic cusps.

METHODS: We included 18 patients aged between 32 and 79 years (mean 63 ± 10.9 years) in this study. All patients had aortic root dilatation with a serious enlargement of the ascending aorta, but non had aortic dissection. Aortic insufficiency was ranged between mild and severe. Left ventricular function was normal ($> 50\%$) in 6 patients, mild depressed ($40\%-50\%$) in 9 patients and severe depressed ($< 30\%$) in 3 patients. Two different sized tubular grafts were used to replace the aortic root (with larger size) and ascending aorta (with smaller size) according to David procedure.

RESULTS: The aortic valve needed to be repaired in 9 patients, did not require any intervention in 8 patients, and it was replaced with a stentless bioprostheses in 1 patient. Coronary bypass surgery was applied in four patients. There was no operative or procedural mortality, but 1 patient with preoperatively chronic obstructive pulmonary disease died because of respiratory insufficiency. We observed temporary low cardiac output syndrome in 2 patients, and temporary renal insufficiency in 4 patients. There was no mortality or morbidity during mid-term follow-up. There was no echocardiographically aortic regurgitation before discharging from the hospital, but only 2 patients developed mild aortic regurgitation on the postoperative 6. month echocardiography.

CONCLUSIONS: Aortic valve sparing procedures should be chosen in the treatment of the proximal ascending aortic aneurysms with the aim of the avoidance of anticoagulation, improvement of left ventricular functions because of no aortic valve gradient or regurgitation, decreasing postoperative complications, and increasing the quality of life.

25 March 2011, Friday / 08:30-10:00 Update in Therapy in Heart Failure Oral Presentations

OP-100 USE OF IVAC 3L™ SHORT-TERM LVAD IN END-STAGE CHRONIC DECOMPENSATED HEART FAILURE

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OBJECTIVE: Case Study: We expand the use of a novel left ventricular assist device (LVAD), iVAC 3L™ (PulseCath; Groningen, the Netherlands) beyond the acute setting to the chronic heart failure.

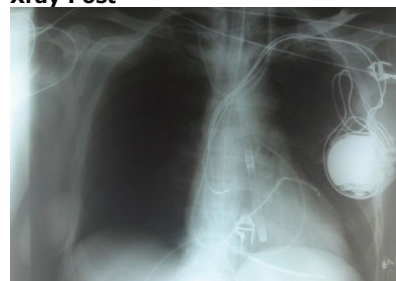
METHODS: We challenged the device in a 61-year-old male patient with chronic end-staged HF due to idiopathic dilated cardiomyopathy who suffered acute decompensation with pulmonary edema as salvage procedure. The patient was in critical cardiogenic shock (INTERMACS level 1) despite maximum

inotropic support and IABP support [2]. The pump was inserted from the right axillary artery through an 8mm vascular graft prosthesis and was positioned in the LV with the help of TEE.

RESULTS: After an initial period of hemolysis, which resolved in two days, the device functioned well on minimal anticoagulation (targeted ACT was 160-180 sec). The patient hemodynamics were immediately improved, pulmonary oedema resolved (Figure 1) and the patient was weaned from the IABP and inotropic support. Eventually, the clinical and hemodynamic status of the patient returned to the pre-shock condition (cardiac output increased, pulmonary capillary wedge pressure dropped), LV ejection fraction showed improvement with decreasing LV end-diastolic dimension measured by echocardiography and BNP levels significantly decreased (INTERMACS level 3). This allowed us to wean the patient from the device on the 10th post-implantation day.

CONCLUSIONS: The concept of implanting a pulsatile short-term LVAD as a bridge to decision has been recently tested in patients with end-stage chronic heart failure complicated by pulmonary hypertension. This has been proven to be a useful strategy to reverse pulmonary hypertension, thus improving candidacy for heart transplantation [4]. The iVAC 3L™ may provide an immediate minimal-invasive mechanical circulatory assistance in centers where there is no immediate availability of devices or it can facilitate transport to centers specialized in mechanical support. The device may provide up to 3 L/min of cardiac output and unload the LV, thus improving myocardial perfusion. Current clinical experience from its use extends from a few hours to 5 days. We tested the device for a period of 10 days with promising results. Therefore, it may be considered as a valuable option in acute and chronic heart failure when IABP support is inadequate and an LVAD is not readily available.

Xray Post



OP-101 THE ATOS TRIAL, REGENERATIVE POTENTIAL OF PICSO IN HEART FAILURE PATIENTS: EXPERIMENTAL RESULTS AND "FIRST-IN-HUMAN USE" EXPERIENCES

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¹Medical University of Vienna, Austria

²Anatomy Leiden University Netherlands Research Center, Netherlands

³Research Institute National Cardiovascular Center, Japan

⁴Keio University, Japan

OBJECTIVE: Periodic coronary venous pressure elevation initiates regeneration opening new opportunities in the quest for myocardial recovery.

OBJECTIVES: We introduce a clinically feasible concept of activating innate regenerative molecular pathways using coronary venous hemodynamics as adjunctive therapy in patients undergoing resynchronization therapy.

METHODS: We compared experimental and clinical data on pressure controlled intermittent coronary sinus occlusion (PICSO) in order to translate this innovative concept into clinical practice.

RESULTS: Meta-analysis of the salvage potential of different intermittent coronary sinus occlusion techniques revealed a significant reduction in infarct size of 29.3% in different species during experimental myocardial ischemia ($p < .001$). An inverse relationship between coronary sinus pressure increase and infarct size ($r = -0.92$; $p < .007$) indicates that the hemodynamic force of venous blood and its mechanotransduction results in salvage, cytoprotection and enhanced collateral flow. Subsequent experiments showed changes in gene expression pattern marked by a 4 fold increase hemoxygenase-1 expression ($p < .001$) in the center of infarction and a 2.5 fold increase of vascular endothelial growth factor (VEGF) ($p < .002$) in border zones in treated animals compared to controls. Hypoxia induced factor (HIF) activity however remained unchanged by PICSO suggesting an independent regenerative stimulus. Furthermore we found a marked upregulation of VEGF and VEGF-receptor 2 protein in the capillary endothelial cells in remote areas in 86% of the PICSO treated hearts and only in 43% of the non PICSO hearts. Clinical significance has been confirmed by significant myocardial salvage and event free survival in patients with acute myocardial infarction and PICSO during primary revascularization with thrombolysis (risk reduction for event free survival and reinfarction 60 months after the acute event ($p < .0001$)). Recently developed new technology was tested in an ongoing "first in man study" performed in heart failure patients undergoing CRT implantation. Stable hemodynamics and no safety concern coincided with an endorsement of our hypothesis that PICSO activates regenerative pulses in heart failure patients. Initial data on sequential pro BNP measurements as well as quality of life data correspond with favorable patient survival up to 2 years.

CONCLUSIONS: First in man experience emphasizes our hypothesis that activation of pluripotent coronary venous endothelium is the common denominator of the PICSO concept. New technology endorses future pivotal clinical trials to underscore the clinical potential of PICSO as adjunctive therapy in primary revascularization procedures and in the quest to regenerate the failing heart.

OP-106 DIAGNOSTIC AND MANAGEMENT CHALLENGES IN PATIENTS WITH GASTROINTESTINAL BLEEDING AND LONG-TERM VENTRICULAR ASSIST DEVICES

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OBJECTIVE: PURPOSE: The use of left ventricular assist devices (LVAD) for the treatment of end-failure is becoming more common. Evidence suggests that patients treated with continuous devices are at increased risk for gastrointestinal bleeding (GIB) beyond what would from routine antiplatelet and anticoagulation alone. Despite this well known problem, and treatment algorithms are undefined. We sought to retrospectively review our experience with GIB in patients treated with LVADs and describe our treatment algorithm.

METHODS: From 4/2000-7/2008, 162 patients were implanted with 190 LVADs. Following IRB approval, those admitted for symptomatic GIB were reviewed. Patients experiencing GIB during the acute post-operative period or treated with short-term device therapy were excluded. Upon presentation, all patients underwent upper and lower endoscopy at bedside and conscious sedation if these tests were negative video capsule endoscopy (VCE) was then performed. Anticoagulation was not held, but corrected if significantly abnormal.

RESULTS: 36 episodes of GIB occurred in 20 pts (12.3% of all LVAD patients. 11 males, mean age: 57 yrs). 13 pts had a single episode of GIB, 7 had multiple episodes. 14 pts were being treated with warfarin, 17 with aspirin, and 8 with antiplatelet agents. Using our protocol, we were able to identify the site in 32 (88.9%) and etiology in 30 (83.3%) pts. VCE was diagnostic in 4/5 pts, endoscopic therapy was successful in 8/9 pts, and 2 required surgical resection (1 post-operative death). Causes of bleeding included peptic ulcer (22%), small bowel angioectasias (17%), ischemic colitis (11%), multiple sites (8%) and other (42%). 58 total endoscopies were performed without complications.

CONCLUSIONS: GIB is a common problem in patients with LVADs. Our protocol consisting of upper and lower endoscopy, followed by VCE if needed, during the acute presentation is diagnostically valuable, safe even when performed at bedside, and often can assist in therapy.

25 March 2011, Friday / 10:30-12:00
TAVI: An Exciting Step in
Cardiovascular Medicine - Oral
Presentations

OP-109 TRANS-APICAL AORTIC VALVE
IMPLANTATION (TA-AVI): THE SAN CAMILLO
EXPERIENCE

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OBJECTIVE: Aortic valve disease is increasing in elderly patients and has a poor prognosis in few years. Aortic valve replacement in very old patients with a high number of comorbidities has high operative risk. TA-AVI represents a minimally invasive therapeutic option to treat this subgroup of patients. Aim of the study is to value the efficacy of the TA-AVI procedure.

METHODS: Between June 2009 and July 2010, 40 patients underwent to TA-AVI at our institution using Edwards-Sapien valve (16 n.23, 24 n.26). Mean age was 82.1 (72-92). 16 were men, 24 women. 39 patients were in NYHA class III, one in F.C. IV. Logistic Euroscore was 31% (14-46). Mean E.F. was 45% (35-60). Comorbidities: COPD 17, chronic kidney disease 19, diabetes 25, peripheral vascular disease 21, pulmonary hypertension 10, coronary artery disease 5, obesity 14, osteoporosis with vertebral collapse 4 (1 Paget), 4 REDO, 1 Emergency. All the procedures have been performed in the hybrid operating room in cooperation cardiac surgeons with interventional cardiologists, under angiographic guidance and TEE monitoring. The implants were performed by left anterior minithoracotomy, without extracorporeal circulation.

RESULTS: No intraoperative death occurred, there was one conversion to sternotomy. 4 deaths: one in IV post-operative day cause by pulmonary embolism, one in 60post-operative day due to ab ingestis, two patients cause by MOF. In 5 patients the procedure was performed in awake patients. 25 patients were extubated in operative room. Pre-operative AVA was 0,5 scm, post operative AVA was 1,7 scm. Post operative E.F. was 48%. Median intensive care stay was 36 hour, discharge from hospital 6,5 days. At 6 month follow-up 1 patients died for respiratory failure, All other patients were alive.

CONCLUSIONS: TA-AVI might be a good alternative to treat old patients with high operative risk. The observed mortality have been inferior to expected on the basis of the logistic euro score. The procedure showed a good post-operative recovery in all patients. All implanted valves have a good haemodynamic performance (AVA 1,7 scm). A longer follow-up is needed to confirm this preliminary datas

OP-112 THE USE OF TRANSCATHETER HEART
VALVES AS A VALVE-IN-VALVE IMPLANTATION
IN PATIENTS WITH DEGENERATED AORTIC
BIOPROSTHESES

O. M. Nawaytjou, O. Wendler, R. Attia, K. Macgillivray, R. Dworokowski, P. Maccarthy, M. Thomas, R. Deshpande, C. Young, V. Bapat
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OBJECTIVE: Reoperations for degenerated aortic bioprostheses and homografts carry a high risk especially in patients with multiple comorbidities. Transcatheter Aortic Valve Implantation (TAVI) is a new and innovative treatment for high risk patients with native aortic stenosis (AS). We present our experience with TAVI as a valve-in-valve (V-in-V) procedure in this cohort of patients.

METHODS: Between February 2008 to December 2010 over 300 patients underwent TAVI using the Edwards Lifesciences Sapien™ valve at our institution, of which 11 patients underwent transapical TAVI as a V-in-V procedure. Seven of those were degenerated stented bioprostheses, two were stentless and two were homografts. All patients were discussed in a multidisciplinary meeting and the decision for TAVI was based on a high predictive risk for redo AVR. The mean age was 79.36 ± 7.42 and 6 (55%) were females. The mean logistic Euroscore was 30.24 ± 8.92% and STS score was 9.22 ± 6.12%. Aortic stenosis was predominant in 6 and aortic regurgitation (AR) in 5 and 91% were in New York Heart Association functional class III-IV. The peak and mean gradients across the valves were 63.09 ± 37.16 and 36.73 ± 25.48 mmHg, respectively. The mean valve area was 0.89 ± 0.36 cm². All procedures were performed under general anaesthesia and the transapical approach was used in all patients. Valve sizes used were 23mm (n=8, 73%) and 26mm (n=3, 27%).

RESULTS: Procedural success was achieved in all patients (100%). There was a significant reduction in the post procedural mean and peak gradients (11.0 ± 5.36 mmHG (P= 0.008) and 21.09 ± 9.14 mmHg (P= 0.002), respectively). The postprocedural valve area significantly increased to 1.30 ± 0.68 cm² (P=0.03). None of the patients had >= Grade 1 aortic regurgitation at discharge. None of the patients sustained neurological, vascular or cardiac complications. One patient required preprocedural insertion of a permanent pacemaker for persistent AV block. There was no 30 day mortality. All patients were alive and in NYHA class I-II at a median follow up of 145 days.

CONCLUSIONS: The use of transapical TAVI as a valve-in-valve for the treatment of degenerated bioprostheses is feasible with excellent short term results in this cohort of high surgical risk patients. Use is dictated by the internal diameter of the degenerated bioprosthesis and longer follow up periods are needed to assess the durability of this treatment option if it were to become an option for lower risk patients.

OP-115 MITRAL STENOSIS AFTER
TRANSCATHETER VALVE IMPLANTATION (CORE
VALVE)

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OBJECTIVE: To study the effects of lower deployment of Core valve (TAVI) prosthesis,using all available tools in the catheterization laboratories

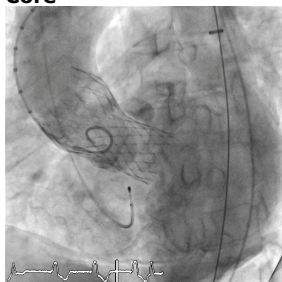
METHODS: 90 years old male patient known to have

severe aortic stenosis, has history of ischemic heart disease and underwent Percutaneous coronary intervention (PCI) and stent of his mid left anterior descending (LAD) artery in 2002, also have a long standing hypertension and primary hypothyroidism and hypercalcemia, permanent pacemaker and chronic gastritis and gastrointestinal bleed in 2007 and bilateral knee osteoarthritis. Patient was treated medically for his heart failure symptoms. Transthoracic echocardiogram showed normal ejection fraction >55% and severe AS, AVA 0.58 cm², mean G 64 mmHg and Peak gradient 118 mmHg was evaluated for Transcatheter aortic valve implantation (TAVI) program after a multidisciplinary evaluation discussion between surgical, medical team and the family of the patient, his Euro Score was 28 %, both risk and benefits explained to the family, The annulus size calculation was 23.8 mm by ECHO and 24 mm by CT-scan and aortogram, his recent coronary angiogram showed patent stent

RESULTS: TAVI was done under general anesthesia and transesophageal echocardiography (TEE) guidance, Pre TAVI, 2D TEE, LAX view of the mitral valve (MV) showing fully opening of both leaflets with no restriction at the hinge point of the anterior mitral leaflet (AMVL) via a transfemoral approach, using a 29 mm CRS Core Valve prosthesis, The valve was deployed lower than usual 8-10 mm from the base of aortic root as seen by aortogram Post TAVI LAO view and no aortic regurgitation by TEE and aortogram., Post TAVI, 2 D TEE of MV in diastole showing restricted opening of the anterior mitral valve leaflet (AMVL) at the basal half due to strut of the CoreValve in LVOT, a 3D TEE at LVOT side. Showed restricted base of the (AMVL) and normal opening of the posterior mitral valve leaflet (PMVL). Follow up TTE 4 days after TAVI. Doppler mitral inflow showing mitral valve area= 2.04 cm². and Mean gradient across the mitral valve = 6 mmHg (HR= 60 bpm) c/w mild mitral stenosis.

CONCLUSIONS: The lower implantation of Core Valve complicated usually by aortic valve regurgitation, atrioventricular block and Bundle branch block. In our patient the impingement of AMVL by the inflow portion of Core Valve prosthesis lead to mild Mitral stenosis. TEE is necessary to diagnose this phenomenon and the treatment is conservative

Core



Lower deployment of core valve

25 March 2011, Friday / 13:30-15:00 Peripheral and Aortic Vasculature: How to Get Involved? - Oral Presentations

OP-117 ANGIOPLASTY AND STENTING FOR SUPERFICIAL FEMORAL ARTERY OCCLUSION. CHERNIAVSKY M.A., KARPENKO A.A. RESEARCH INSTITUTE OF CIRCULATION PATHOLOGY, NOVOSIBIRSK

C. Mikhail

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OBJECTIVE: to investigate the possibility of angioplasty and stenting in the treatment of prolonged occlusive lesions of the SFA (more than 10 cm)

METHODS: During 2009-2010, recanalization and angioplasty with stenting of SFA was performed in 23 patients. Medical history of 10 years. The length of the lesion from 11 to 27 cm, mean was 15.5 cm. Average age of patients ranging from 46 to 78 years (mean age 60 ± 9,1 years) and men accounted for 60%. Stage of peripheral arteries disease was 2 – 3 grade. Diabetes mellitus was in 16 (69.5%) patients. Balloon angioplasty of superficial femoral artery without stenting was performed in 6 (26%) cases, with stenting in 17 (73.9%) patients. All patients with restenosis underwent re-angioplasty with stenting.

RESULTS: Recanalization was successful in 100% of cases. In all patients recanalization of occluded arteries was performed using a hydrophilic guide Raptor 0,035 and Terumo 0,035. The success of antegrade recanalization of the occlusion was 100% in 14 (60.8%) patients. Co-intervention with angioplasty of popliteal-tibial and tibial segments were performed in 10 patients (43,4%). From early postoperative complications was detected in one case a stent thrombosis. Intraoperative complications were not observed. Early postoperative complications were not observed. Long-term results after 6 months: stent restenosis in 1 patient, restenosis after angioplasty in 3 patients. Primary patency (82.6%).

CONCLUSIONS: Percutaneous transluminal angioplasty is an effective and safe treatment of long occlusions of the superficial femoral artery.

OP-118 RESULTS OF ENDOVASCULAR TREATMENT OF PATIENTS WITH LERICHE SYNDROME. CHERNIAVSKY M.A., KARPENKO A.A

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OBJECTIVE: To assess the immediate and long-term results of endovascular treatment of patients with multilevel arterial disease of lower extremities.

METHODS: The study included 21 patients with multilevel arterial disease of lower extremities. Age of patients ranged from 47 to 78 years (mean age 61 ± 8,5 years), men was 57%. Multifocal atherosclerosis was observed in 21 (100%) patients.

17 (81%) patients had coronary heart disease. Diabetes was verified in 14 (66.6%) patients. All patients had multilevel arterial disease of lower extremities, i.e. the lesion of two or more arterial segments. Correction the lesions of aorto-iliac segment was in 8 (38%) cases, iliac-femoral segment in 9 (42.8%) patients, 4 (19%) supplemented with angioplasty of leg arteries. **RESULTS:** Recanalization of occluded segment of arteries was performed in 17 (80%) patients. Technical success ranged from 95% to 100%. Clinical improvement was achieved in 90-100% of cases. The was no mortality. From complications in the two cases were distal embolism, which required open surgery, five patients had hematoma at the site of puncture, one patient in the early postoperative period was marked by stent thrombosis in the SFA. We have not mentioned pseudoaneurysms, dissection and rupture of arteries. The average patient's stay in office after the operation was about 3 days. A monitoring study of patients 7 months after surgery we found no damage and stent restenosis, primary patency was 90%. **CONCLUSIONS:** The results showed high effectiveness of endovascular surgery in patients with multilevel arterial disease of lower extremities.

OP-119 SURGICAL THERAPY OF THORACIC AORTIC ANEURYSM AND TYPE A AORTIC DISSECTION: SEVENTEEN YEARS' EXPERIENCE IN 892 PATIENTS

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OBJECTIVE: Several innovative approaches have been introduced for surgical treatment of thoracic aortic aneurysms (AA) and type A aortic dissections (AAD). We examined the effects of the underlying disease, the surgical procedure and these new techniques on operative outcome.

METHODS: We retrospectively reviewed all patients who underwent surgery for AAD and AA during a 17-year interval (1989-2006). 892 consecutive patients were identified, 623 patients were operated on for AA, 269 patients had AAD. The aortic root was repaired either by subcoronary (80%), or supracoronary replacement (19.6%) of the ascending aorta. 0.4% were unclassified. The aortic valve was replaced in 3.1 and 5.1% had David procedure. After 1999, the following changes were performed: (1.) arterial cannulation of the right A. subclavian artery, (2.) antegrade cerebral perfusion, (3.) mild to moderate hypothermia 28 - 32° C with (4.) a minimum flow rate 1000 ml/min, (5.) occlusion of the Truncus brachiocephalicus, left A. carotis and left A. subclavia in case of replacing the aortic arch and (6.) operations done only by specialised surgeons.

RESULTS: Hospital mortality for AA was 3.8% and 15.9% for AAD ($p<0.01$). Operative mortality decreased since 2000 ($n=599$), 13.2% vs. 2.4% in the AA group ($p<0.01$) and 35% vs. 13.1% in the AAD group ($p<0.01$). Factors for improved survival were $p<0.01$ in univariate analysis and $p<0.01$ in multivariate analysis.

CONCLUSIONS: The implementation of various refinements in surgical and anaesthetic techniques reduced mortality of surgery of the aortic root significantly. Despite standardized surgical technique, operative mortality remains remarkable due to the underlying disease

OP-121 WHO SHOULD REPAIR TYPE A AORTIC DISSECTIONS?

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OBJECTIVE: The natural history of acute type A aortic dissections mandates early surgical intervention. Traditionally mortality is quoted to increase 1% every hour for the first 48-hours. We aimed to identify features of acute type A aortic dissections that would predict outcomes.

METHODS: All patients having aortic surgery for acute type A aortic dissections during 2005-2009 were identified. Prospectively recorded clinical and operative data were analysed using cox proportional hazards model, multivariate regression and Kaplan-Meier survival curves constructed.

RESULTS: 60 patients had surgery for acute type A aortic dissection. Mean Logistic Euroscore was 33.6%, median age 59.8yrs. 33/60(55%) were referrals from secondary centres, 19/60(31.6%) from emergency room and remainder from other hospital departments. Mean time taken from CT scan to surgery for patients from secondary centres was 804minutes compared to 554minutes for patients presenting directly to our centre. There was a divergence in major complications (17.8% vs. 36.3% $p=0.02$) and lower in-hospital mortality (10.7% vs. 18.1% $p=0.04$) in favour of early surgery. Overall hospital mortality was 18.3%. In-hospital mortality for specialist aortic surgeons was 14.8% vs. 21.2% for non-aortic surgeons ($p=0.004$). The operative procedures for aortic surgeons were more varied and complex with a longer bypass time (181.2mins vs. 157mins $p=0.8$) however with a shorter cross-clamp and hypothermic arrest time (83.4 and 24.4mins vs. 110 and 32mins $p=0.07$).

CONCLUSIONS: There is a reduction in major complications and mortality in favour of early surgery. Despite increased operative complexity by aortic surgeons overall mortality was less, possibly as a result of a more comprehensive approach to the disease, which in turn improved survival. This presents a challenge for future planning of aortic vascular surgery services.

OP-122 TOTAL ARCH REPLACEMENT WITH TRIFURCATED GRAFT: LONG TERM RESULTS

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OBJECTIVE: Open repair of the aortic arch remains a technically challenging operation because of the need for circulatory arrest during arch replacement. There are several techniques for arch replacement in the literature. Total arch replacement is more

complex operation than the other techniques, however it is a complete repair that eliminates further pathologies and complications such as aneurysmal dilatation and a possible reoperation. In this report we reviewed our experience in total aortic arch replacement with trifurcated graft and antegrade cerebral perfusion.

METHODS: Study Population From 1999 to 2010, 488 patients underwent repair of aortic valve, root, arch, and ascending aorta, as well as replacement of the aortic valve at our institution. Of these, 45 patients had total aortic arch replacement with trifurcated graft. Study End-Points. The primary endpoints were transient ischemic attack, stroke, and death. Surgical Technique. The site of arterial inflow cannulation was the axillary artery so as to reduce the atheroembolic risk of central cannulation. Deep hypothermia was used in all cases regardless of the specific procedure. Cerebral oximeters were used to monitor brain oxygen saturations with a goal saturation of over 50%. Cerebroprotection was achieved with deep hypothermic circulatory arrest and selective antegrade cerebral perfusion. ACP was achieved through the right axillary inflow cannula. It's our practice to reconstruct the arch vessels first, using a trifurcated graft in total arch replacement. After the completion of these anastomoses, antegrade flow in the trifurcated graft is restored through the common lumen.

RESULTS: The mean age of the patients were 65 ± 11 years. Total perfusion time was 231 ± 61 min and aortic cross clamp time was 115 ± 67 . One patient had stroke (2%), 3 had seizure disorder (6%) and 1 had in-hospital death (2%). Renal dysfunction was observed in 2 patients (4%), reintubation in 6 patients (14%), prolonged intubation (> 48 hours) in 14 patients (29%), postoperative bleeding in 5 patients (10%), and late death in 6 patients. There was no late reoperation due to arch pathology. 1, 3, 5 and 10 year event-free survival were 91.5, 88.9, 86.5 and 60.8 respectively.

CONCLUSIONS: Arch repair is a challenging operation. Total arch replacement is the most complex procedure for the arch pathologies that eliminates all aortic tissue and further late complications such as late dissections and dilatation. It has excellent early and long term results.

OP-123 INTRAOPERATIVE USE OF RECOMBINANT ACTIVATED FACTOR 7 DURING COMPLEX AORTIC SURGERY

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OBJECTIVE: Post-operative bleeding is a major cause of morbidity and mortality following aortic surgery. Intraoperative coagulopathy is a well-known culprit in this process. Recombinant activated Factor VII (rFVIIa) is increasingly used for the post-operative management of such bleeding. We report our experience with the intraoperative use of this agent.

METHODS: We performed a propensity match analysis on 376 retrospectively identified patients

who underwent aortic root, arch, and/or ascending aortic replacement surgeries from 1999 to 2010. Beginning in 2009, we started using rFVIIa as an intraoperative adjunct for persistent, non-surgical, mediastinal bleeding. We matched a total of 58 patients; rFVIIa-treated group (n=29) and non-rFVIIa-treated group (n=29). We compared the matched patients on reexploration, mortality, bleeding related events, the use of blood and blood products, length of intensive care unit stay, duration of hospitalization and thrombotic complications.

RESULTS: Propensity matched patients had similar pre- and intra-operative characteristics. The mean dose of rFVIIa group was 23 ± 12 μ g/kg. We found significantly lower rates of surgical re-exploration (p=0.004), fewer prolonged intubations (p=0.004), less total chest tube output (p=0.01), fewer units of packed red blood cells (p=0.01), and fresh frozen plasma (p=0.04) transfused postoperatively in the rFVIIa group. There was no significant difference in mortality (p=1), duration of intensive care unit stay (p=0.44) or hospital stay (p=0.32) or in thrombotic complications between the groups (p=0.5).

CONCLUSIONS: We recommend the intra-operative administration of low-dose rFVIIa but limited to the management of persistent, non-surgical, mediastinal bleeding in aortic surgery. Further prospective randomised studies and larger cohorts are needed to verify these findings.

25 March 2011, Friday / 17:00-18:30 Carotid and Coronary Diseases: Medical and Surgical Solutions - Oral Presentations

OP-125 ASSESSMENT OF PROTECTIVE EFFECTS OF WARM TERMINAL BLOOD CARDIOPLEGIA ON MYOCARDIAL PROTECTION IN CORONARY ARTERY BYPASS GRAFT SURGERY

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OBJECTIVE: A significant metabolic derangement occurs in the ischaemic-reperfused heart of patients undergoing coronary artery bypass surgery using cold blood cardioplegia. It has been reported that up to one forth of deaths after coronary artery bypass grafting surgery may be caused by Reperfusion injury especially in patients with higher NYHA classes. There are evidences that in adult cardiac operations, a warm cardioplegic reperfusate (hot shot) before removing the aortic cross-clamp improves postbypass myocardial function and metabolic recovery.

METHODS: On a prospective basis, patients undergoing Coronary Arterial Bypass Graft (CABG) were randomly assigned into two groups; Terminal Warm Blood Cardioplegia and Controlled group. Total number of 41 patients were entered the study, of which 24 were in group Terminal Warm Blood

Cardioplegia and 17 were in Control group. Briefly the technique was as follow: At the conclusion of operation, with the aortic clamp still in place, controlled aortic root reperfusion is begun, initially using warm hyperkalemic blood cardio-plegia. A total of 500 mL of the blood reperfusate is administered. For patients with a body surface area of less than 1.5 m², the reperfusate volume = 500 × BSA / 1.5. Once that has been infused, the perfusionist continues the controlled aortic root reperfusion by arranging the circuit so that aortic root per-fusion continues with normothermic, normokalemic, un-modified blood. The heart remains flaccid and electromechanically quiescent for 2 to 10 minutes after the onset of the controlled aortic root reperfusion. Controlled aortic root perfusion is continued until sinus rhythm has returned and ventricular contractions are strong. Variables including post-operative ejection fraction, need for inotrope and spontaneous beating after de-clamping of aorta were assessed. Also we measured creatinine phosphokinase (CPK) at 15 minute, 8, 16, and 24 hour post operatively. Data were analyzed using SPSS 16.

RESULTS: Among patients in CONTROL group 41% (95% CL: 19-62%) received at least one inotrope, but only 17% (95% CL: 0 - 35%) of patients in TWBC group did so (p = 0.085). Also in respect to EF there was superiority in TWBC group, only in patients with low pre operative EF. There was higher rate of spontaneous beating in TWBC group (21 of 24 or 88%) versus Control group (12 of 17 or 70%; P<0.1).

CONCLUSIONS: it seems prudent to routinely use Terminal Warm Blood Cardioplegia in patients undergoing coronary bypass graft especially in those with reduced ventricular function.

OP-126 OUR EXPERIENCE OF MINIMALLY INVASIVE DIRECT CORONARY ARTERY BYPASS IN SINGLE VESSEL DISEASE

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OBJECTIVE: Minimally invasive direct coronary artery bypass (MIDCAB) grafting is an alternative in patients with a high-grade left anterior descending coronary artery (LAD) stenosis. We assessed our early results in patients with single vessel LAD disease who underwent MIDCAB without CPB.

METHODS: From December 2001 to November 2010, 200 patients with proximal LAD disease who underwent MIDCAB surgery were included in the study. The indications for MIDCAB included proximal LAD stenosis unsuitable for balloon angioplasty, failed angioplasty, those with in-situ stent stenosis and those who could not afford angioplasty. However, Obese female patients and patients with angiographic evidence of an intramyocardial running LAD, diffusely diseased and small LAD, unstable angina and those requiring emergency revascularization after failed PTCA were excluded from the study. In two patients with COPD, MIDCAB was done under epidural anaesthesia.

RESULTS: Early and late mortality was 0.5% and 1.0% respectively. The infarct rate was 1.0%. Other complications (e.g. reoperation for management of bleeding, chest wound problems, arrhythmias, cerebrovascular accident, pericardial effusion, pulmonary complications) were reported in 10 cases. The conversion rate to sternotomy / cardiopulmonary bypass was 2.0%. Incidence of re-intervention for graft failure was 1.0%. Duration of mechanical ventilation and total hospital stay were 7+/-3.0 hours (0-5hours) and 5+/-1.0 days (3-6 days) respectively. Atrial fibrillation was seen in 5 patients. At 6-month follow-up, 160 grafts were studied angiographically. 3/160 graft (2.0%) was occluded and 1/160 graft (7.2%) had a significant stenosis.

CONCLUSIONS: Although MIDCAB grafting is a challenging technique, it may be safely performed on selected patients with low postoperative mortality and morbidity. Clinical outcomes and immediate graft patency after MIDCAB are acceptable.

OP-127 OFF-PUMP VERSUS ON-PUMP CABG – OUR EXPERIENCE

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OBJECTIVE: The coronary artery bypass grafting (CABG) is classically done using the cardiopulmonary. The cardiopulmonary bypass is associated with systemic inflammatory response syndrome which may lead to coagulation abnormalities and cerebral, renal, myocardial and respiratory morbidity. Therefore the technique of off-pump CABG was evolved with an attempt to reduce the deleterious effects extra-corporeal circulation. The present study aims to analyze study aims to assess the metabolic changes and clinical outcomes in patients undergoing on or off pump coronary bypass surgery.

METHODS: From March 2009 to May 2010, 60 patients were included in the study. 30 patients underwent On-pump CABG and 30 patients underwent Off-pump CABG. The metabolic markers were measured to assess cerebral, renal, myocardial and respiratory injury and coagulation abnormalities and the clinical outcome in both the groups. The results were statistically analyzed.

RESULTS: The clinical outcome in the Off-pump CABG group fared better than the On-pump group with reduced duration of ventilatory and inotropic support. Even the metabolic markers revealed better post-operative renal function, reduced myocardial and neurological injury with reduced incidence of lactic acidosis than the On-pump CABG group.

CONCLUSIONS: The Off pump CABG is associated with reduced myocardial injury, inflammatory response, and postoperative morbidity. High-risk patients with additional diseases like lung disease, kidney failure and peripheral vascular disease may benefit from this kind of operation.

**OP-128 COMBINED CAROTID
ENDARTERECTOMY AND ON-PUMP OR OFF-
PUMP CORONARY REVASCULARIZATION FOR
CONCOMITANT CAROTID AND CORONARY
ARTERY DISEASE**

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OBJECTIVE: Carotid artery stenosis is one of the most important factors for neurological complications after coronary artery surgery. In the literature, optimal surgical management is controversial for the patients who have carotid and coronary artery disease. Combined carotid endarterectomy and coronary bypass grafting and the staged approach are the main alternatives. In this study, we present our results for simultaneous carotid endarterectomy (CEA) with on and off pump coronary artery bypass grafting (CABG).

METHODS: At our hospital, 42 patients underwent by combined unilateral CEA/CABG between January 2007 and December 2010. Our sample covers 30 male (%71.5) and 12 female (%28.5) patients aged between 48 to 72 (median 60.2). All patients were admitted to our department with symptoms of coronary artery disease. Their carotid artery occlusive diseases were diagnosed by physical examination and duplex carotid scanning. Carotid Doppler was performed for all patients, who were scheduled for CABG. Moreover, at least %60 chance of stenosis in the internal carotid artery was used as benchmark for applying CEA. Carotid and cerebral CT angiography was performed for all patients before CEA. We offered CEA, as a concomitant surgical procedure to the asymptomatic patients with at least 70% stenosis, or for the ones who have unstable plaque detected by duplex ultrasound. Symptomatic patients with significant stenosis were considered as the candidate for concomitant procedure. Sixteen patients underwent combined CEA/CABG with an off pump technique (group I) and Nine patients underwent combined CEA/CABG with an on pump technique (group II).

RESULTS: Results show that there is no significant difference between these two patient groups for an average number of distal anastomoses. Total intubation time, the cardiac intensive care stay, and the hospital stay of group I were significantly less than group 2. Patient from either group I or group II had no stroke. We haven't detected any local wound complications in both groups. There was only one hospital death in group II.

CONCLUSIONS: Combined carotid endarterectomy and coronary bypass surgery can be performed with acceptable morbidity and mortality in the patients with surgical coronary and significant carotid artery disease to protect them from the possible complications of both diseases.

**OP-129 PREDICTORS OF PROLONGED
DRAINAGE OF CHYLOTHORAX AFTER CARDIAC
SURGERY**

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OBJECTIVE: Chylothorax is a clinical challenge. This

study aims at determination of the predictors of prolonged drainage of chylothorax after cardiac surgery in a single tertiary centre in Jeddah; Saudi Arabia.

METHODS: A retrospective analysis of 52 patients of chylothorax with a mean age of 10 months (range, 1 month-60 years) who developed chylothorax after heart surgery (January 2007 through September 2010). Data were collected regarding patients demographics, procedures, chylous drainage and its management, complications and follow up.

RESULTS: There was one hospital mortality. All patients were managed by Fat-free diet or Monogen. Lone fat free diet with Steroids were used in eight patients (15.4%). Somatostatin analogue (Octreotide) was used adjunctively in seven (13.5%) patients and in two patients (3.8%), steroids and octreotide were used adjunctively. The median duration of chest tube drainage was 10.5 days (range, 4-34 days). The median amount of chest tube drainage /kg/day was 18 mL (range, 6.6 to 72 mL). All patients responded to medical treatment except one case who required thoracic duct ligation and a patient who died. The use of octreotide and steroids therapy significantly reduced the amount of chest tube drainage. At median follow up of 12 months (range, 1-40 months) after hospital discharge, no recurrence of chylothorax was observed.

CONCLUSIONS: Chylothorax is much more common post pediatric cardiac than post adult cardiac surgery. Conservative therapy of chylothorax after cardiac surgery remains the standard approach. Steroids and or octreotide can be used with an acceptable success. The most significant predictor of prolonged chest tube drainage in chylothorax is triglyceride/cholesterol ratio more than 2.

**OP-131 SUPPRESSING UNFAVOURABLE
BIOLOGICAL RESPONSES OF AORTO-
CORONARY VEIN GRAFTS THROUGH THE
PLACEMENT OF AN EXTERNAL NITINOL MESH**

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OBJECTIVE: Coronary artery bypass surgery is a tried and tested modality of treatment for coronary artery disease and currently the most commonly used conduits are the internal thoracic artery combined with saphenous vein grafts. Unfortunately, these vein grafts have a high attrition rate; about 1-2% per year in the first five years, increasing to 4% per year from year six to 11 postoperatively. Approximately 60% of vein grafts remain patent 11 years postoperatively. The pathognomonic biological feature of vein graft disease is intimal hyperplasia, leading to vein occlusion. In spite of this major drawback, vein grafts still serve as a very popular conduit in coronary surgery. Much emphasis has been placed on trying to prolong the lifespan of such grafts and our aim in this study was to test the biological effect that an external saphenous vein support (eSVS) mesh had on intimal hyperplasia.

METHODS: Single aorto-coronary grafts were

performed in each of 32 Chacma baboons. Coronary artery bypass grafting to the left anterior descending artery was done with the aid of cardio-pulmonary bypass and ischaemic cardiac arrest using autologous saphenous veins. Sixteen baboons received the meshed graft, whereas 16 grafts were unmeshed; of which eight received external glue application while eight grafts were unglued. Of the baboons that survived until six months, their hearts were explanted and the grafts underwent angiographic, macro and microscopic evaluation.

RESULTS: There were four premature deaths (12.5%). Fourteen of the sixteen (87.5%) meshed aorto-coronary grafts were patent whereas in the unmeshed group, six of the eight (75%) non-glued grafts and also six of the eight (75%) glued grafts were found to be patent. With regard to patency, no statistical significance was observed between the meshed and unmeshed grafts. Microscopic examination, however, revealed a statistically significant reduction ($p < 0.0001$) in intimal hyperplasia in the vein grafts with the external saphenous vein support mesh compared to the unmeshed group.

CONCLUSIONS: Our studies have proven a statistically significant reduction in intimal hyperplasia in aorto-coronary vein grafts fitted with the external saphenous vein support mesh. This bodes well for the longevity of aorto-coronary vein grafts.

OP-132 ENDO-ACAB: MINIMAL INVASIVE CORONARY ARTERY BYPASS GRAFTING USING VATS

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OBJECTIVE: Minimal invasive techniques in coronary artery bypass grafting have gained more interest. However, left thoracotomy and traumatic rib-retraction are often required. Robotic technology facilitates minimal invasiveness but is not widely available due to high costs. Here we describe our experience with endoscopic Atraumatic Coronary Artery Bypass (endo-ACAB) grafting.

METHODS: A total of 26 patients (11 male and 15 female) with a mean age of 59.6 years (range 39-81.5 years) underwent an endo-ACAB procedure between 2005 and 2009. Through VATS, the internal mammary artery (IMA) was harvested from the upper margin of the first rib to the lower margin of the fifth rib using harmonic scalpel (Ethicon-endo Surgery, inc.). Opening of the pericardium and identification of the target coronary vessel was followed by a mini-thoracotomy (± 4 cm) using a small soft tissue retractor. Stabilization of the heart was established with the Octopus®NS Tissue Stabilizer (Medtronic, inc.) and a hand-sutured anastomosis was made under direct-vision.

RESULTS: The procedure was successful in 22 patients. No iatrogenic injury of the IMA was noted. Mean operative time was 176 minutes (range 117-300 minutes). Mean postoperative ventilation time was 161 minutes (range 0-450 minutes) and the mean total hospital stay was 5 days (range 3-8 days). During the operation, 2 patients needed

conversion to sternotomy for persistent bleeding of the anastomosis and doubts for graft patency. Another 2 patients needed re-intervention, because of bleeding of a side-branch and spasm of the anastomosis.

CONCLUSIONS: VATS is an attractive alternative to robotic harvesting of the IMA in minimal-access coronary artery bypass grafting resulting in minimal physical trauma. It enables the usage of existing techniques resulting in a short learning curve as well as low costs. Endo-ACAB can be used in a hybrid procedure for multivessel disease.

25 March 2011, Friday / 08:30-10:00 Coronary Artery Disease: Risk Prediction, Diagnosis, Treatment - Oral Presentations

OP-137 SUBLINGUAL NITROGLYCERIN PRESCRIPTION AND POTENCY IN PATIENTS WITH CORONARY ARTERY DISEASE AND ANGINA

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OBJECTIVE: ACC/AHA/ESC guidelines recommend sublingual nitroglycerin (SNG) to be prescribed in patients with coronary artery disease (CAD), including those with stable angina and those recovering from acute coronary syndromes. These patients are at risk for coronary events, and SNG may be required to treat acute symptoms of myocardial ischemia. However, according to pharmacists, patients need to renew SNG tablets every 6 months and SNG sprays every 2 years in order to prevent carrying an outdated product. The purpose of this study was to determine the frequency of prescription of SNG and the relationship to potency in patients with CAD.

METHODS: Two hundred thirty-eight patients with documented coronary artery disease and angina were enrolled into this prospective, multicenter study. Data on patient demographics, medical history, coronary disease status, the use of SNG were collected.

RESULTS: The mean age of patients was 61 ± 11 years, 64 % were male. Ninety five percent had at least one risk factor, 47% had MI, 75% had prior PCI or bypass surgery. Despite documented CAD and angina, only 46 % of patients had a prescription for SNG. Of those with a prescription of SNG, 67% used SNG tablets and 24% used SNG spray. Use of at least one dose of SNG in the past year was reported by 85% of patients; 37% did not routinely carry their medication; 89% patients did not know the shelf life of the product that they were using and were not aware of that they might be carrying an outdated

product. Of those who were routinely carrying the SNG tablet or spray 28% were carrying an outdated product. Of those with a prescription of NG, 33% were not educated by the physician how to store and use the NG product.

CONCLUSIONS: Despite the ACC/AHA guideline recommendations, our study results showed that a substantial percentage of patients with CAD and angina either lack a prescription for sublingual NG or carry a potentially outdated product. In order to comply with the guidelines and provide the optimal medical management, physicians should be more careful in regards to frequency of SNG prescription and should provide detailed information regarding the use of the SNG product.

25 March 2011, Friday / 10:30-12:00 Expectations and Hopes from Coronary Surgery - Oral Presentations

OP-140 OFF-PUMP VERSUS ON-PUMP SURGERY IN PATIENT WITH LEFT MAIN CORONARY DISEASE: IS IT SAFE?

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OBJECTIVE: We discussed if off-pump bypass (OPCAB) surgery in the patients with critical left main stem (LMS) coronary artery disease is a safe method.

METHODS: From May 2007 to September 2010, the patients whom were operated because of the left main coronary artery disease were collected retrospectively. The patients were divided in two groups ' Group I was consisting of the patients operated with on pump conventional technique (CCAB) and the patients underwent off -pump surgery were formed the group II. Myocardial stabilizer and posterior pericardial stitches were used for stabilization and position of the heart in OPCAB cases. Non-randomized, retrospective data analysis included demographic and preoperative risk factors, operative details, clinical outcome and early follow-up were presented.

RESULTS: During the study period 84 patients with LMS stenosis were operated (OPCAB n=45, CCAB n=39). Groups were similar in terms of preoperative and intraoperative variables. CCAB patients received significantly more grafts per patient (3.1 ± 0.73 vs. 2.6 ± 0.76). Mortality was higher in the group1 (OPCAB 1.3% vs. CCAB 2.6%). OPCAB patients had less postoperative inotropes (12.0% vs. 38.1%), less pacing (2.7% vs. 10.1%, $P < 0.02$), and blood product transfusion. A slightly reduced postoperative length of stay (5.6 ± 6.5 vs. 7.3 ± 6.2 days, $P < 0.01$) were detected in group II patients. At 24 months follow-up, CCAB and OPCAB actuarial survival was $95.2 \pm 1.7\%$ and $96.6 \pm 2.3\%$, respectively.

CONCLUSIONS: OPCAB surgery is a safe and effective surgical method in patients with critical LMS disease.

OP-141 FACTORS HAVING EFFECT ON MORTALITY IN THE PATIENTS WITH PENETRATING HEART INJURY

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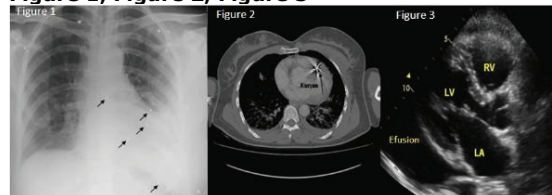
OBJECTIVE: Although penetrating heart injuries are less frequent when compared with other injuries, it is important because of its high mortality rate. The majority of these patients are admitted to emergency departments with signs of shock or agony. Arrival to hospital as fast as possible, early diagnosis and emergent surgical treatment are crucial for patient survival. In this study, we investigated the factors that affecting survival in patients presented to our center with the diagnosis of penetrating heart injury and given treatment.

METHODS: 94 victims with penetrating heart injury (82 male and 12 female, mean age: 25.9 ± 12.7 years) admitted to our center from November 2000 until June 2010 were retrospectively evaluated. We recorded the features of demographic, the duration of arrival to hospital, the way of delivery, clinical condition in admission and the reasons of injury. Additionally, the presence of haemothorax, pericardial haemathoma, tamponade or coronary artery injury, the management of patient's outgoing (resuscitation thoracotomy, the operation after clinical following or some diagnostic methods), the injured chamber of the heart, the presence of accompanying other organ injury, heart rhythm at the beginning of surgery and surgical approaches were recorded.

RESULTS: The mortality rate of is 13.8 % in our study. It was not found any correlation between survival and age, sex, the reason of injury (gunshot, stab, iatrogenic), the presence of tamponade and coronary artery injury. However, it was detected a significant correlation between delivery way (ambulance or other vehicles), the duration of arrival to hospital, the clinical condition in admission, the management of patient outgoing, heart rhythm before the surgery, the presence of pericardial haematoma or haemothorax, injured heart chamber, the presence of accompanying other organ injury.

CONCLUSIONS: The arrival duration to hospital is the most prominent and changeable factor affecting the penetrating heart injury outcome. The shortening of this time will dramatically improve on the survival in these patients which have very high mortality.

Figure 1, Figure 2, Figure 3



Views from X-ray, CT and transthoracic echocardiography of the patients

OP-142 EFFECT OF RENAL DYSFUNCTION AT ELEVATION OF SERUM AMYLASE AND LIPASE AFTER CORONARY ARTERY BYPASS SURGERY

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OBJECTIVE: CABG applied patients have been seen incidence of pancreatic amylasemia %30-70 and pancreatitis has been seen less then three percent. Mechanism of pancreatic enzyme elevation has not been clearly after cardiac surgery.

METHODS: Our aim was to determine the relationship associated by ischemia temporary renal dysfunction elevation pancreatic enzymes after CABG.CPB was used all patients underwent CABG. Patients average age: 65.19±11.34. serum total amylase,lipase,makro amylase was measured different eight period.An addition that serum Cystatin C and urine NAG level activation was determined.

RESULTS: Hyperamylasemia was seen eighteen eight percent of patients.But nonelse of this patients hadn't present pancreatitis as clinical.Six percent of these patients was seen at that time stopped hearts,five percent of these patients was seen after 20 min.from arrested heart and seven percent of these patients was seen after 40 min.from arrested heart. fourteen percent of patients were seen at that time heart running,twenty six percent of patients were seen initial value of ICU and thirty percent of patients were seen twenty four hours value of ICU.

CONCLUSIONS: our study was made pancreatic enzyme measurements. Amylase began to rise during the initial extracorporeal circulation which was determined reach the maximum level at postoperatively 6 and 24 hours.

OP-143 THE PRESENCE OF MYOCARDIAL INTRA OR THE INVISIBLE LAD, A DIFFERENT APPROACH: VERTICAL DISSECTION METOD

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OBJECTIVE: scheduled to be anastomosed to the LAD in most of the time, with myocardial or pericardial fat tissue is covered. Many methods have been described for LAD. However, each has different complications. By this study, the LAD or the presence of fat tissue in epikardial new, easy and vertical incision technique was performed with minimal complications,

METHODS: 2004 - 2010 Between 2267 coronary surgery was performed. The LAD in 135 patients, was the intra-myocardial. In 2015 the patient was covered with fatty tissue over the LAD. The LAD was observed in 1 patient intracaviter. Vertical incision TECHNIQUE: In all cases of cardiac arrest was performed. Grand cardiac vein anastomosis to the LAD of the place immediately on

the right side this time on an area of 1 cm vertical incision was made. The incision was very attentive and polite. The incision used for the 15 numbers busturi. Each time, we investigate whether the highlights of the LAD with the aid of busturi. Then again, walk down to small steps deeper. LAD inildiginde sufficient depth, is clear, albeit faint. Later on in the LAD anastomosis, this time with him to make a cut parallel to the dissection is done. Especially in the dissection was extended proximally parallel to the Lad. Thus, the LAD-Lima anastomozunda king was prevented to do. The resulting myocardial tissue on each side, bleeding did not stop with a low-energy cautery. For this reason, Rao V. Parachuri as defined by the method, by modifying performed. Here, on the inside face of the parietal pericardium in the visceral side, touch the kind of incision in the 6 / 0 proplene is standing by. This method was applied to perforating the RV in 4 patients. Simple and pericardial incision were firmly supported by proplene bleeding stopped. Advantage of this technique, the incision, the LAD with a vertical axis. Systolic-diastolic movement of the heart Sonucda seam stress to a minimum of 15% is affected. And the bleeding does not happen.

CONCLUSIONS: Good Lad vertical incision method is applied to find practical, easy, and the method of the opinion that a possible solution to the complication.

OP-144 OVER 80 YEARS OF AGE CABG APPLICATIONS

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OBJECTIVE: Coronary bypass surgery in patients with advanced age group has been increasing in recent years. We aimed to analyze preoperative risk factors, the values of postoperative morbidity and mortality for over 80 years old patients whom treated with coronary artery bypass surgery.

METHODS: Between 2005-2010 14 (9 males, 5 females, mean age 80.3±0.4 years; range 80 to 82 years) CABG operations were performed to the patients over 80 years old. However, %7 (n:1) COPD, %7(n:1) DM, %35 (n:5) hypertension were stated at demographic datas of patients.

RESULTS: Coronary Bypass was performed to 10 of the patients. Additional cardiac pathology as a cause of severe mitral regurgitation underwent mitral valve repair. One patient underwent aortic valve replacement due to aortic stenosis. One patient underwent bilateral carotid endarterectomy and patch plasty because of Carotid stenosis. Saphenous vein graft were used in all patients. The average CPB time was 133 minutes and CCT was 73 minutes. The average hospital stay 17.8 days range (9 days to 30 day). Cordorone administration were used for 3 patients which had atrial fibrillation in post operative period. The mortality rate was %14 (n:2). One of the patient was died at postoperative 2nd and the other was at 4th days because of respiratory problems.

CONCLUSIONS: With the increasing of development levels of countries, expectations of healthy and long life expectancy is also increasing in that population.

For this reason, the proportion of patients at older age group underwent coronary bypass operations are also increasing. We believe in that preoperative preparation and the optimal revascularization attempt will reduce the rate of postoperative morbidity and mortality in this group of patients.

OP-145 CARDIAC SURGERY IN PATIENTS WITH LOW EJECTION FRACTION

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OBJECTIVE: Ejection fraction is a kind of measurement which indicates the amount of volume that heart pumps in every beat. EF is usually measured by echocardiography and is a clinical parameter that shows the heart's inotropic situation. A well-functioning heart should pump more than %50 of the volume in it. Low EF is considered below %35. Dilated cardiomyopathies, heart valve diseases, myocardial infarction and uncontrolled hypertension may reduce the EF value. Cardiac surgery is considered as high risk at patients with low EF, increasing the probability of arrhythmia and sudden cardiac arrest. In this study, we analysed our cardiac surgery experiences in patients with low ejection fraction.

METHODS: The data were collected retrospectively from 102 patients with low EF ($<35\%$) undergoing cardiac surgery (MVR, AVR, CABG, valve replacement + CABG, MVR+ Annuloplasty) in our clinic between years 2002 and 2010. Co-morbidities such as diabetes mellitus, chronic renal failure, hypertension and also preoperative rhythm, postoperative inotropic and intraaortic balloon pump requirements were studied.

RESULTS: From 102 patients with low ejection fraction 82 of them were male and 20 of them were female. The mean age was 62 ± 20 (38-79). Additional disorders such as chronic renal failure, diabetes mellitus (DM), hypertension, myocardial infarction (MI) and need for inotropic support and intraaortic balloon pump, family history and smoking history were studied (Table 1). Hospital mortality rate was 4.9% ($n=5$). All of the five patients were over 65 years of age. (17.8 % of patients over 65 years of age). 3 of 33 MI diagnosed patients and 3 of DM diagnosed patients developed exitus.

CONCLUSIONS: Appropriate surgical approaches to the cardiac pathologies of patients with low EF manifest acceptable outcomes. The study made us think that some risk factors are not effective on hospital mortality rates. We have the opinion that older age (>65 years of age), diabetes mellitus and myocardial infarction increase the mortality rates in patients with low EF undergoing cardiac surgery.

Table 1. Preoperative and Postoperative Data

Risk Factors	Patient Number (n)
Chronic Renal Failure	5
Diabetes Mellitus	36
Hypertension	42
Myocardial Infarction	33
Smoking	28
Preoperative Rhythm (Atrial Fibrillation)	24
Intraaortic Balloon Pump Requirement	9
Family History	22
Left Heart Failure	34
Mortality	5
Total Number of Patients	102

OP-146 THROMBOELASTOGRAM IN OPEN HEART SURGERY

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OBJECTIVE: Thromboelastogram first described by Hartert in 1948. There were changes such as platelet function disorders, increased fibrinolysis, haemostatic coagulopathy in cardiopulmonary bypass during open heart surgery. Thromboelastogram is a technique that assesses almost all parts of the hemostatic system. In this study, we aimed to investigate the origin of postoperative bleeding due to whether surgery or coagulopathy.

METHODS: The study included patients that had had bleeding the first 1 hour after open heart surgery with drainage of 130 ml between May 2006 - December 2010. Gender and age discrimination were not made. The study included patients that underwent open heart surgery, isolated valve, combined coronary artery bypass grafting and valve + coronary artery bypass grafting. Blood samples were collected at first postoperative hour and tested in blood count tube.

RESULTS: Thromboelastogram test was performed on a total of 31 patients after postoperative open-heart surgery because of excessive drainage. These were 25 males and 6 females, respectively. The mean age was 61, range 40 to 77 years. Isolated coronary bypass surgery to 22 patients, isolated valve surgery to 4 patients and combined procedure to 5 patients were performed. Thromboelastogram test detected extrinsic and / or intrinsic bleeding disorder in 17 of 31 patients with excessive drainage. In 8 of 17 patients with first 5 days of clopidogrel and/or had a history of aspirin use. Two patients had a history of clopidogrel and/or aspirin usage within 5 days preoperatively, although thromboelastogram was normal. While thromboelastogram was normal in 5 of 9 patients that underwent revision surgery, surgical source of bleeding was detected. Thromboelastogram revealed bleeding disorder in 3 of the patients. However, surgical bleeding source and positive thromboelastogram (bleeding disorder) were detected in 1 patient.

CONCLUSIONS: Thromboelastogram is an alternative method that assessing coagulation system. This test based on Visco-elastic and mechanical properties of the clot as a basis for evaluating the hemostatic system gives an overall analysis. The correct identification of emerging hemostatic disorders in patients undergoing open heart surgery, play an important role in reducing complications accordance with the amount of transfusion and therefore. We believe that, thromboelastogram can be use as a method to help reduce unnecessary revision operations due to surgical drainage after open heart surgery or bleeding disorder.

**OP-147 REDO OPEN CARDIAC SURGERY;
INCREASING ASPECT NOWADAYS**

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OBJECTIVE: Although open cardiac surgery is performed in many hospitals, nowadays, the patient population who undergo operation is increasing. The clinical symptoms occur, and may need reoperation in some of these patients. Cardiac reoperations have high risk. We focused on the reoperations that performed in our clinic, and its benefits on other reoperations that will be performing.

METHODS: Between January 2005-December 2010, 22 patients that underwent cardiac reoperation which were considered retrospectively. Standard cardiac surgery technique was performed in many of patients, axillary and femoral cannulation was performed after cardiac, and great vessel injury in some of the patients.

RESULTS: 12 (% 55) of patients were male, 10 (%45) were female. All these patients underwent elective operations. Mean age was 58.5 ± 8.89 (41-75). 14 of operations were on-pump CABG, 1 was off-pump CABG, 4 were MVR, 1 was AVR, 1 was tricuspid annuloplasty and AVR, 1 was CABG+MVR+Tricuspid annuloplasty. Anastomosis were between LAD, RCA, PDA, D1, and D2. LIMA graft was used in 3 of LAD anastomosis, safenous graft was used for the others. The average cross clamp time was 79.8 ± 70.3 min and total CPB time was 126.7 ± 80.4 min. IABP was used for 2 of patients in intensive care. Reoperation was performed in 2 of patients because of postoperative bleeding. Mean ICU stay was 4.4 ± 2.7 days and hospital stay was 10.2 ± 5.1 days. Hemodiafiltration was used in 4 of patients because of acute renal failure. Mortality occured in 4 of patients in early postoperative time. One of the patient which IABP was used died due to LCOS, other 3 patients were died because of multipl organ failure.

CONCLUSIONS: Reoperations have different surgical technical difficulties about anatomic differences, scary tissue, and patency grafts. Mortality and morbidity rates in redo surgery are low according to literature, and survival rate is good according to early follow up. Functional capacity of patients were satisfactory postoperatively.

**25 March 2011, Friday / 15:30-17:00
Minimal Invasive Surgery: New Hopes
Oral Presentations**

**OP-155 ENDOVASCULAR AAA REPAIR: TWO
YEARS' EXPERIENCE**

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OBJECTIVE: Abdominal aortic aneurysms (AAAs) are common in the industrialised world, causing 2% of all male deaths over 55 years of age. Abdominal aortic aneurysms (AAA) may now be treated by endovascular placement of an arterial graft. The aim of this study was to evaluate the early and mid-term results of the first 12 elective endovascular repairs for infrarenal abdominal aortic aneurysms in our hospital.

METHODS: Between November 2008 and November 2010, thirteen men 47-81 years old (mean, 68 years old) had transfemoral insertion of endoluminal grafts for treatment of infrarenal abdominal aortic aneurysm. Many patients had numerous severe comonbid illnesses, including chronic obstructive pulmonary disease, coronary artery disease, hypertension, diabetes.

RESULTS: Further iliac limb extenders were used in eight patients to cover commun iliac arteries. Two patients underwent femoro-femoral bypass grafting operation. One patient was died in postoperative follow up due to infection and disseminated intravascular coagulation.

CONCLUSIONS: The early results of endovascular repair for abdominal aortic aneurysms appear satisfactory, with a 92,3% successful endograft deployment rate.. A current alternative for treatment of abdominal aortic aneurysms is transarterial placement of endovascular grafts. Aortic endoprostheses can be introduced from a distant arterial site, avoiding the need for a laparotomy, and often without the use of general anesthesia

**OP-157 THROMBOLYSIS OF THE DEEP VEIN
THROMBOSIS WITH EKOS® ULTRASOUND-
ACCELERATED TREATMENT**

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OBJECTIVE: To evaluate the success of lysis and clinical outcomes in patients treated with ultrasound-accelerated thrombolysis for deep vein thrombosis.

METHODS: Twelve patients of DVT were treated with ultrasound-accelerated thrombolysis. Eleven of the occlusions were in the lower extremity and only one was in the upper extremity. The clot was acute (<14 days) in 33% of cases, subacute (15-28 d) in 50%, chronic (>28 d) in 17%. Patients were treated with rtPA.

RESULTS: Complete lysis (>90%) was seen in 9 of 12 cases (75%) and overall lysis (complete plus partial) was seen in 11 (92%). No lysis occurred in one patient (8%), four of which were chronic. The median thrombolysis infusion time was 21.0 hours.

Major complications (hematoma at site of earlier surgery) occurred in only one patient (8%), with no incidence of intracranial or retroperitoneal hemorrhage.

CONCLUSIONS: Ultrasound-accelerated thrombolysis was shown to be a safe and efficacious treatment for DVT. The addition of US reduces total infusion time and provides a greater incidence of complete lysis with a reduction in bleeding rates.

OP-158 COMPARISON OF MITRAL VALVE RESISTANCE AND CONVENTIONAL STENOSIS INDICES IN RELATION WITH PULMONARY ARTERY PRESSURE AND BRAIN NATRIURETIC PEPTIDE IN PATIENTS WITH MITRAL STENOSIS

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OBJECTIVE: Mitral valve resistance (MV resistance) has been proposed as a new index in determination of hemodynamic consequence in patients with Mitral stenosis (MS). But the relation between mitral valve resistance and signs of hemodynamic deterioration (elevation of pulmonary artery pressure and brain natriuretic peptide level) has not been investigated yet

METHODS: The study population consisted of 25 consecutive patients (age:39.2±7.1years, Male / Female: 7/18) with moderate to severe MS (Mitral valve area < 1.5cm²). All patients had MS due to rheumatic valvular disease. Comprehensive echocardiographic evaluation was performed. Mitral valve area (MVA), mean mitral valve pressure gradient (MVPG), systolic pulmonary artery pressure(sPAP) and MV resistance were calculated from all patients. Brain natriuretic peptide level(BNP) level was measured.

RESULTS: : Both BNP level and sPAP were more correlated with MV resistance ($r = 0.82$, $p < 0.001$ and $r = 0.65$, $p = 0.001$, respectively) than MVA ($r = -0.72$, $p < 0.001$ and $r = -0.64$, $p = 0.001$, respectively) and MVPG ($r = 0.57$, $p = 0.003$ and $r = 0.52$, $p = 0.008$, respectively). Comparison of MV resistance and conventional stenotic indices revealed that MV resistance was most correlated with mean MVPG ($r = 0.66$, $p < 0.001$) and least correlated with MVA ($r = 0.49$, $p = 0.01$). Patients with sPAP>50 mmHg and BNP level >150pg/ml had significantly higher MV resistance than patients with sPAP< 50 mmHg (142±63 vs 85±5, $p < 0.007$).

CONCLUSIONS: Mitral valve resistance seems to be more correlated with elevation of sPAP and BNP level than the conventional stenosis indices

OP-159 ENDOVASCULAR AND HYBRID TREATMENT FOR VASCULAR DISEASE; EXPERIENCE OF A CARDIOVASCULAR SURGERY DEPARTMENT

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OBJECTIVE: This study includes a 3 year experience of a cardiovascular surgery department in endovascular and hybrid procedures for the treatment of vascular disease.

METHODS: Sixty-six patients were treated in interventional procedure theater between 2007-2010, 64 of the patients were male and mean age was 58±19 (range:21-86). Fibrinolytic treatment was performed with a guidance of catheter in 4 acute venous thrombosis. Coil embolisation was performed in 3 infrapopliteal arterial hemorrhage due to gunshot injury, and splenic artery aneurysm. Endovascular stent graft deployment was performed in thoracic aorta in 13 patients. Hybrid procedures were left carotico-subclavian bypass in 5 patients, right subclavian artery-to-left subclavian artery additional left subclavian artery-to-left carotid artery bypass in 1 patient and ascending aorta tube graft interposition and arcus debranching with trifurcated bypass in 1 patient. Concomitant thoracic and abdominal stent graft was implanted in 1 patient. Endovascular aneurysm repair of abdominal aorta was performed in 12 cases. Simultaneously SFA stent implantation was performed one of EVAR group. We performed hybrid procedures 4 of 11 carotid stent implanted patients. Simultaneously CABG was performed in 3 of them, additional iliac artery stent implanted in 1 of them. We performed profundoplasty in 2 patients and femoropopliteal bypass in 1 patient of 22 peripheric arterial endovascular procedures.

RESULTS: There was no intraoperative mortality. Complications due to endovascular procedure treated in the same procedure with an advantage of hybrid operating theater. Bilateral renal artery occlusion after endovascular aneurysm repair due to retrograde migration treated with urgent renal arterial bypass. Femoro-to-femoral crossover bypass performed in 1 patient due to iliac arterial occlusion after EVAR. Stent graft deployment performed in one case because of arterial dissection and rupture after stent implantation. One minor cerebrovascular complication and one central fascial paralysis revealed in carotid stent group. Patients were discharged from the hospital in postoperative 4.9±3.7th days. Aorto-esophageal fistula revealed in one patient in postoperative 2th months of thoracic endovascular procedure. Wrapping and primary repair of esophagus operation was performed, but patient died due to mediastinitis in the postoperative period. Two patient died associated with extracardiac or extravascular events in the follow up period.

CONCLUSIONS: The usage of endovascular techniques may offer a lower mortality and morbidity rate especially in high risk patients. Implementation of an interventional procedure room or an hybrid room for such operations is essential for a cardiovascular surgery department.

OP-160 PERCUTANEOUS JUGULAR VEIN CANNULATION FOR MINIMALLY INVASIVE CARDIAC SURGERY

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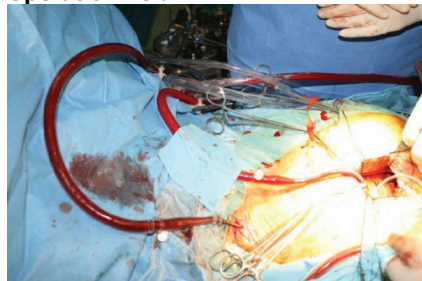
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OBJECTIVE: Lack of surgical exposure in minimally invasive cardiac surgery limits the possibility standart central venous cannulation. Venous access can be done via femoral or jugular routes with low risk of morbidity. We prefer these sites in cases requiring bicaval venous cannulation.

METHODS: Percutaneous jugular venous access has been used in two atrial septal defect cases. Mean age of the patients was 26 years. Left ventricular ejection fraction of both cases were 70% and mean body surface area has been calculated as 1,85. Patients have been placed with a 30 degrees lateral supine position on the table. Right side of the neck has been draped for jugular vein puncture, in addition to standard surgical preparation. After placing the guidewire into the right jugular vein, a lower mini sternotomy incision has been performed. A 16 F percutaneous venous cannula has been introduced under TEE guidance after standart heparinization. The cannula has been placed in superior vena cava. Cannulation of the inferior vena cava has been performed through a small incision, which has been used for pericardial tube insertion at the final step of the operation. A 18 F aortic cannula has been placed and CPB has been initialized. Controlled vacuum between -30 to -50 mm Hg has been applied to promote venous return. Secundum type defects have been repaired with PTFE patches. The jugular vein cannulae have been removed 10 minutes after protaminization and 15 to 20 minutes of compression has been applied to puncture sites.

CONCLUSIONS: The number of minimally invasive approaches is increasing in recent years, which has triggered the improvement of the devices and techniques for CPB. To extend the ability for performing an excellent operative procedure through a small incision, perpheral cannulation is good alternative. We prefer jugular vein access which offer surgical advantages, in addition to the cosmetic results and low risk of morbidity.

Operation field



Jugular vein and ascending aortic cannulations have been performed and CPB has been initialized.

OP-161 LIFE-THREATING COMPLICATIONS OF ENDOVASCULAR STENT-GRAFTING

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OBJECTIVE: Endovascular management of both acute and chronic aortic aneurysm has emerged as an alternative to open. Computed tomographic angiography (CTA) has been requested for follow-up and evaluation of aortic stent complications. Despite early promising clinical results, effect on the long-term durability of the aortic repair have not been yet established. They are associated with complications which can be resulted in a high death rate.

METHODS: To update our experience with thoracic and abdominal aortic stent-graft treatment over a 2 year period, 55 endovascular graft repairs were performed for AAAs and TAAs.

RESULTS: During follow-up three patients underwent emergency treatment. One had aorto-esophageal fistula after TEVAR which the previous endostent procedure was performed in another center, second one had total thrombosis of endostent after EVAR of AAA with Behcet Disease, and the third patient had endostent migration and aneurysmatic sac rupture after type 2 endoleak of EVAR of AAA. All of these patients had gone after open surgery due to preoperative critical status.

CONCLUSIONS: A good stent-graft placement is not enough to make this procedure successful. Persistent perfusion of the aneurysm sac from retrograde flow in branch vessels is a major long-term concern. Combined retroperitoneal endoscopic ligation of branch vessels with stent deployment, sac ablation with a thrombogenic substance, to ensure complete depressurization of the aneurysm will be new challenges of this procedure. During follow-up, life threatening complications such as graft migration after endostent procedure brings high mortality

25 March 2011, Friday / 17:00-18:30 New Challenges in Coronary Surgery Oral Presentations

OP-162 PARTIAL PERICARDIOTOMY TECHNIQUE IN MULTIVESSEL CORONARY ARTERY BYPASS GRAFTING SURGERY

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OBJECTIVE: In CABG patients, traditionally, the surgeons are used total pericardiotomy for providing graft anastomosis. The author used partial pericardiotomy in CABG patients who underwent multivessel or one vessel coronary bypass surgery.

METHODS: Totally 32 CABG patients have been operated using this technique without cardiopulmonary bypass. 9 of those had one coronary vessel disease, and the remaining patients had two or three coronary artery disease. 75% of patients had poor left ventricle and ejection fraction

was between 30-35%. 1-2 cm partial pericardiectomy was performed from all over the targetting coronary artery vessels. Pericardial stay sutures were inserted and octopus was inserted. After the coronary arteriotomy intracoronary shunt was inserted. The distal coronary artery anastomosis was completed. In all patients LITA was used. In 13 patients radial artery was used for occluded intermediate coronary artery. In the remaining target coronary artery saphenous vein was used.

RESULTS: No mortality or morbidity was seen after the operations. The mean intensive care unit staying time was 27 ± 2 hours. The mean extubation time in all patients was 6 ± 1 hours. Postoperative enzyme analyses has shown that there was no myocardial ischemia. EKG analyses were normal in patients.

CONCLUSIONS: As we know that some patients are needed redo operation after coronary artery bypass surgery. In the second operation, life threatening bleeding is a severe complication when the sternotomy is performed. Minipericardiectomy technique in CABG surgery can be prevent from this complication. The author believe that postoperative pericardial adhesion is decreased using this method. On the other side, total pericardiectomy and cardiac stay suture is affected the cardiac position and haemodynamic state. Using this method cardiac anatomic position is not affected. To provide pericardial adhesion this method can be use when the beating heart coronary bypass procedure.

OP-163 KRYPTONITE, AN OSTEOCONDUCTIVE ADHESIVE BONE CEMENT IN CARDIAC SURGERY

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OBJECTIVE: Wire cerclage is the standart closure method of sternotomy in cardiac surgery. Kryptonite OA is a non-toxic, osteoconductive adhesive with bone-like properties composed of naturally occurring fatty acids and calcium carbonate. We examined the clinical and radiographic results of this agent and its effects on bone healing.

METHODS: Since August 2010, 12 patients had Kryptonite OA cement inserted in their sternal medulla before sternotomy closure with wire cerclage. They were followed-up by clinic visits and chest computed tomographic (CT) scans pre and postoperatively 4th and 15th day. All postoperative CT chest scans were evaluated for sternal dehiscence. Sternal pain at rest and with coughing, postoperative functional recovery, inspiratory capacity and analgesic use within 72 hours was compared with standart closure method at their clinical follow-up.

RESULTS: Twelve preoperative and 24 postoperative CT chest scans were evaluated. At follow-up there were neither clinical dehiscences nor nonunions of the sternums. Kryptonite OA cement appears to mimic those of natural bone. In patients, adhesive closure was not associated with adverse events such as adhesive migration, embolization or infection. There was statistically significant difference in Kryptonite OA cement inserted group at sternal pain score, mean HAQ score for postoperative functional

recovery, volum (ml) for inspiratory capacity and analgesic use ($p < 0.001$). In SPECT intensity ratio there was no difference for sternal perfusion (bone scan) between Kryptonite OA and standart group ($p = ns$). Sternal perfusion was not compromised by adhesive closure.

CONCLUSIONS: Kryptonite OA cements are reliable and valuable to use on patients especially who have osteoporotic sternums and in those who are overweight during open heart surgery for postoperative functional recovery, respiration, pain, sternal dehiscence and infection are influenced by early bone stability.

OP-164 CORONARY REVASCULARIZATION WITH MINIMIZED EXTRACORPOREAL CIRCULATION VERSUS OFF PUMP AND CONVENTIONAL CIRCUITS IN HIGH RISK PATIENTS

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OBJECTIVE: The best approach to surgical myocardial revascularization remains controversial. We evaluated the minimized cardiopulmonary bypass (mini-CPB) versus off-pump (OPCAB) and conventional control (C-CPB) with respect to systemic inflammatory response, myocardial protection, perioperative regional cerebral oxygen saturation (rSO₂), air handling and clinical outcome in Euroscore 6+ patients undergoing coronary revascularization (CABG).

METHODS: Over a two-year period, 90 patients (Euroscore 6+) were prospectively randomized to one of the three perfusion protocols (N=30): Group 1: MiniCPB (Rocsafe, Terumo); Group 2: OPCAB; Group 3 (Control): C-CPB (Capiiox SX, Terumo). Serum interleukin-6 (IL-6) and Tumor Necrosis Factor (TNF)-alpha levels were measured. Blood samples were collected at baseline (T1); at the end of the operation (T2) and 24 h (T3) postoperatively. CD11b/CD18 expressions were determined by flow cytometry. Serum lactate and CKMB levels were measured from coronary sinus blood. rSO₂ desaturation risk score (Invos, Somanetics) was calculated by multiplying rSO₂ below 50% by time (sec). Gaseous microembolic (GME) activity was monitored simultaneously during the first and last 15 min. of CPB in Groups 1 and 3 by fixed-beam ultrasonic imaging device (EDAC, Luna Innovations, Roanoke, VA).

RESULTS: Perioperative data is demonstrated in Table 1 (*: $p < 0.05$ vs. control). IL-6 levels (pg/mL) were lower at T2 in mini-CPB and OPCAB vs. control ($p \leq 0.01$). TNF-alpha levels (pg/mL) were significantly lower in mini-CPB and OPCAB at T2 and T3 vs. control ($p < 0.05$). Mean GME activity was comparable in two groups (mini-CPB: 23.4 ± 2.1 emboli/sec; C-CPB: 31.4 ± 3.5 emboli/sec)

CONCLUSIONS: Mini-CPB can be considered similar to off-pump surgery in terms of systemic inflammatory response, myocardial protection and early clinical outcome.

Table 1: Perioperative Outcome

	CKMB at T2 (ng/m L)	Atrial Fibrillati on (%)	CD11b/CD 18 (%) at T2	rSO ₂ desaturati on risk >6000 (yes vs. no) (%)	Respirat ory Support (h)
MiniCP B	7.2±3	14*	19.2±2*	21±7.5*	8.5±4*
OPCAB	6.45± 3	35.7	24.6±3	41.4±9	9.2±5
C-CPB (Contr ol)	7.1±3	46.6	37.4±5	49.5±11	13.4±6

(*:p<0.05 vs. control)

OP-165 ISCHEMIA-MODIFIED ALBUMIN USE AS A PROGNOSTIC FACTOR IN PATIENTS THAT UNDERGO CORONARY BYPASS SURGERY

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OBJECTIVE: Various biomarkers are used to explain the hemodynamic status that emerges in CABG surgery applied patients in the postoperative period. These biomarkers generally indicate whether there is adequate myocardial protection. The recently introduced biomarker levels termed ischemia-modified albumin (IMA) have been investigated in this prospective study. The IMA levels were measured in the preoperative, intraoperative, and early postoperative periods and the relation of all the hemodynamic parameters of the patients to IMA levels were evaluated.

METHODS: Measurements were taken from 30 cases (24 mens, 6 womans) that were operated under elective conditions. The mean age of the patients was 58,7. Blood samples were taken from the coronary sinus immediately before cross-clamp placement and 30 minutes after cross-clamp placement as well as from the central venous catheter 6 and 24 hours following the operation and the IMA levels were studied.

RESULTS: The evaluation of the IMA levels of the patients yielded statistically significant differences between the preoperative IMA levels and the IMA levels in the intraoperative and postoperative periods. When the hemodynamic results of the patients in the postoperative period (development of atrial fibrillation, the need for cardiotoxic, arrhythmia, arterial pressure, etc.) were considered, the hemodynamic parameters of patients with high IMA values were found to have been badly affected in a way that is statistically significant.

CONCLUSIONS: IMA levels are an indicator of myocardial protection and it is at the same time a new agent that could be as one of the prognostic indicators. However, new studies are required to clarify this situation further.

OP-166 OFF-PUMP CORONARY ARTERY BYPASS SURGERY VERSUS NONPULSATILE OR PULSATILE CARDIOPULMONARY BYPASS: RESPIRATORY SYSTEM AND OKSIDATIVE STRESS

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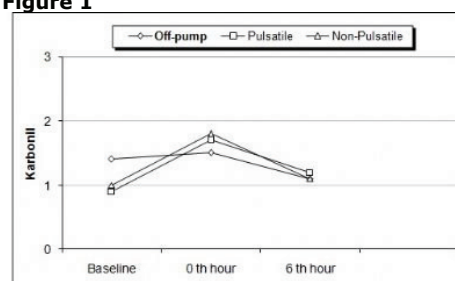
OBJECTIVE: In our study we aimed that compared with the effects of off-pump CABG (OPCABG), pulsatile cardiopulmonary bypass (PCPB), non-pulsatile cardiopulmonary bypass (NPCPB) on the respiratory system and oksidative stress.

METHODS: Thirty two patients that were undergone elective CABG were incorporated the study. The patients was arranged in groups according to using perfusion technique during CPB. The groups are following that off-pump CABG (n=10), pulsatile CPB (n=11) and non-pulsatile CPB (n=11). The blood samples were collected for preoperative and postoperative 0 and 6 th hours levels of carbonyl and was made respiratory function test in preoperative and postoperative 5th days.

RESULTS: The plasma postoperative levels of carbonyl which indicator of oksidative stress were lower in OPCABG than the other groups (p<0.05). There were no statistically significant difference in levels of carbonyl between pulsatile CPB and non-pulsatile CPB groups (figure 1). When the effects of three groups on the respiratory system were evaluated partial arterial oxygen pressure (PO₂), forced expiratory volume in 1s (FEV₁), forced vital capacity (FVC), FEV₁/FVC ratio were higher in OPCABG on postoperative period (p<0.05).

CONCLUSIONS: In our study we established that the negative effects of off pump CABG the respiratory system and oksidative stress were lower than pulsatile CBP and non-pulsatile CBP.

Figure 1



The plasma levels of carbonyl of off-pump, pulsatile and non-pulsatile CABG

OP-167 LEFT DESCENDING ARTERY REVASCULARIZATION IN LOW-RISK PATIENTS: OFF-PUMP OR ON-PUMP

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OBJECTIVE: This study aimed to compare the outcome of off-pump and on-pump myocardial revascularization in patients with left anterior descending artery (alone or with diagonal artery)

stenosis

METHODS: We retrospectively reviewed the medical records of 300 patients; 150 with on-pump coronary artery bypass, and 150 with off-pump coronary artery bypass. There were no significant differences between two groups for medical data and operative findings. On-pump and off-pump groups were compared in terms of hospital mortality and morbidity.

RESULTS: In the on-pump group, hospital mortality was 3.3% (5 patients); in the off-pump group, it was 2.6% (4 patients). Five patients (3.3%) in the on-pump group had myocardial infarction; three of them died of cardiogenic shock. In the off-pump group 4 patients (2.6%) had myocardial infarction, two of whom died. Two patients (1.3%) in the on-pump group had stroke; one died. Two patients (1.3%) in the off-pump group had strokes; both died. One patient (0.6%) in the on-pump group had mediastinitis and died of sepsis.

CONCLUSIONS: In low-risk patients having left anterior descending artery bypass, use of on-pump method vs. off-pump method was not associated with significant differences in morbidity or mortality

OP-168 DEXTROCARDIA AND OFF-PUMP CORONARY REVASCULARIZATION; CLINICAL EXPERIENCE

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OBJECTIVE: Dextrocardia is a rare clinical entity concerning coronary revascularization. We present our clinical experience in respect of 4 cases performed with off-pump techniques. We evaluate the positional changes affecting the surgeon and operational techniques.

METHODS: Four patients (3 male, 1 female) underwent off-pump coronary artery revascularization aging between 57 to 79 years. Right internal thoracic artery (RITA) used for anterior descending (AD) branch of left coronary artery in all patients. Radial artery (RA) used in three patients, in two of them anastomosis placed on right coronary artery and the other placed on posterior descending branch of right coronary artery. Proximal RA anastomosis placed on aorta in two cases. In the patient who was 79 years-old having calcific ascending aorta proximal anastomosis placed on RITA. Operating surgeons performed the anastomosis conventional right side, but one left handed surgeon tried to operate on left side and found it unnecessary to change position and continued on the usual side.

RESULTS: All patients had uneventful postoperative period and discharged from the hospital on the fourth postoperative day in usual manner. Dextrocardia as an anatomical challenge had no impact in off-pump coronary revascularization techniques.

CONCLUSIONS: In patients with dextrocardia, operation can be performed in usual manner without difficulty and positional change is unnecessary.

OP-169 EFFECT OF BACK TURN TO INTENSIVE CARE UNIT THE RISK FACTORS AFTER CORONARY ARTERY BYPASS SURGERY: ONLY CENTER RETROSPEKTIF STUDY

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OBJECTIVE: Intensive care unit process is very important department of cardiac surgery. But extend intensive care unit process is related to increase health spend and hospital mortality and morbidity. Our group was to examine isolated CABG patients.

METHODS: Isolated 3729 coronary artery bypass patients was operated by same operation team at between 2002 January to December 2007. Intermittant cross clamping technical use at all operations. Gathered data of all patients by retrospectively.

RESULTS: The determination of significant risk factors of again back turn in intensive care unit 147 patients. Standard cardiopulmonary bypass technique was used for all patients. All patients followed up cardiovascular surgery intensive care unit. The patients got service from intensive care unit by anesthesiologist and surgeons common decisions. Patients with unstable hemodynamic conditions or matter diuresis, respiration, neurological, gastrointestinal and other clinical problems were reserved in ICU.

CONCLUSIONS: Patients age and sexuality, preoperative complication and cross clamping time and cardio pulmonary bypass time, low ejection fraction, insulin dependent diabetes mellitus, chronic obstructive lung disease, immediate surgery and EuroSCORE classification too much 5 is related intensive care unit stay period.

26 March 2011, Saturday / 10:30-12:00 New Risk Markers in NSTEMI - Oral Presentations

OP-185 EVALUATE THE RELATIONSHIP BETWEEN TIMI FRAME COUNT AND THE NUMBER OF CRITERIA OF METABOLIC SYNDROME

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OBJECTIVE: Calculation of the TIMI frame count in patients with coronary artery disease, have an important role in the evaluation of coronary blood flow in objective. The main target of this research work is the assessment of the Coronary Flow by using TIMI frame count in patients with stable angina with metabolic syndrome.

METHODS: For this aim had been tested 151 patients in 59.9±10.5 ages. All patients had been divided into

three groups; To I group had been included 60 patients with stable angina with 3 criteria of metabolic syndrome, to II group had been included 50 patients with stable angina with 4 criteria of metabolic syndrome and to III group had been included 41 patients with stable angina with 5 criteria of metabolic syndrome. The rate of arterial pressure, anthropometrical indications, total cholesterol, triglycerides, and lipids level in blood had been defined in all patients. All patients underwent coronary angiography and TIMI frame count was calculated.

RESULTS: According to the results in patients' with stable angine with 5 criteria of metabolic syndrome the TIMI frame count was more ($p < 0.05$) than in patients with stable angine with 3 and 4 criteria of metabolic syndrome. Also in the patients with stable angina with 4 criteria of MS the LAD TIMI frame count was significantly more than in patients with stable angine with 3 criteria ($p < 0.05$) of metabolic syndrome.

CONCLUSIONS: The TIMI frame count is a simple, inexpensive and broadly applicable method to the understanding of the physiology and pathophysiology of coronary artery blood flow in patients with stable angine with metabolic syndrome. For this reason, the calculation of TIMI frame count in patients with stable angina with metabolic syndrome has an important role in the selection of treatment options and determining the prognosis of the disease.

26 March 2011, Saturday / 13:30-15:00 Non-Invasive Diagnostic Tests in Brugada Syndrome and Challenging Lead Extractions - Oral Presentations

OP-198 ASSESSMENT OF ATRIAL ELECTROMECHANICAL DELAY AND P WAVE DISPERSION IN PATIENTS WITH TAKAYASU'S ARTERITIS

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OBJECTIVE: Takayasu arteritis (TA) is a chronic inflammatory disease of unknown etiology, resulting in a granulomatous panarteritis of the aorta and its major branches. Cardiovascular complications, including cardiac failure, pulmonary hypertension, cerebrovascular accident, myocardial infarction (MI), and ruptured aortic aneurysm are the major causes of morbidity and mortality. Echocardiographic evaluation of electrical events especially atrial electromechanical delay (AEMD) is relatively novel subjects in cardiac ultrasound practice. Recent developments in tissue Doppler echocardiography, it is possible to assess precise analysis of atrial mechanical events from different regions with a high temporal resolution. It has been known that in patients with TA, left atrial pressure increases. We aimed to assess atrial electromechanical delay and P

wave dispersion (Pd) in patients with TA.
METHODS: A total of 32 TA patients and 22 hypertensive controls were enrolled. Transthoracic echocardiographic examination was performed in all subjects. Inter-AEMD and intra-AEMDs of both atrium were measured from parameters of tissue Doppler imaging. From the ECG recording, following the determination of Pmax and Pmin, Pd was calculated by subtracting the Pmin value from the Pmax value.

RESULTS: Thirty-two patients (30 females, mean age 41.0 ± 14.1 years) with TA were studied. Evaluation revealed hypertension in 23 (71.9%), severe aortic regurgitation in one, and mild to moderate aortic regurgitation in 8 patients (25.0%). The arterial lesions included type I in 6 (18.8%), type II in 6 (18.8%, 2 patients with IIa and 4 patients with IIb), type III in 1, and type V 19 (59.4%). Three (9.3%) subjects had pericarditis and/or pericardial effusion in patients with TA. Age, gender, smoking status, arterial blood pressure, LVEF, right ventricular functions were similar in patients and controls. When atrial electromechanical properties was assessed, inter-AEMD (54.2 ± 18.5 vs. 44.3 ± 13.0 , $p = 0.030$) and intra-left AEMD (45.6 ± 17.4 vs. 36.0 ± 11.1 , $p = 0.026$) were found to be significantly higher in patients with TA with respect to control group. However, no statistically significant difference was found in intra-right AEMD between the groups. The mean Pd was higher in patients with TA than control group (14.1 ± 4.2 ms vs. 11.2 ± 3.7 ms, $p = 0.008$).

CONCLUSIONS: Atrial electromechanical delay and Pd were higher in patients with TA even compared with control group with similar arterial blood pressure. Beside the arterial hypertension, this might suggest other possible mechanisms causing increased atrial conduction delay in patients with TA.

26 March 2011, Saturday / 17:00-18:30 Percutaneous Coronary Intervention: Unexpected Consequences - Oral Presentations

OP-212 EFFECT OF PRIMARY PERCUTANEOUS CORONARY INTERVENTION ON LEFT VENTRICULAR DYSSYNCHRONIZATION IN ACUTE PERIOD OF ST SEGMENT ELEVATION MYOCARDIAL INFARCTION

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²Department of Cardiology, Erzurum Regional Training and Research Hospital, Erzurum, Turkey

OBJECTIVE: Era of interventional cardiology has been rapidly expanding as a result of developments in equipments, strategies and adjuvant medications in percutaneous coronary intervention (PCI). In our study we aimed to demonstrate the effect of PCI on left ventricular dyssynchronization in acute period of ST segment elevation myocardial infarction via Tissue Synchronization Imaging (TSI) method.

METHODS: Forty-four myocardial infarction patients with ST segment elevation (29 male, 15 female) who

presented to coronary intensive care unit within 12 hours of chest pain. Echocardiographic imaging and measurements of patients were recorded and compared previously and after PCI before hospital discharge (approximately within 5 day).

RESULTS: Left ventricle systolic and diastolic diameter that measured via echocardiography were significantly decreased after PCI (respectively $p < 0.001$ and $p < 0.001$). Ejection fraction of the patients were significantly increased after PCI ($p < 0.001$). Using TSI method, measured pre PCI and post PCI non-apical reciprocal duplet four segment achievement to peak systolic velocities (T scores) of: basal lateral segment ($p < 0.001$), mid-lateral segment ($p < 0.001$), basal septal segment ($p < 0.001$), mid-septal segment ($p < 0.001$), basal anterior segment ($p < 0.001$), mid anterior segment ($p < 0.001$), basal inferior segment ($p < 0.001$) and mid inferior segment ($p < 0.001$) were all significantly decreased. The difference between the achievements to peak systolic velocity time of reciprocal segments was regarded as intraventricular dyssynchrony for left ventricle. Intraventricular dyssynchrony indexes of Basal anterior-Basal inferior (BABI) ($p < 0.001$), Mid anterior-Mid inferior (MAMI) ($p < 0.001$), Basal lateral-Basal septal (BLBS) ($p < 0.001$), Mid lateral-Mid septal (MLMS) ($p < 0.001$) segments were significantly reduced in post PCI period according to the values pre PCI.

CONCLUSIONS: we showed that PCI has an important effect to LV dyssynchrony on acute period of ST segment elevation myocardial infarction with TSI method. The detrimental effect of LV dyssynchrony on global functions of LV is the effect on remodeling of the ventricle after acute MI and one of the targets of management should be the dyssynchrony of the left ventricle.

26 March 2011, Saturday / 08:30-10:00 Congenital Heart Defects: Update in Surgical Approaches - Oral Presentations

OP-215 HYBRID PROCEDURES FOR CONGENITAL HEART DISEASE REPAIR

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OBJECTIVE: We herein present an alternative treatment in 7 patients with congenital heart disease employing the hybrid approach. The goal is to provide optimal therapy by minimizing the potentially harmful effects of methods that accompany conventional surgical procedures.

METHODS: From June 2006 to June 2010, 7 patients age 4 months to 56 years old with congenital heart disease underwent hybrid procedures for complex cardiac lesions. Two patients underwent beating heart closure of a muscular ventricular septal defect (VSD) with an occluding device. Also a patient with supra-aortic, main and branch pulmonary artery (PA) stenosis underwent conventional surgical patch augmentation of the ascending aorta and the main

pulmonary artery, while the branch PA stenoses were treated by intraoperative stenting. Four patients with tetralogy of Fallot (TOF) and branch PA stenosis underwent conventional pulmonary valve replacement and patch augmentation of the the main pulmonary artery, while the branch PA stenoses were treated by intraoperative stenting. Of these one had in addition intraoperative VSD closure with an occluding device.

RESULTS: There were no deaths. One patient had an open chest closure the first postoperative day. Another developed postoperative pneumothorax. Median ICU and hospital stay were 1 and 5 days respectively. At follow up of 2-48 (median 5) months, all patients remain well and free from further interventions.

CONCLUSIONS: Patients with muscular VSD can currently be treated with the hybrid approach. Residual VSD closure with an occluding device in reoperations can significantly reduce the operative time. Intraoperative pulmonary artery stenting in addition to conventional surgical repair can be performed safely and may be complementary in patients with complex lesions.

OP-218 RECOMBINANT ACTIVATED FACTOR VII IN PEDIATRIC CARDIAC SURGERY: SINGLE UNIT EXPERIENCE

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OBJECTIVE: To report our experience in the use of recombinant activated factor VII in preventing excessive bleeding after open heart surgery

METHODS: 14 patients who received rFVIIa as rescue therapy for excessive postoperative hemorrhage after cardiac surgery for the period of January, 2010 to date was analyzed. The perioperative blood loss via the chest drain before and after the administration of recombinant activated factor VII (rFVIIa) and the use of blood products, coagulation indicators (international normalized ratio (INR), activated partial thromboplastin (aPTT), before and after the rFVIIa was given were analyzed.

RESULTS: The recombinant factor VIIa was successfully used in stopping bleeding in all the patients. The mean coagulation results prior to rFVIIa were the following: INR 2.88 (range, 1.82-4.5); aPTT 65 seconds (range 33.4-95.1); after rFVIIa administration the mean INR was 1.2 (range, 0.82-1.56), mean APTT was 38.7 seconds (range, 25.6-54.9). There were no thromboembolic events or allergic reactions and no deaths recorded.

CONCLUSIONS: Our experience showed that the use of rFVIIa was effective in stopping intractable, safe in usage and indirectly reduced the transfusion of blood and its products.

OP-221 OUR EXPERIENCE WITH WARDEN'S PROCEDURE FOR THE REPAIR OF SINUS VENOSUS ASD WITH PARTIAL ANOMALOUS RIGHT UPPER PULMONARY VENOUS CONNECTION

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OBJECTIVE: To highlight our experience on the use of Warden's procedure for the repair of sinus venosus ASD with anomalous right upper pulmonary venous connection.

METHODS: A prospective study of 58 patients who had Warden's procedure from September, 2009 to Nov, 2010. Demographic data, preoperative and postoperative ECG, aortic cross-clamp time, cardiopulmonary bypass time, and length of ICU stay, length of hospital stay, postoperative echocardiography and complications were analyzed.

RESULTS: The male to female ratio was 1:1. The median age was 14.1 yrs (range, 2 to 48 yrs). Preoperatively all patients were in sinus rhythm. 26 patients had associated left superior vena cava and two patients had repair of supracardiac TAPVC at the same time. The mean follow up was 3.3months (range, 3months-1.3years) Postoperative ECG showed sinus rhythm in all the patients also the ECG done at first follow up which was usually 4 weeks was after discharge showed Normal Sinus Rhythm. The mean CPB time was 99.8 min(range,54-163min) and mean aortic cross-clamp time was 58.0min(range22-112min) The mean ICU stay was 1.33 days(range,1-4days) and length of hospital was 6.2 days(range, 5-13days) Postoperative echocardiography showed minimal or no gradient across the SVC-RA appendage anastomotic site. No mortality was recorded during the follow- up period.

CONCLUSIONS: This is the largest reported series of warden's procedure in the literature till date. It is known from other studies that Superior Vena Cava – Right Atrial appendage anastomotic site obstruction and Sinus Node dysfunction are quite a concern with the conventional techniques. However, from our short follow-up and looking at the literature these dual problems are much less with wardens' procedure than the conventional methods.

OP-222 STERNAL SPARING MINIMALLY INVASIVE APPROACH FOR ASD OCCLUSION

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OBJECTIVE: The recent development of transcatheter closure technique with Atrial Septal Occluder device provides an alternative therapeutic

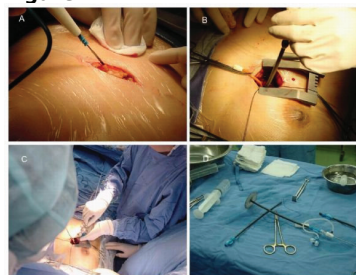
choice to surgery. However large secundum defects with limited septal margins or fenestrated septum are less suitable for percutaneous closure. We have been operating on these patients with a minimally invasive ASD occlusion technique which is combined the characteristic of both standard surgical ASD closure and intervention closure. We report our initial experience and mid term outcome with Transthoracic Minimally Invasive ASD Occlusion.

METHODS: The aim was to evaluate the safety and efficacy of ASD Occlusion by a transthoracic minimally invasive pathway. Nine patients with secundum atrial septal defects were selected for this procedure. We used a new product which including a unique delivery system through a transthoracic pathway.

RESULTS: There were 3 men and 6 women with a mean age of 26.4(9.6) years undergone this procedure from 2007 through 2010. All procedures were successful and there were no conversions to median sternotomy. Mean (SD) ASD size was 28.3 ±5.0 mm, including 2 cases for limited rim and one case for fenestrated septal. Mean (SD) procedure time were 54 ±24 minutes, Mean (SD) postoperative hospital stay was 3 (1) days. Mean follow-up reached 20.6 months (median 18, range 14-30 months). Follow up echocardiographic examination found a very small residual shunt in only one patient. The technique has no operative mortality so far.

CONCLUSIONS: The presented technique provides an alternative procedure for the correction of large secundum ASD, limited rim ASD or fenestrated septum

Figure 1



Steps of Procedure

**26 March 2011, Saturday / 13:30-15:00
Mitral and Aortic Valve Surgery: What is New? - Oral Presentations**

OP-229 BRAIN PROTECTION FROM EMBOLI ASSOCIATED WITH TAVI. FIRST IN HUMAN STUDY OF A SHEF TRANSCATHETER AORTIC EMBOLIC PROTECTION DEVICE

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OBJECTIVE: The aortic valve in adult aortic stenosis is heavily calcified. In recent publications as well as in the Partner study a high clinical stroke rate (>5%) is found following TAVI. An alarming rate 50%-92% new brain lesions with more sensitive DW-MRI (diffusion weighted MRI) shown in prospective

studies.

Brain embolization of calcific and atheromatous material from disruption of the diseased valve can be substantially reduced by aortic filtration and diversion of the debris downstream. The severe clinical implications of stroke and the outcomes of multiple small brain infarct, can be much reduced. Diversion of the emboli downstream will exchange a catastrophic adverse event into a minor subclinical or treatable problem.

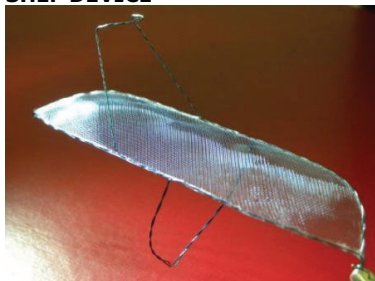
METHODS: SHEF is a proprietary transcatheter aortic embolic protection device, positioned in the aortic arch before TAVI. SHEF is made from Nitinol, a memory alloy, enabling crimping and reexpansion in a routine transcatheter fashion. It is designed to protect all branches of the aortic arch feeding the brain and upper body, by deflecting embolic material downstream.

Todate, 10 patients underwent SHEF protection. 7 were TAVI and 3 with other high risk for stroke indications. All procedures were carried out in one center. CENTER.

RESULTS: All 10 procedures were completed successfully. There were no major adverse events (MACE) including stroke. There were no minor adverse events (AE) nor local puncture-site complications. SHEF was introduced and positioned easily in all patients in less than 4 minutes. It had no interference with the primary procedure. SHEF is radiopaque and the deployment and location were controlled by fluoroscopy. SHEF did not use any added exposure to radiation.

CONCLUSIONS: SHEF embolic protection is feasible and safe for use in TAVI procedures. A pivotal study is underway to establish the safety and functionality of SHEF.

SHEF DEVICE



OP-230 MINIMAL ACCESS MITRAL VALVE REPLACEMENT

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OBJECTIVE: A variety of techniques including Mini-sternotomy(Gundry), right anterior mini-thoracotomy, Port Access approach (Heartport), indirect endoscopic techniques (Chitwood) and robotic techniques have been described to reduce surgical access in mitral valve surgery. The last three procedures are costly, involve a relatively long training curve and leave the patient with multiple scars in the chest and groin. We used a mini-

thoracotomy technique for mitral valve patients and compared our results with the conventional technique.

METHODS: We randomized 100 consecutive patients presenting to our practice for mitral valve surgery between two groups. The first group (test group) consisted of 50 patients in which mitral valve surgery was performed via mini-right anterolateral thoracotomy approach. The control group (50 patients) underwent classical mitral valve surgery through median sternotomy. Standard aortic and bicaval cannulation with antegrade blood cardioplegia was adopted in both groups.

RESULTS: There was no statistical difference between the two groups preoperatively regarding their age, pathology, LV function and male/female ratio. All patients had valve replacement. The incision in the test group was 12-15 cm long in the right submammary groove. Direct aortic cannulation using elongated aortic canula, clamping and cardioplegia administration was achieved in all patients easily. The mean bypass time was slightly longer in the test group. The cross-clamp time was lower in the test group. There was no hospital mortality in both groups and there was one morbidity in the form of sternal infection in the control group. The mean hospital stay was similar for both groups.

CONCLUSIONS: The cosmetic appearance in the test group was excellent that rivals that of robotically assisted techniques and the patients' wounds were scarcely apparent in the female patients. The study demonstrates the efficacy and safety of this older technique, with excellent cosmetic results and no additional cost or risk to the patients.

OP-232 CONSERVATIVE MITRAL VALVE SURGERY. A BRIEF REVIEW OF A SHORT TERM STUDY

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OBJECTIVE: The aim of this study is to report our results in conservative surgery for mitral regurgitation.

METHODS: Between January 2007 and May 2010 conservative mitral surgery was performed in 72 patients with mean age 61.7 ± 6.5 . Male /female ratio was 0.76. The mechanism responsible for mitral regurgitation was: Bileaflet prolapse 54.1 % prolapse of the anterior leaflet 26.5%, prolapse of the posterior leaflet 12.5%, annular dilatation 4.2% and free-edge erosion 2.7%. Rheumatic disease was the cause of regurgitation in 9.7%, degenerative 76.3%, endocarditis 4.2 %, ischemic 6.9 % and the others 2.8%. NYHA class 1 was 29.2 %, NYHA 2 26.4%, NYHA 3 41.6 % and NYHA class 4 2.8%. During the preoperative period 72.2% of patients were in sinus rhythm and 27.8 % in atrial fibrillation. Surgical techniques performed were: annular ring 5, commisurotomy and annular ring 6 patients, quadrangular resection and annular ring 8, edge to edge repair, quadrangular resection and annular ring 35, edge to edge and annular ring 16, quadrangular resection and chordal transposition 2. Left ventricular ejection fraction was above 45% in 66 patients (91.6%) Mean cardiopulmonary bypass

was 71 ± 11.2 min. and mean cross-clamp time was 56.2 ± 14.6 minute. The degree of preoperative insufficiency was 47.8%, 34.7% and 17.4% for 1, 2-3 and 4 degree respectively.

RESULTS: During the postoperative period only 30 % of the patients had grade 1 mitral insufficiency confirmed by TEE and 70% with no regurgitation. Hospital mortality was 1.3%. Follow up: Freedom from reoperation after 6 months was 100% for all the patients. Post operative NYHA class I was 68%, NYHA class II 26.4%, NYHA class III 4.2 %, NYHA class IV 1.4 %.

CONCLUSIONS: Despite the unbelievable technologic improvements, perfect valvular prosthesis still could not be developed. Preserving the patients' own valvular structure is the best method for treatment. In our small series we may conclude that, the conservative mitral valve surgery is a successful method for significant mitral regurgitation with its satisfied results.

OP-233 WHICH REGURGITANT MITRAL VALVES ARE NOT BEING REPAIRED?

R. Attia, J. Roxburgh, C. Blauth

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OBJECTIVE: To identify features of regurgitant mitral valves which predict failure to repair.

METHODS: All patients having mitral surgery for pure regurgitation during 2000-2008 were identified. Prospectively recorded clinical and echocardiographic data were analysed.

RESULTS: A total of 733 patients had surgery for pure mitral regurgitation. Repair was successful in 303 (41.3%). The remaining 430 had valve replacement, but in 131 (30.4%) the original intention had been to perform valve repair. The repair failures were classified into three groups. Group 1 where the valve was un-repairable on inspection, $n=91$ (69.5%). Group 2 where repair was attempted but abandoned, $n=19$ (20.9%). Group 3 where the repair was completed but deemed unsatisfactory by the operating surgeon, $n=21$ (16.0%). The valve pathologies involved were degenerative ($N=52/131$ 39.6%); group 1 $n=36$ (69.2%), group 2 $n=8$ (15.3%), group 3 $n=8$ (15.3%). Rheumatic ($N=45/131$ 04.3%); group 1 $n=32$ (71.1%), group 2 $n=8$ (17.7%), group 3 $n=5$ (11.1%). Ischaemic ($N=18/131$ 13.7%); group 1 $n=18$ (66.6%), group 2 $n=2$ (7.4%), group 3 $n=7$ (25.9%). Infective ($N=7/131$ 5.3%); group 1 $n=5$ (71.4%), group 2 $n=1$ (14.3%), group 3 $n=8$ (14.3%). The degenerative group were further subdivided according to pathoanatomy of the valves. Those having a posterior leaflet prolapse were most likely to be in group 1 $n=6$ (35.3%), group 2 $n=7$ (41.2%), group 3 $n=4$ (23.5%) respectively. Anterior leaflet prolapse was again more frequent in group 1 $n=14$ (82.4%), group 2 $n=3$ (17.6%), whereas there were no patients in group 3. Bileaflet prolapse was highest in group 1 $n=12$ (75.0%), while groups 2 and 3 had $n=2$ (12.5%) each. Additional procedures were carried out in 60 (45.8%) patients. Group 1 $n=45$ (75.0%), group 2 $n=8$ (13.8%), group 3 $n=7$ (11.6%).

CONCLUSIONS: Although repair was more likely to

be attempted in degenerative valves with isolated posterior leaflet prolapse, there was a marked lack of correlation between complexity of pathology and repair rate. The overall decision to repair appears to reflect surgeon attitude. This represents a missed opportunity to develop repair skills and therefore improve patient outcomes following mitral valve surgery.

OP-234 MINIMALLY INVASIVE VERSUS CONVENTIONAL AORTIC VALVE REPLACEMENT: A SINGLE CENTRE 5-YEAR EXPERIENCE

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OBJECTIVE: Data on the impact of minimally invasive approach on clinical outcomes after isolated aortic valve replacement (MIAVR) are limited and controversial. The aim of the study was to compare the outcomes of patients undergoing MIAVR and conventional aortic valve replacement (CAVR).

METHODS: The study consisted of 152 consecutive patients undergoing first time isolated AVR between 2005 and 2010 under one surgeon. Prospectively collected data were analysed on 60 patients undergoing MIAVR (partial J sternotomy) compared to 92 patients undergoing CAVR. Univariate and multivariate analyses were performed to identify predictors of outcome.

RESULTS: There was no in-hospital mortality in the MIAVR group vs. 2.1% in CAVR ($p=0.06$). Length of hospital stay and major complication rates were similar in both groups, despite the fact that MIAVR was performed in patients with a higher mean Logistic EuroScore 11.6% vs. CAVR 8.6% ($p=0.02$). Higher co-morbidity in the MIAVR group included: higher median age of 73 vs. 68 years, incidence of COPD 15/60 (25%) vs. 9/92 (9.7%) and extra-cardiac arteriopathy 10/60 (16.6%) vs. 5/92 (5.4%). There were no differences in the mean bypass time or cross clamp times MIAVR (60.4 and 45.6 mins) vs. CAVR (56.4 and 42.5 mins) respectively. Univariate analysis demonstrated that MIAVR was associated with reduced incidence of allogenic blood transfusion (27% vs. 12%, $p=0.03$) and chest infections (0 vs. 4.3% $p=0.02$). On multivariate analysis predictors for blood transfusion were increasing age (OR=2.2), prolonged bypass time (1.1) and CAVR (OR=2.3). There were no wound infections in the MIAVR group vs. 4.3% in CAVR.

CONCLUSIONS: MIAVR is safe and effective procedure that allows significant reduction in allogenic blood transfusion, wound infection and improvement of respiratory dynamics. The bony continuity of the rib cage is maintained, reducing the incidence of post-operative atelastasis and reducing chest infection rate. It should be specially considered in elderly patients with poor respiratory reserve and those at high-risk of sternal wound and chest infections.

26 March 2011, Saturday / 15:30-17:00
New Perspectives in Coronary Surgery
Oral Presentations

OP-235 A NEW TECHNIQUE OF SURGICAL VENTRICULAR RESTORATION FOR ISCHEMIC CARDIOMYOPATHY ALTERNATIVE TO DOR OPERATION: MEDIUM-TERM RESULTS

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OBJECTIVE: Aim of the study was to compare the results after surgical ventricular restoration (SVR) using the Dor technique (group A) and an alternative approach (group B), developed to reduce the progression of the left ventricular remodelling and limit the worsening of the diastolic function with time.

METHODS: Between March 2003 and March, 2010, 54 patients affected by ischemic cardiomyopathy received a SVR at our unit, along with surgical myocardial revascularization. The STICH trial criteria have been used as indication to SVR. The patients were divided in two groups. 28 patients (group A) underwent a classical DOR operation, using a bovine pericardial patch. In the remaining 26 patients (group B), a double-line "Horseshoe" semicircular, pledged purse-string and a second incomplete double-line suture more proximal to the apex were accomplished, in order to reduce the ventricular diameter at the equatorial level. Aggressive approach to the mitral valve incompetence and direct closure by Guilmet technique of the ventriculotomy completed the operation.

RESULTS: Early mortality was 7,6% in group A, 3,1% in group B. Reduction of LVED diameters, improvement of EF and NYHA class were more significant in group B ($p < 0,05$). Residual mitral incompetence was more frequent in group A. Late mortality (mean FU time 5,4 years) was 28% in group A, 8,1% in group B. Freedom from re-hospitalization was 81% in group A, 92% in group B.

CONCLUSIONS: Patients affected by ischemic cardiomyopathy seem to have a better short and long-time outcome after SVR accomplished with our surgical protocol, when compared to the classical DOR operation.

OP-236 PROGRESS FROM STANDARD ON-PUMP CABG-SURGERY TO ALMOST 100 % OFF-PUMP CORONARY ARTERY BYPASS GRAFTING (OPCAB) OVER 5 YEARS

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OBJECTIVE: Off-pump coronary artery bypass grafting (OPCAB) has been demonstrated to yield excellent results, especially in the high risk population. Due to technically more demanding surgery, however, it has not gained widespread use in the cardio-surgical community. In this study we describe the successful evolution of an OPCAB

program to reach an over 95 % OPCAB rate throughout the department.

METHODS: A retrospective review of our coronary artery bypass patient population over the past 5 years was done. Clinical results of OPCAB surgery are described and the conversion rate as well as reasons for conversion to on-pump CABG are analysed. The Medtronic Octopus system with or without addition of the Starfish device was used routinely. All patients received intraoperative graft assessment using Doppler flow measurement.

RESULTS: Between January 2005 and August 2010, 4137 patients underwent primary coronary artery bypass grafting at our institution. 1535 patients were operated on-pump and 2602 patients were grafted in OPCAB technique. The yearly conversion rate from on-pump to off-pump technique gradually went down from 13.6 % in 2007 to 0.9 % in 2010. The rate of emergent intraoperative conversion to on-pump surgery reached levels as low as 0.9 % in 2010. Overall operative mortality was 2.0 % in the on-pump group and 0.6 % in the OPCAB group 8 ($p < 0,001$). Early graft occlusion rate was unremarkable in both groups.

CONCLUSIONS: A successful OPCAB program with excellent results can be established safely, without compromise in surgical quality. Conversion rate can be lowered to a minimum. OPCAB skills for surgeons and anesthesiologists can be developed to a high level as long as a comprehensive OPCAB concept is implemented throughout the department.

OP-237 OFF-PUMP CORONARY ARTERY BYPASS GRAFTING WITHOUT AORTIC ANASTOMOSIS USING IN-SITU BILATERAL INTERNAL MAMMARY ARTERY – A NEW TECHNIQUE

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¹Fortis S. L. Raheja Hospital, Mumbai, India

²Manoria Heart Care Center, Mumbai, India

OBJECTIVE: Off-pump Coronary Artery Bypass Grafting (OPCAB) reduces the complications related to use of cardiopulmonary bypass. However the effects of using aortic side clamp during OPCAB is not eliminated if any graft is anastomosed to aorta. We describe here a simple technique of OPCAB using in-situ Internal Mammary Artery (IMA) as the only source of blood supply to the coronary grafts, thereby eliminating the need of aortic side clamp.

METHODS: We use OPCAB as a routine technique and use maximum number of arterial grafts possible in every patient. Every patient underwent preoperative assessment of bilateral subclavian artery. In our technique both IMAs were harvested whenever possible. One IMA was used to graft Left Anterior Descending Artery (LAD) and its branches. Other IMA was used to create a composite graft with radial artery (RA). This composite graft was used to revascularize the remaining coronary arteries.

RESULTS: All CABG records were analysed. Out of 194 OPCABs performed, this technique of bilateral IMA was used in 138 patients. Another 11 patient had grafts based on single IMA (Configuration 6). Thus aortic anastomosis was avoided in 149 (76.8%) patients. There was one hospital death in the study group due to intractable arrhythmia induced by old

anterior wall scar – grafts were documented to be patent by angiography. There were 2 late deaths due to unrelated illness. The remaining patients are doing well without any angina.

CONCLUSIONS: The patency and efficacy of in-situ IMA graft for CABG is well documented. Our technique used both in-situ IMA grafts. After grafting of LAD with one IMA, the IMA-RA composite graft was constructed. During this time LAD was perfused with one IMA graft. This may explain that fact that there was no conversion to CPB during grafting in spite of being a low volume center.

OP-238 CELL SAVER IN OFF-PUMP SURGERY

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OBJECTIVE: Off-pump CABG is potentially associated with reduced intraoperative blood loss and homologous blood transfusion in comparison to on-pump CABG. In this randomised controlled study we investigated the effects of autologous cell saver blood transfusion on blood loss and homologous blood transfusion requirements in patients undergoing off pump CABG.

METHODS: 40 patients were randomised into two groups: (A) off-pump with cell saver blood transfusion (CSBT), (B) off-CPB without CSBT. Volume of intraoperative autologous blood transfusion, postoperative mediastinal blood loss and homologous blood transfusion requirements were measured. Homologous blood was transfused when haemoglobin concentration fell below 8 g/dl postoperatively. Pre and postoperatively prothrombin time and partial thromboplastin time were measured.

RESULTS: Preoperative patient characteristics were well matched among the two groups. The amount of salvaged mediastinal blood available for autologous transfusion was similar in the off-pump group (A) compared to the off-CPB group (B) (233 ± 155 ml vs 271 ± 144 ml, P = 0.05). The cell saver group (A) received significantly less homologous blood than the group without cell saver (145 ± 197 ml vs 396 ± 394 ml, respectively, P < 0.005). Postoperative blood loss was higher in group B than in group A (560 ± 226, and 345 ± 260 ml, P > 0.05). Clotting test results revealed no significant difference between the groups. There was no significant difference in postoperative morbidity between groups.

CONCLUSIONS: Off-pump CABG is associated with significant reduction in intraoperative mediastinal blood loss and homologous transfusion requirements. Autologous transfusion of salvaged washed mediastinal blood reduced homologous transfusion significantly in the off-CPB group. Cell saver caused no significant adverse impact on coagulation parameters in off-CPB CABG. We recommend the use of autologous blood transfusion in both off-pump CABG surgery.

OP-239 VATS ON THE ONLY LUNG IN A PATIENT WITH ASYMMETRICAL PERICARDIAL AND PLEURAL EFFUSIONS – CASE REPORT

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OBJECTIVE: To report a case of VATS of a 70 year-old female patient with long-lived pulmonectomy and superimposed acute, massive pleural and pericardial effusions. She was admitted in hospital with cardio-pulmonary failure necessitating artificial ventilation

METHODS: Taking into account patient condition, her past medical history and potential complications of surgical, and non-surgical treatment we decided to perform VATS on the only lung for evacuation of both pericardial and pleural effusions. We opt for using bronchial blocker to preclude the RLL from ventilation, and allowing at the same time sufficient room for surgical manipulation.

RESULTS: There were not recorded deterioration of patient's sign during operation and the whole procedure went uneventfully.

CONCLUSIONS: In patient with pulmonectomy, VATS is possible alternative techniques for treatment of pericardial effusion.

OP-240 TOTAL ARTERIAL OFF-PUMP CABG WITHOUT BLOOD TRANSFUSION IN A LOW VOLUME CENTER – IS IT A MYTH

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OBJECTIVE: Advantages of OPCAB (off pump coronary artery bypass) are well documented. But conversion of OPCAB to CPB (cardiopulmonary bypass) is associated with higher morbidity and mortality. This is a particular concern in low volume centers or centers starting OPCAB. We are presenting a methodology of OPCAB using maximal no of arterial grafts.

METHODS: We use OPCAB as a routine in every patient unless there is any other associated condition. We used following methods to improve the safety of OPCAB:

1. Maintaining normothermia.
2. Routine use of PA catheter
3. Routine use of femoral arterial line
4. Routine use of cell saver
5. Complete revascularization

RESULTS: 175 consecutive patients were included in the study. Elective on CPB CABG was performed in two patients – one had a large atrial septal defect and the other had a LV (left ventricle) thrombus. All 173 patients underwent OPCAB without any conversion to CPB. Hemodynamic compromise in 5 (2.89%) patients required insertion of IABP (intra-aortic balloon pump). In all of them OPCAB was completed after IABP insertion. Both IMA was used in 160 patients (92.5%). Average number of grafts per patient was 4.18 and average number of arterial grafts per patient 3.75 and average number of venous grafts 0.43 per patient. BT (blood transfusions) was avoided in 55 (31.8%) patients and 68 (39.3%) patients required two or less units of BT.

CONCLUSIONS: The technique of OPCAB is still evolving. Low volume centers have higher rate of conversion to CPB. This may be a reason that OPCAB has found limited popularity particularly in low volume centers or among younger surgeons. Hypotension due to impaired LV function can be

successfully tackled by using IABP. Though blood loss can be managed by blood transfusion, use of cell saver helps to reduce the number of BT. Moreover, in case of ongoing blood-loss during OPCAB grafting, use of cell saver allows the surgeon to remain stress free and complete the grafting with perfection. Also we can use one size smaller intracoronary shunt which will not only make distal grafting less technically demanding but also decreases endothelial injury. It is our impression that routine use of cell saver is a major contributing factor. We conclude that our technique of OPCAB using arterial grafts can be safely performed in a low volume center. Routine use of cell saver during OPCAB reduces BT requirement and increases operator confidence and comfort.

OP-242 CARDIAC SURGERY IN NONAGENARIAN. SHOULD WE OPERATE?

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Khamis Mushyat, Saudi Arabia

OBJECTIVE: Growth of the elderly population worldwide will continue to accelerate and will have a profound impact on health care resources in the future. Patients aged 90 years and older represent a rapidly growing subset of this population, many of whom are functionally limited by cardiovascular disease. The question to operate or not to operate is still debatable. The aim of this study was to review our local experience with nonagenarians concerning postoperative morbidities, mortality, and short-term survival status.

METHODS: A consecutive series of nonagenarians (14 patients) who underwent cardiac operations between May 2007 and December 2009 were retrospectively reviewed. Data included baseline preoperative clinical status, intraoperative characteristics, and perioperative course and short-term clinical outcomes.

RESULTS: There were 2 women (14.3%) and 12 men (85.7%). There were 6 coronary artery bypass grafting (CABG) procedures (43%), 3 aortic valve replacements (AVR) (21.5%), one combined mitral valve replacement (MVR) and CABG (7%), 2 combined AVR and CABG (14%), one double valve procedure (7%) and one removal of left atrial clot (7%). Thirty-day mortality was 14% (2 deaths total; one operative death and one cardiac arrest at ICU day 2 postoperative). Short-term follow up (range, one month to one year), 11 patients 78.5 % are still alive. One patient is missing follow up. Two patients died during follow up from non cardiac causes. 7 patients (50%) have quality of life similar to average aged matched population without known cardiac disease.

CONCLUSIONS: Although morbidity, mortality, and cost may be higher in nonagenarian, advanced age itself (>90 years) should not be a contraindication to an open-heart operation.

26 March 2011, Saturday / 17:00-18:30 Innovative Surgical Approaches For Congenital Cardiac Defects - Oral Presentations

OP-243 SURGICAL EXPERIENCE IN THE ADULT CONGENITAL HEART DISEASES

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OBJECTIVE: The patients with adult congenital heart diseases have asymptomatic or non-serious symptoms. Surgical treatment is prevented the complications such as the heart failure and the development of irreversible pulmonary vascular disease.

METHODS: Total 218 patients were included in the study, 142 (%65) female, 76 (%35) were male. The average age was 32 (16-71). Primary cardiac pathology was atrial septal defect (ASD) in 173 patients, ventricular septal defect (VSD) in 31 patients, patent ductus arteriosus in 10 patients, tetralogy of Fallot (TOF) in four patients, Primary cardiac pathology was associated with anomalous pulmonary venous return with superior venous caval type ASD, single atrium type ASD, cor triatriatum type ASD, persistent left superior vena cava type ASD, and lutebacher syndrome was seen in eight patients, in five patients, in two patients, in one patient and in one patient, respectively. Patchplasty with intracardiac patch in 21 patients and primary suture in 10 patients with pledged sutures was performed in the VSD. The patients with PDA were underwent ligation and division. The patients with TOF were treated by total correction.

RESULTS: All patients underwent additional surgical procedures in accordance with additional cardiac pathologies. Three patients with single atrium type ASD was need permanent pacing after the operation. All patients were discharged within 6 to 10 days. Postoperatively there was no problem with medium or long term clinical and echocardiographic follow up.

CONCLUSIONS: The surgical treatment of adult congenital heart diseases should be done the best treatment method with low complication and high success rate.

OP-244 OFF PUMP FONTAN PROCEDURE IN CHALLENGING CASES

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Medical Faculty, Istanbul University, Istanbul, Turkey

OBJECTIVE: The last-stage palliation of patients with single ventricle physiology hearts is Fontan procedure and its modifications that can be performed with or without cardiopulmonary bypass in the current era. Pulmonary vasculature and status of the lungs are critically important for the success of the operation.

METHODS: Between 1998 and 2010, 24 consecutive patients underwent extracardiac Fontan operation. The operation was performed with cardiopulmonary bypass in 3 patients and without cardiopulmonary

bypass in 21 patients. 20 of these patients had staged Fontan procedure.

RESULTS: 6 of this 24 patients in which the operation was performed without cardiopulmonary bypass required difficult surgery. 3 of this 6 patients had pulmonary patchplasty for enlargement, 1 had reconstruction for shunt distortion and 2 patient had dextrocardia. There was no mortality among these 6 patients.

CONCLUSIONS: Off Pump Fontan procedure can also be performed in difficult and challenging cases. It provides good results in short and midterm follow-up periods with improved postoperative hemodynamics. Off pump fontan does not influence postoperative mortality but lowers postoperative morbidity.

OP-245 SURGERY FOR COMPLEX TRANSPOSITION OF THE GREAT ARTERIES, AND MODIFIED NIKAI DOH PROCEDURE

Z. Torlak, O. A. Sayin, S. Umaroglu, O. Goksel, U. Alpagut, E. Dayioglu, E. Tireli

Department Of Cardiovascular Surgery, Istanbul Medical Faculty, Istanbul University, Istanbul, Turkey

OBJECTIVE: Surgical management for patients with transposition of the great arteries (TGA), ventricular septal defect (VSD) and left ventricular outflow obstruction (LVOTO) still remains controversial. Rastelli operation has been widely performed procedure among these patients. Some of the other surgical strategies like arterial switch operation with relief of LVOTO, and Nikaidoh Procedure have been developed to improve results.

METHODS: Between 1998 and 2010, 18 consecutive patients underwent surgery for TGA-VSD-LVOTO. Surgical procedures involved were the Rastelli and Lecompte modification in 10 patients, arterial switch operation with relief of LVOTO in 5 patients. and Nikaidoh procedure was performed in 3 patients in which Rastelli operation could not be performed due to small restrictive VSD.

RESULTS: One patient from Rastelli and Lecompte group was died in early postoperative period. There was no dead among arterial switch group. Two patients from Nikaidoh group had complex coronary artery anatomy and one of them had gone due to cardiac failure in the early postoperative period.

CONCLUSIONS: Different surgical approaches have been developed for patients with TGA, VSD and LVOTO. The patients with a Z-score of pulmonary annulus about -2 or higher are good candidates for arterial switch operation with relief of LVOTO. Nikaidoh procedure can be performed in patients with small VSD. This technique for Aortic translocation seems promising but coronary anomalies bring higher mortality.

OP-246 SURGICAL REPAIR AND LONG TERM OUTCOME IN CONGENITAL SINUS OF VALSALVA ANEURYSMS: A 24-YEAR EXPERIENCE WITH 55 CASES

S. Sarikaya, A. Fedakar, M. Kalender, E. Aksoy, A. Elibol, M. Yanartas, M. Sismanoglu, M. Balkanay, M. Alp, M. K. Kirali

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OBJECTIVE: Aneurysms of the sinus of Valsalva (ASVs) are rare. Although unruptured ASVs are usually asymptomatic, ruptured ASVs often cause symptoms and needed emergency repair. The aim of our study was describing our experience and investigates results of operated Aneurysms of the sinus of Valsalva.

METHODS: This retrospective study included 55 patients (8 females (%14,5), 47males(%84,5); mean age 31 ± 12 years; range 10 to 65 years) who underwent congenital sinus valvula aneurysms repair operations at Kartal kosuyolu research and education hospital between January 1985 and march 2009. twenty-five of patients had additional lesions. Subarterial ventricular septal defect (VSD) was the most common associated defect (20 patients, 36 %), and aortic insufficiency the second (11patients, 20%). The origin of the ruptured aneurysms was the right coronary sinus in 41 patients (74%) and the non-coronary sinus in 10 (18%) left coronary sinus in one (2%). No ruptures were observed originating from the left coronary sinus one (2 %), right coronary sinus two (3%). The aneurysms ruptured into the right ventricle in 36 patients (65 %), into the right atrium in 14 (25%), and into the left ventricle in two patient (3%). Routinely To achieve repair, the aorta and cavity into which the aneurysm had ruptured were opened. The aneurismal sac was existed and defect repaired with patch in 35 cases, primary in 12 cases. Aortic valve replacements were performed eight cases, aortic valvuloplasty in three cases additionally. The patients were followed up at our outpatient department. Telephone calls were made, and questionnaires were sent to the patients for data collection when necessary.

RESULTS: Postoperatively, the NYHA class improved significantly in patients who had SVA repair. There were 3 early hospital deaths (mortality, 6 %) due to acute renal failure, low cardiac output syndrome and five death at late period (2 case cardiac, 3 case non cardiac). Surviving patients were followed up for 8.4 ± 3.8 years (range: 1 to 15years). The actuarial survival rate was 94 % at 10 years, 90 % at 15 years.

CONCLUSIONS: The operative results for SVA repair are excellent. Following diagnosis of ruptured sinus of Valsalva aneurysm, surgical repair is the treatment of choice. long-term survival rates of 94 % 10 years and 90% at 15 years. We conclude that SVA should be repaired surgically as early as possible.

OP-247 SURGICAL REPAIR OF COARCTATION OF AORTA

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OBJECTIVE: This study reviews the experience of a single center with surgery for coarctation of aorta (CoA) in neonates and infants over five years

METHODS: Fourteen neonates and infants (between 3 days and 12 months) who were operated for CoA in our clinic between 2005 and 2010. End to end anastomosis and extended resection were used techniques in both neonates and infants.

RESULTS: Eight neonates and six infants were operated. CoA is more frequent in male population. All infants have patent ductus arteriosus. Most associated cardiac anomaly were patent foramen ovale (in 7 patients) and bicuspid aorta (in 4 patients). Two neonates were died after operations because of sepsis who were preoperatively intubated and having inotropic support.

CONCLUSIONS: Although surgical repair for CoA seems to be the gold Standard, it is still associated with mortality and morbidity.

OP-248 BED-SIDE SURGICAL CLOSURE OF PATENT DUCTUS ARTERIOSUS IN VERY LOW BIRTH WEIGHT PREMATURE INFANTS

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OBJECTIVE: Premature neonates frequently have haemodynamically significant patent ductus arteriosus (PDA) which can lead serious complications. We present our experience on PDA surgical closure in 9 very low-birth-weight premature within a one-year of period.

METHODS: 10 very low-birth-weight premature (LWPN) who infants underwent PDA ligation in our pediatric cardiac surgery department between December 2009 and January 2011 were reviewed. In 4 bedside PDA ligation was performed in the premature intensive care unit (PICU). In the others it was performed in the operation room. The mean gestational age and birth weight was 26.7 (24-32) weeks and 1043.2 (450-2500) g respectively. All patients underwent a medical treatment for PDA closure. Because of the failure of medical treatment, all patients underwent surgical closure. Preoperatively 9 infants were ventilator dependent. Totally 2 infants was death. After operation, there were 1 deaths caused by complication of pulmonary hypertensive crises in bedside group. Another infant death was during the anesthesia induction due to hypothermia. It was at operation, the mean age was 32 days (9-80 days). The operation was performed through a left anterolateral thoracotomy in fourth intercostal space. One PDA was clipped with metallic haemoclips and the others was double ligation and transfixed. 7 preoperatively intubated babies survived and were extubated at 28 ±14,1days postoperatively

RESULTS: No LWPN died as a result of operation (0% early mortality). Post-operative period required

inotropic and diuretic infusion and a more aggressive ventilatory management.

CONCLUSIONS: In LWPNs, surgical PDA closure is usually given when medical treatment fails. The shift from medical to surgical closure should be based on clinical conditions being surgical PDA closure in PICU safe and effective also in extremely LWPNs. It can avoid transportation of critically ill, very small infants. We suggest surgical closure as the primary treatment in very-low-birth-weight infants who are ventilator dependent to avoid the possible complications of indomethacin and prolonged intubation.

OP-249 TOTAL CORRECTION OF TOF: CLINICAL OUTCOMES

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OBJECTIVE: Tetralogy of Fallot is one of the most common two congenital cardiac pathologies. The aim of study is to evaluate the clinical outcomes of 162 patients with TOF who admitted to Central Neftciler Hospital Cardiovascular Surgery Department between 2006 and 2010.

METHODS: The study population consisted of 156 patients (106 male) and 2-35 years of interval. In patients who had hematocrit level >60, elevated INR and elderly patients with coagulopathy, before surgery 1000-1500cc blood exfusion was performed and replaced with plasma or colloidal fluids. In appropriate and required patients, exfused blood products autotransfused again. Inreoperative evaluation Mc Goon index was used and 1,6-1,8 in 8 patients, 1,8-2,0 in 19 patients and >2,0 in 135 patients. In 128 patients this was the first procedure, but remaining 34 patients had BT shunt before. VSD were closed with continuous stiches by pericardial xenografts. Pulmonary annulus was assessed by kgx3 formula. In appropriate 41 patients pulmonary valves and also in 10x2 patients annulus was protected. Pericardial xenograft was used as transannular patch. (Ao/RV <0,6 in 81 patients; 0,6-0,8 in 63 patients; 0,8-1,0 in 18 patients). There was no operation for RV/PA gradient up to 40 mmHg. In patients with RV/PA gradient >40 (7patients) RVOT was dilatated under pump. AverageCPB duration was 50,1±9 minutes.

RESULTS: Additional congenital anomalies were classified as ASD in 26 patients, PFO in 97 patients, PSVC in 5 patients, dextrocardia in 2 patients, PDA in 19 patients and coronary anomalies in 2 patients. Early mortality occurred in 2 (1,2%) patients. Early reoperation required in 2 patients (residual stenosis at RVOT in a patient due to right ventricular failure at 7th day and due to right ventricular failure at 2nd month in other patient). Due to heart failure temporary sternal re-opening was performed in 3 patients and closed at 4th-5th days. Postoperative echocardiography revealed hemodynamically non-significant residual VSD in 7 patients, residual pulmonary gradient in 5 patients. No revision for AV block and hemorrhage. In a patient with TOF+ascending aortic aneurysm+3-4* aortic regurgitation, we performed total correctionfor

TOF, aortic valve repair and ascending aorta replacement.

CONCLUSIONS: During congenital cardiovascular surgical procedures the working group by surgeons, nurses and other health care workers was the main component of the good clinical outcomes.

OP-250 USE OF ISCHEMIA-MODIFIED ALBUMIN DURING CONGENITAL CARDIAC SURGERY: PRELIMINARY STUDY

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OBJECTIVE: Ischemia-modified albumin (IMA) is an excellent biomarker for MI because of early detection during ischemia and early decrease after ischemia allowing for easy detection of re-injury. It can also detect myocardial ischemia without necrosis and requires only simple testing. The aim of our study was to determine the effects of congenital cardiac surgery on the circulatory IMA levels.

METHODS: After receiving ethical committee approval, 8 patients were included in to this study. The samples were collected from 8 patients (3 male-5 female) underwent acyanotic congenital cardiac surgery. Age, sex, weight, CPB and aort clamping times, extubation times, ICU and hospital discharge days were recorded. All of the patients premedicated 30 minutes before operation with 0,5 mg/kg midazolam intranasally. The induction of anesthesia was provided with theiopental, morphine, vecuronium. Sevoflurane was administered at concentration levels of 1-2 % before CPB and 0.5-1 % during CPB. Samples were divided into 4 groups by the collection times (T1; before induction, T2; after CPB, T3; at the end of the operation, T4; 24th hours postoperatively). Patients provided for determined extubation criteria were extubated and provided for discharge ICU criteria were hospitalized. IMA levels was measured by albumin-cobalt binding test. Data were analysed by chi-square test and T-test.

RESULTS: There were no differences between the demographic data. IMA levels increased in T1, T2 and T3 when compared preoperative IMA levels. IMA levels increased by 29% after CPB. 25 and 10 % increase in the IMA levels were observed in T2-T3 group respectively. These increases were found to be statistically significant (p:0.037).

CONCLUSIONS: The data show that IMA levels can be used as a ischemia marker during congenital cardiac surgery.

OP-251 INTRAPERICARDIAL TERATOMA RESEMBLING TGA IN NEWBORN

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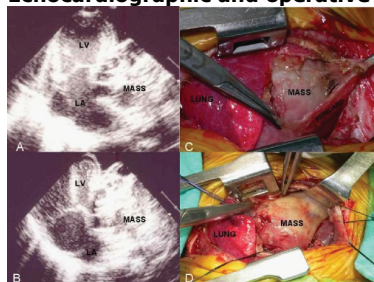
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OBJECTIVE: Incidence of primary cardiac tumors in infants is between 0,0017 to 0,28 (1). Intrapericardial teratomas are even rarer (2). Serious cardiac and respiratory symptoms are present at birth (3). We present an infant with a primary cardiac tumor, who is the fourth child of a 28 years old healthy mother. The tumor has been detected on ultrasound examination at 28th gestational week. He was born with a birth weight of 2250 mg and without any cardiorespiratory compromise at 36th week. The mediastinum was enlarged on chest X-ray examination. A 6x4 cm mass with dense and hypodense areas and well defined margins has been visualized near the LA on TTE. There was no collapse at the right side of the heart.

METHODS: He was operated on day 30. A left sided thoracotomy has been performed. His left lung was totally collapsed. The tumor has been identified after e pericardiotomy parallel to the left phrenic nerve. It was attached to LA, aorta and proximal site of pulmonary artery. The tumor has been totally excised without CPB. He was extubated on the next postoperative day. The pathological examination of the multiloculated, cystic, myxoid tumor revealed intrapericardial mature teratoma. There was no pericardial effusion and the cardiac functions were normal on TTE after the operation.

CONCLUSIONS: Teratomas in newborns are usually located in sacrococcygeal areas, testicles and ovaria, and in fewer cases at the neck. Intrapericardial teratomas are very rare. (5 to 6 in 10000 children), which are mostly benign and located at the roots of major vessels. They can be diagnosed after the 20th week of the pregnancy. A multilobulated, irregular with cystic and calcified areas can be visualized on fetal USG. CT and MRI are useful tools to detect the relation with surrounding tissues and multiplicity of the tumor. Pericardial and pleural effusion, ascites can be present, which may be responsible for tamponade. Surgical treatment is essential. Hydrops is a poor prognostic factor. Long term follow up is necessary for immature tumors or incomplete resection. Alpha-fetoprotein levels are useful for detecting recurrences.

Echocardiographic and operative view of the tumor.



26 March 2011, Saturday / 08:30-10:00 Peripheral Venous Diseases Revisited Oral Presentations

OP-253 ENDOVENOUS LASER THERAPY OF LOWER EXTREMITY VARICOSE VEINS: A SINGLE CENTRE EXPERIENCE OF 700 PROCEDURES IN 498 PATIENTS IN FOUR YEARS

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OBJECTIVE: In this study we evaluate endovenous laser ablation (EVLA), a percutaneous technique that uses intra-operative duplex ultrasound as an option for the treatment of lower extremity varicose veins.

METHODS: Guided by duplex ultrasonography, obtained data from 700 EVLA procedures in 498 patients between 2006 and 2010 were analyzed retrospectively.

RESULTS: A total of 700 procedures' success level was 97% and no major complications after treatment were recorded apart from one deep vein thrombus which occurred 2 weeks after a great saphenous vein procedure. Other complications were rare and simple such as skin hyperpigmentation, phlebitis, paresthesia ect.

CONCLUSIONS: EVLA is a safe and effective alternative to conventional surgery for the treatment of patients with varicose veins.

OP-254 VENOUS ULCER TREATMENT METHODS

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OBJECTIVE: Chronic venous insufficiency on the back of the leg ulcers typically consists of the internal malleolus. The purpose of this study is still an important treatment of venous ulcers in the treatment of venous ulcer patients treated with surgery and combined techniques were analyzed retrospectively, the methods to evaluate the clinical returns.

METHODS: Vakif Gureba Hospitals between January 2001 and January 2010. Heart and vascular surgery clinic at 250 c6 from the patient were evaluated. The mean age was 45.8. One of 178 female patients, 72 of them were male. 150 patients were right, 75 of them left, 25 of them were bilateral. 150 patients were performed and the vena safena manga stripping operation was performed wound care, 30 were

performed perforen vein ligation (2 with and 3-party) were performed, 20 were performed Linton perforen vein ligation was performed, 33 of them underwent external valvuloplasty, all 12 cases after operation, valvuloplasty yapıldı. hastaların antibiyoterapi was started. Patients recurrence, infection, hematoma, thromboembolism, bleeding was assessed in terms.

RESULTS: Patients were followed for 24 months after the operation. (15 days, 1 month, 3 months, 6 months, 12 months, 18 months and 24 months) Perforen vein ligation in 10 patients in the 2 hastada. stripping cruris hematoma occurred in these patients was also close enough to follow. None of the patients were embolism, There was no postoperative bleeding in patients, 15 of the patients due to external causes (heart failure, ht), mortality was observed. There was no recurrence in patients after treatment.

CONCLUSIONS: C6 according to CEAP classification of the surgical patients and give medical treatment in accordance with the patient's psychological need to remedy the existing wounds is necessary to correct diagnosis and correct treatment planning..

OP-255 ENDOVENOUS LASER ABLATION OF GREAT SAPHENOUS VEINS USING A NEW 1470 NM DIODE LASER AND THE RADIAL FIBRE – FOLLOW-UP AFTER SIX MONTHS

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OBJECTIVE: Endovenous laser ablation (EVLA) is an efficient method to treat insufficient great saphenous veins (GSV) with high occlusion rates. Most of the published EVLA data concern 810, 940, 980 nm diode lasers and 1064 or 1320 nm Nd: Yag laser systems. Major side effects are postoperative pain and bruising. The aim of the study was to assess outcome and side effects after EVLA of incompetent GSV with a 1470 nm diode laser (Ceralas E, biolitec) using a radial emitting fibre.

METHODS: Between September 2010 and February 2011, 68 saphenous veins of 59 consecutive patients where treated by EVLA for GSV incompetence. All patients were examined clinically and with duplex by an experienced phlebologist prior to intervention. In the same session all insufficient tributaries were treated by microphlebectomy. Laser treatment was carried out in a continuous mode with a power of 15 W. Local pain, ecchymosis, induration and paraesthesia in treated regions, vein diameter, tumescent anaesthesia volume, linear endovenous energy density (LEED) and venous clinical severity score (VCSS) were recorded. Follow-up visits were planned on the 2nd postoperative day, 7th day, 1st, 3rd and 6th months.

RESULTS: There was no significant difference concerning gender, age, body mass index or diameter of the treated vein. At the six month follow-up all treated veins remained occluded and no new reflux in the treated segments occurred. No severe complications such as deep venous thrombosis could be detected. The average linear endovenous energy density (LEED) with radial emitting fibre was 87 J/cm (SD 9.4). Mean tumescent anaesthesia volume/limb was 290 ml (SD 75ml). There was significant

difference in patient population on postoperative day 2, day 7 and 1st month control in VCSS.
CONCLUSIONS: EVLA of GSV with a 1470 nm diode laser is a minimally invasive, safe and efficient treatment option with a high success rate. Using a radial emitting fibre may additionally improve postoperative results.

OP-256 CLINICAL EXPERIENCES OF THE PATIENTS THAT VENA CAVA FILTER IS USED

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OBJECTIVE: Deep venous thrombosis is the cause of morbidity and mortality about its complications. Vena cava filter is a treatment option in patients that cannot be treated by anticoagulant or trombolitic for preventing pulmonary embolism. In our clinic, we focused on clinical outcomes of patients that vena cava filter is used.

METHODS: Between January 2007 and December 2010 we used vena cava filter (Cordis OPTEASE by Johnson & Johnson Company, USA) in 12 patients who have deep venous thrombosis. At the same time they cannot be treated by anticoagulant therapy because of their clinical condition. This procedure is performed with local anaesthesia under scopy device by replacing the filter under renal veins. Prosedure was established via femoral vein.

RESULTS: Mean age of 12 patients were 62.2 ± 7.9 . During the procedure in 1 patient filter was replaced to right atrium. Following this, filter was taken and it was again replaced to infrarenal location. In other patients, there were no complications during this procedure. 5 patients improved clinically and radyologically. For 2 of them, we planned displacement of filter after one month. However because of the disfunction of a filter component, displacement could not be done. Other 3 patient's follow up is still continuing.

CONCLUSIONS: For the patients who have pulmoner embolism and cannot be treated by anticoagulant treatment, vena cava filter is an effective method for prevention of important complications. Although this technique is not used frequently, we consider that it can be used confidently in many patients.

Table 1. Characteristics of patients

Characteristics of patients	n
Sex (male/female)	2/10
Elective surgical operation	6
Surgical operation from the past	2
Intracranial bleeding	2
Bone fracture	5
Gastrointestinal bleeding	2
Pulmoner embolism	1

OP-257 THE RETROSPECTIVE EVALUATION OF VENOUS THROMBOEMBOLISM CASES REGARDING GENETIC MUTATION AND RECURRENCE AT DOKUZ EYLUL UNIVERSITY HOSPITAL, CARDIOVASCULAR SURGERY DEPARTMENT

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OBJECTIVE: Venous thromboembolism (VTE) is the leading cause of considerable morbidity and mortality worldwide. Genetic mutation (GM) as a subject of influencing factor on recurrence is under debate. Furthermore, these different point of views cause different opinions about the timing of GM analysis and the anticoagulant treatment duration in these cases. The aim of this study is to reveal the type and coincidence of GMs in VTE cases along with the effect of them on recurrence.

METHODS: Between 2008 and 2009, 109 cases, already have been evaluated for GM at our clinic, constitutes the study group. The study was performed retrospectively and cross-sectionally.

RESULTS: Factor V Leiden, Prothrombin G20210A, MTHFR C677T and A1298C was found in 33%, 14,7%, 59,6% and 43,1% of cases. While GM was present in 93,9% of cases with primary-VTE, it was found in 89,5% of cases whose VTE was not primary. The risk of the recurrence in cases with one, two and ≥ 3 GM was in sequence 3.34, 11.12, 49.5 times more. In further analysis, it was found that the significance of the difference was empowered along with the increasing number of genetic mutations per case. In binary logistic regression analysis, it was determined that the significance in age of ≥ 40 years [OD:9,1 (95% CI:1,7-48,4), $p=0,01$], every one unit increase in total risk factors [OD:18,36 (95% CI:5,4-62,6), $p<0,001$], every one unit increase in total GM [OD:6,7 (95% CI:2-21,7), $p=0,001$], the history of surgery [OD:7,7 (95% CI:2,1-28,3), $p=0,002$], the existence of medical illness [OD:8,3 (95% CI:2,3-29,8), $p=0,001$] and the existence of malignancy [OD:8,7 (95% CI:1,5-49,5), $p=0,015$] were continuing.

CONCLUSIONS: This study reveals the existence of GM as an important factor on recurrence of VTE. The increased risk of recurrence in increasing total number of GMs, along with the GM as an unmodifiable condition becomes a current issue, the question of conducting GM analysis in all cases with VTE. Although GM analysis is recommended in cases with primary-VTE, the determination of GM in 89,5% of cases without primary-VTE supports our opinion that all cases with VTE ought to be analysed at their first episode of VTE. Because the existence of GM increases the risk of recurrence and the consequences of recurrent events on loss of employment-power, economic burden along with morbidity and mortality, we recommend to perform GM analysis at the first event and to anticoagulate individuals with combined genetic mutations lifelong, except coincidence of MTHFR C677T and A1298C.

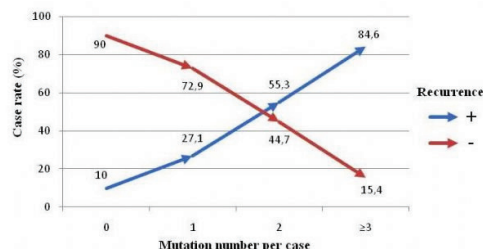
Table 1. Factors affecting recurrence of VTE.

Factors	χ^2	p
Age ≥ 40 yrs	5,37	0,018
Increase in total risk factors	64,27	<0,001
History of operation	7,52	0,006
Existence of internal disease	8,8	0,003
Malignity	4,67	0,031
In-hospital episode	8,8	0,003
Existence of genetic mutation	4,68	0,042
Increase in mutation number	21	<0,001
Existence of FVL mutation	13,2	<0,001
Combined FVL and MTHFR mutation	23,43	0,003

Table 2. Comparison of VTE recurrence rate between mutation number groups.

Mutation number	χ^2	n	p
0 - 1	1,32	58	0,25
0 - 2	6,53	48	0,01
0 - ≥ 3	12,61	32	<0,001
1 - 2	7,05	86	0,008
1 - ≥ 3	14,19	61	<0,001

The relationship between GM number and recurrence.



26 March 2011, Saturday / 10:30-12:00 Surgery for the Aorta and The Peripheral Realistic Opportunities - Oral Presentations

OP-258 MIDTERM RESULTS OF AORTIC VALVE REPLACEMENT WITH CRYOPRESERVED HOMOGRAFTS

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OBJECTIVE: This study was performed to analyze the midterm clinical results of aortic valve replacement with cryopreserved homografts

METHODS: Aortic valve replacement performed in 40 patients (26 male, 14 female, aged 0-79, median: 40 years) with cryopreserved homograft. The indication was aortic valve endocarditis in 20 patients (50%), truncus arteriosus in 6 patients, re-do operation after aortic valve reconstruction in 14

patients. The valve sizes ranged from 10 to 27 mm and median diameter was 21 mm. Root technique was used for homograft replacement in all patients.

RESULTS: Mean cardiopulmonary bypass time was 96 ± 31.6 minutes and the cross clamp time was 82 ± 53 minutes. Mean intensive care stay was 3.8 days and mean total post operative stay was 12.1 days. The 30-day postoperative mortality rate was %12.5 (5 patients). There were 4 late deaths. Only 1 of them was of cardiac related. Overall mortality was 22.5%. 33 patients were followed for 67 ± 26 months (median: 18 months). Two patients needed reoperation due to aortic aneurysm caused by endocarditis. The mean transvalvular gradient significantly decreased after valve replacement ($p < 0.003$). The last follow up showed that the 27 (82 %) patients had a normal left ventricular function.

CONCLUSIONS: Cryopreserved homograft are safe alternatives to mechanical valves that can be used in adequate indications. Although it has high perioperative mortality, cryopreserved homograft implantation is an alternative for valve replacement particularly in younger patients and in removing conditions which causes complex surgical problems such as endocarditis.

OP-259 RELATIONSHIP BETWEEN LOSARTAN TREATMENT IN ASCENDING AORT DILATATION AND CIRCULATING PLASMA MATRIX METALLOPROTEINASE 9 CONCENTRATION (GELATINAZ-B)

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OBJECTIVE: Expression of matrix metalloproteinase (MMP) has been shown in aortic dissection and aneurysms indicating increased proteolysis compared with the normal aorta. We attempt to determine the relationship between losartan treatment in ascending aort dilatation and circulating plasma matrix metalloproteinase-9 concentration.

METHODS: The 61 hypertensive patients (stage 1 for JNC VII) and with ascending aort dilatation (male > 3.7 cm; female > 3.6 cm) were included in the study. All participants underwent a complete transthoracic echocardiographic examination including ascending aort and aortic root measurement. Plasma concentration of MMP-9 were determined by the one step sandwich enzyme immunoassay method in first examination and compared with after a year of losartan treatment.

RESULTS: The MMP-9 levels after a year of losartan treatment were lower than basal levels ($p < 0.001$). Significant changes were not found in the diameters of the ascending aort ($p = 0.1$). One correlation analysis, we found a positive correlation between ascending aort diameter and plasma MMP-9 levels ($r = 0.40$, $p = 0.006$).

CONCLUSIONS: The MMP's have a significant role in aortic aneurysm formation. Ascending aort dilatation is associated with higher MMP release, which may indicate the role of increased collagenolytic elastolytic activities in hypertension-induced aortic dilatation.

Regulation of blood pressure and lowering the MMP levels may slow the progression of aortic aneurysm.

OP-260 CILOSTAZOL, A TYPE-III PHOSPHODIESTERASE INHIBITOR, REDUCES ISCHEMIA/REPERFUSION INDUCED SPINAL CORD INJURY

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OBJECTIVE: Neuroprotective effects of cilostazol against focal cerebral ischemic injury have been reported in experimental studies in rats. This neuroprotective potential has been ascribed to its anti-inflammatory and anti-apoptotic effects mediated by scavenging of hydroxyl radicals. However, the effects of cilostazol on spinal cord ischemia-reperfusion injury have not been reported to date. This study was designed to investigate the protective efficacy of cilostazol on the neurologic and histopathologic outcomes of spinal cord ischemia caused by aortic occlusion in rats.

METHODS: In this experimental study, animals were divided into three groups in a randomized fashion. (1) Vehicle-treated sham group (Group1, n=8): The operation was performed in the same fashion but without aortic occlusion and drug intake. (2) Vehicle-treated ischemia group (Group2, n=8): The animals underwent aortic clamping and spinal cord ischemia for 45 minutes without drug intake. (3) Cilostazol group (Group3, n=8): The animals had cilostazol therapy (20 mg/kg/day orally) for 3 days before operation. Aortic clamping and spinal cord ischemia were performed for 45 minutes. All rats had neurological examination including motor and sensory function preoperatively and at 48 hours after surgery. Spinal cord function was graded according to the modified Tarlov scoring system. The rats were sacrificed by a lethal intracardiac injection of pentobarbital. Sections of the lumbar spinal cord were harvested for histologic examination immediately after lethal injection. The spinal cords between the levels of L1 and S1 were extracted carefully through an anterior approach.

RESULTS: The malonyldialdehyde level of cilostazol-treated group was lower than that of the ischemia group (0.27 ± 0.01 mmol/g versus 0.33 ± 0.04 mmol/g, respectively; $p=0.026$). This finding indicated a decreased oxidative stress after cilostazol treatment. The superoxide dismutase level of cilostazol-treated group was higher than the ischemia group (519.6 ± 56.3 U/g versus 438.9 ± 67.4 U/g, respectively; $p=0.016$). Spinal cord GSG-Px level was significantly higher in cilostazol-treated group, compared to the ischemia group (4.07 ± 1.37 U/g

versus 3.21 ± 1.02 U/g, respectively; $p=0.47$). The total injury score was significantly increased in I/R group, indicating significant spinal cord injury. After cilostazol treatment, the damage to the motor neuron cells was only slight, and large populations of cells were preserved. Nevertheless, axonal structures in the white matter were mostly deteriorated compared with normal white matter. Conversely, total histological injury score was significantly decreased in the cilostazol treatment group, indicating significant attenuation of the spinal cord injury. **CONCLUSIONS:** Cilostazol treatment before tissue ischemia protects the spinal cord from I/R injury in rats. This protection is probably associated with decreased oxidative stress in the spinal cord tissue. Cilostazol treatment can be beneficial for the prevention of neurologic deficits after descending aortic and thoracoabdominal aortic pathologies.

OP-261 SUBCLAVIAN ARTERY OCCLUSION AND SURGICAL RESULTS OF MID-DOME EXPERIENCE

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OBJECTIVE: In this study, surgical treatment of subclavian artery stenosis were analyzed retrospectively, the clinical methods to assess the returns

METHODS: 2001-2010 vakif gureba hospitals on heart and vascular surgical clinic in January subclavain evaluated 50 patients scheduled for surgery because of arterial stenosis. 20 of the female patients, 30 of them were male. The mean age of patients was 56.4 tumors. Right subclavain artery stenosis in 10 patients, 35 of them left subclavian artery stenosis, 5 of them had bilateral arterial stenosis. Hypertension in 10 of these patients, 15 of them had diabetes, and smoking status in all patients. Cerebral artery and the carotid artery in 50 patients, 27 of them because there is a narrowing axillo Axile bypass these patients, 18 patients with stenosis of the carotid and cerebral artery bypass caroticosubclavian not exist, bilateral subclavian artery stenosis was present in 5 with aorticosubclavian bypass. Patients after the operation, infection, relapse, mortality, in terms of thrombus were evaluated retrospectively

RESULTS: Axilloaxiller thrombus was seen in 3 patients, and thromboendarterectomy was performed in acute period. caroticosubclavianda thrombus was observed, aorticosubclavianda thrombus was observed. Infection was seen in 2 patients only aorticosubclavian of bypass, they saw the benefit from medical treatment. Early or late stage of tumor and surgery-related mortality was observed in any cases, caroticosubclavian bypass in 1 patient, postoperative 1 axilloaxiller of bypass in 3 patients days hematoma was seen in these patients was only close enough to follow.

CONCLUSIONS: According to the patient instead of the subclavian stenosis arterindeki strategy by developing alternative methods of applying a variety of subclavian artery stenosis with low morbidity successfully applied to surgical reconstruction

OP-262 INTRATHORACIC AORTIC DISEASES AFTER CARDIAC SURGERY IN LONG TERM

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OBJECTIVE: The aim of this study when should we consider to interfere to ascending aorta which patient has borderline dilated ascending aorta. It is hard to know the true incidence of the intrathoracic aortic diseases after cardiac surgery. This issue depends on different reasons. These patients have surgeries in different centers or these patients can not apply the hospital cause of high mortality risks and they may not survive more than several hours. Sometimes surgeons don't want to interfere borderline dilated ascending aorta because its easy way. But these patients may apply with dissected ascending aorta or ascending aorta aneurysm with high mortality risk.

METHODS: We evaluated which patients had operated our hospital between 2000-2009. This study includes 50 patients have intrathoracic aortic disease before whatever cardiac surgery is made. 39 patients were male (78%), 11 patients were woman (22%). Mean age of patients were 52.1±13.9. 14 patients had aortic dissection, 26 patients had aortic aneurysm, 8 patients had descending aortic aneurysm, 2 patients had ascending aortic pseudoaneurysm. 41 patients had aneurysm, 5 patients had aortic dissection without aneurysm. 46 patients were operated and 4 patients were followed of medical therapy. Between two operation time was 8.5±7.4 months. First operations of the patients were 11 CABG, 17 AVR, 6 supracoronary graft interposition, 1 descending aortic graft interposition, 1 MVR, 3 repair of aortic coarctation, 2 TOF totally correction, 2 AVR+CABG, 1 AVR+MVR, 2 AVR+supracoronary graft interpositions, 2 CABG+supracoronary graft interpositions, 2 Bentall de Bono procedures. Second operation of the patients were 14 supracoronary graft interpositions, 5 CABG+supracoronary graft interpositions, 13 Bentall de Bono, 8 descending aortic graft interpositions, 6 AVR+supracoronary graft interpositions.

RESULTS: Total mortality rate was 32% (15 patients). 5 patients emergently operated and all of them became exitus. Age was statistically significant in mortality group ($p=0.01$). Aortic cross clamping time was higher in mortality group ($p=0.02$). Total perfusion time was higher in mortality group ($p=0.004$). Sex was not statistically significant. In this study after AVR operations development of aortic aneurysm or dissections were higher than other groups ($p=0.06$). We found that preoperative aortic radius is important for development of aortic dissections or aortic aneurysm. 4.3 cm or higher aortic radius has higher risk of aneurysm and dissection after operation in mid-long term.

CONCLUSIONS: Although development of cardiac surgical procedures cardiac reoperations mortality are still high. Our study shown that 32% mortality range extremely high and its associated with

age. Therefore life expectancy increases, reoperations rates will increase too. Avoiding of palliative treatment is best goal in first operations.

OP-263 MEDIUM-TERM RESULTS IN PATIENTS UNDERGOING PROFUNDAPLASTI

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OBJECTIVE: Profunda femoris artery superficial femoral and / or popliteal occlusion in the presence of current primary source of collateral for the lower extremity. The aim of this study, the importance of the deep femoral artery for blood supply retrospectively to review the lower extremity.

METHODS: 2005 Jan-2010 Jan between the heart and vascular surgery clinic Vakıf Gureba hospital this research was performed on 250 patients. The mean age was 57.2. The number of female patients, 95, 155 patients were male. 110 patients were operated on the left hand one right hand, 140 of them. Iliac and femoral artery stenosis patients, 85 of them, 100 of them common femoral artery stenosis, 65 patients had stenosis of the profunda femoral Arter. 120 patients in addition to hypertension, 190 of them had diabetes, 80 of them had KOAH disease. 85 patients was ABF +, profundaplasti, 100 patients was fempop + profundaplasti bypass, 35 patients was the femoral cross + profundaplasti, 30 patients was the profundaplasti. Patients mortality, recurrence, bleeding, acute embolism, infection, amputation was checked for.

RESULTS: These patients Hematoma: Fempop the 12 patients, 5 patients in the femoral cross, was seen in 15 patients with ABF. Patients with clinical follow-up of these patients declined to hematomas, Infection: In 5 of the patients who underwent ABF, fempop of the patients who were 7 of them. This is lined with infection of the patients in intensive antibiotherapy declined. Acute embolism: Fempop the 7 people, 10 patients in the ABF postoperative 1 day was an acute embolism. thromboendarterectomy was performed in patients. The symptoms resolved after the patients thromboendarterectomy. Mortality: ABF 15 patients, post-op day mortality from MI was observed. External cause mortality was seen in 50 patients. Amputation: ABF and fempop the 16 patients operated on in spite of the 9 patients achieved adequate blood flow to the distal finger amputation (10), the metatarsal amputation (6), below knee amputation (6), amputation above the knee (3) operation was performed. Patients were asked to return again after 3 years 190 patients Navision as it was the patients were asked to Doppler ultrasound and Doppler ultrasound in patients with critical limb ischemia, 30 of them, 20 of them showed signs of non-critical limb ischemia.

CONCLUSIONS: Patients with planned operations in profundaplasti bypass aspect ratio of the time and the intervention of a higher rate of amputation of the foot gangrene or lower. Therefore, the operation should be added profundaplasti.

OP-264 SURGICAL TREATMENT FOR ACUTE MESENTERIC ISCHEMIA

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OBJECTIVE: Mesenteric ischemia was first described in the 15th century by Antonio Benivieni. It is due to a reduction in intestinal blood flow, which is almost commonly caused by occlusion, vasospasm, or hypoperfusion of the mesenteric vessels. Acute mesenteric ischemia (AMI) is a potentially fatal vascular emergency with overall mortality of 60% to 80%, and its reported incidence is increasing. In this study we aimed to present the outcomes, effects and early results of Superior Mesenteric Arterial (SMA) Embolectomy operations that performed in last ten years.

METHODS: Between January 2005 and April 2010, 16 consecutive patients (8 males, 8 females, mean age 70.6 ±11.3 years; range 44 to 86 years) in whom AMI or SMA embolism was diagnosed were treated in our hospital. Clinical data of patients with AMI were reviewed and analyzed retrospectively.

RESULTS: Fourteen patients presented with sudden onset of abdominal pain. The duration of abdominal pain before diagnosis was 3-18 hours (mean, 9.2 hours). One were posttraumatic and the other were after abdominal aortic aneurysm operation. Small bowel necrosis was detected in all patients, while colonic involvement was present in 5 (31.2%). Concomitant embolectomy was also performed in all these cases. Bowel anastomosis was established in 4 (25%). Hospital mortality rate was 75% (n=12).

CONCLUSIONS: The overall mortality rate due to AMI is 70%-90% and SMA embolism is the frequent cause of ischemia. The strategy for definitive treatment depends on etiology. Appropriate treatment of SMA embolism is usually immediate surgical embolectomy, resection of gangrenous bowel segments, or both. The prognosis of AMI of any type is grave. Patients in whom the diagnosis is missed until infarction occurs have a mortality rate of 90%. In accordance with the published reports, we believe that early diagnosis is the main problem still remain to be solved.

OP-265 INFRARENAL ANEURYSM SURGICAL EXPERIENCE

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OBJECTIVE: Aneurysm, focal dilatation of the normal vessel diameter increased more than 50% describe. Symptomatic or rapidly progressing aneurysms. For this reason, a ruptured abdominal aortic aneurysms are a fast growing and surgeon should intervene. In this study, we retrospectively evaluate patients with abdominal aortic aneurysm due to the intervention.

METHODS: 2005 Jan-2010 jan between the heart and vascular surgery clinic Vakıf Gureba hospital Infrarenal abdominal terms emergency response due

to the 1120 patients Aortic Aneurysm research are included. Patients with average age was 65.2. 75 patient were female, 45 patients were male. 45 of them had diabetes 65 of them had hypertension and 35 of them had KOAH disease. Infrarenal abdominal aortic aneurysm patients is the average size 7*6,5. Patients were operated in emergency conditions. Aortic aneurysm repair and operation has been held and patients postop intensive care hospitalization. (mean a day intensive care stayed) Patients mortality, bleeding, acute embolism, infection was checked for.

RESULTS: The patients were treated at regular intervals followed closely. During the 10 patients into the intensive care unit after surgery died. 3 of them in the post-op 3 a day died of MI. 5 of the patients were hematoma. Hematoma was observed during follow-up, 3 patients postoperative a day acute embolism was seen, and fell to the thromboendarterectomy. 2 days postoperative wound infections were observed in 7 of the patients, the infection resolved with intensive antibiotherapy.

CONCLUSIONS: Infrarenal abdominal aortic aneurysm is a disease with high mortality. And the response must be immediate. Intervention should be at the right time to reduce the rate of patient mortality.

26 March 2011, Saturday / 13:30-15:00 Therapeutic Hopes in Heart Failure: Cardiac Resynchronization Therapy and Transplantation - Oral Presentations

OP-267 THIRTEEN YEARS SURVIVAL ON ORTHOTOPIC HEART TRANSPLANTATION; SUMMARY OF THREE PATIENTS

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OBJECTIVE: Purpose of this study is to evaluate the three cases undergone orthotopic heart transplantation with the diagnosis of noncoronary dilated cardiomyopathy followed up about 13 years

1st CASE: B.P. 39 years old, male patient. Left ventricle end systolic diameter (LVESD) 5.5 cm., left ventricle end diastolic diameter (LVEDD) 6.7 cm. left ventricle ejection fraction (LVEF) 30%. The patient had undergone biatrial orthotopic heart transplantation on November 7, 1997. Total ischemic time 207 min. 2nd case: H.E. 19 years old female patient. LVESD 6.7 cm., LVEDD 7.4 cm. LVEF 20%. The patient had undergone biatrial orthotopic heart transplantation on November 24, 1997. Total

ischemic time 260 min. 3rd case: R.A. 30 years old male patient. LVEDD 6.1 cm., LVEDD 6.5 cm. LVEF 25%. The patient had undergone biatrial orthotopic heart transplantation on December 3, 1998. Total ischemic time 214 min.

RESULTS: All three cases were extubated on postoperative day first. Cyclosporine, azothiopurine and corticosteroid triple combination therapy were administered in the antirejection treatment. No major early complication occurred on the 1st cases. Total right hip replacement was performed due to aseptic femur necrosis on the postoperative 4th years. In third cases, aspergillosis lung infection and abscess formation had developed in second postoperative months. The infection was relieved with long term antibiotic treatment and drainage under CT guidance successfully. Now, all three cases are following up NYHA Class 1-2 on postoperative 13 th years.

CONCLUSIONS: Long term survival in orthotopic heart transplantation depends on many factors. Mainly, donor and recipient characteristics, surgical procedure, early postoperative and late possible complications should be evaluated and treated carefully.

OP-268 PLASMA ASYMMETRIC DIMETHYLARGININE (ADMA) LEVELS AS A SIGN OF REJECTION IN HEART TRANSPLANTED PATIENTS

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OBJECTIVE: Asymmetric dimethylarginine (ADMA) is a regulatory factor in Nitric oxide (NO) biosynthesis. It is competitive inhibitor of Nitric oxide synthetase (NOS). Nitric oxide takes place in endothelial vasodilatation, smooth muscle proliferation inhibition and cell-to-cell interaction in vessels. NO is important in endothelial derived vascular homeostasis. Endothelial injury has a role in rejection pathophysiology and ADMA, a sign of endothelial dysfunction, may be used as a rejection parameter. Yet there is no proof between ADMA levels and rejection in literature. We aim to look for any possibility of using ADMA levels as a non-invasive diagnostic method of rejection in heart transplanted patients.

METHODS: 45 heart transplanted myocardial biopsy planned patients (10 women, 35 men) were taken and plasma ADMA levels were explored before biopsies. We looked for relation between pathology results and plasma ADMA levels.

RESULTS: Rejection was showed in 14 of 45 patients (4 women, 10 men). Average plasma ADMA level in rejection group was 55,2 micromol/ dl (SD: 5,2), and in clear biopsy group was 35,7 micromol/ dl (SD: 4,7). This discrimination was accepted meaningful (p:0,0001). There was no diabetic patients in both groups. Average age was 42 in rejection group and 44 in clear biopsy group. In rejection group there were 14 patients (4 women, 10 men) and in clear biopsy group there were 31 patients (6 women, 25

men).

CONCLUSIONS: Plasma ADMA levels with history and physical examination can be helpful in diagnosis of rejection patients. It can be used as a non-invasive method in early diagnosis and regulation of medical therapy in heart transplanted patients.

26 March 2011, Saturday / 15:30-17:00 Valvular Heart Diseases: Acute Rheumatic Fever and Beyond - Oral Presentations

OP-275 EARLY CLINICAL EXPERIENCE OF 3-DIMENSIONAL SADDLE SHAPE RIJID ANNULOPLASTY RING IN MITRAL VALVE REPAIR

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OBJECTIVE: Mitral valve repair generally preferred as a surgical approach in most of the mitral valve disease. There are multiform mitral annuloplasty rings on the market. The 3D dynamic behavior and saddle shape of the mitral valve is taken into account at developing the annuloplasty ring designs. We preferred 3-dimensional saddle shape rijid annuloplasty ring depending on its benefits over semi-flexible ring for majority of the mitral pathologies except some cases with rheumatismal disorders affecting subvalvular apparatus.

METHODS: From January 2010, we implanted 3-D saddle shaped ring as an annular prosthesis in 22 patients, 8 males and 14 females with a mean age of 50,6 years. The cause of mitral regurgitation was degenerative (in 8 patients), ischemic (in 8 patients) and rheumatic (in 6 patients). Median sternotomy and bicaval cannulation were used as a surgical approach. Concomitant surgical procedures were aortic valve replacement (AVR), CABG and Trikuspid valve reconstructions. Transseptal approach was used in all patients (except one) for a good exposure and to prevent cardiac arrhythmias.

RESULTS: Repair was completed successfully in all patients. There were 3 early mortality due to cardiac low output. On follow up ranging from 4 weeks to 11 months. Inserted annuloplasty ring sizes ranged from 26 to 34 mm. On the early post-implant echocardiogram, all had grade 0 or +1 regurgitation. In routine controls, the patients were doing well clinically and had no symptoms. Mid term echocardiographic studies are still going on.

CONCLUSIONS: The optimal shape and flexibility of mitral annuloplasty rings are still controversial. Saddle shaped annuloplasty rings provide a mechanical benefit to the valve through a low and uniform force distribution of the mitral annulus and reduction in leaflet strains to improve repair durability compared with flat rings. The findings from this study indicated a low incidence of complication with a satisfactory valvular function. Long term follow-up is required to obtain the durability of this ring.

OP-277 CLASSIC LEFT ATRIOTOMY TECHNIQUE VERSUS VERTICAL TRANSEPTAL APPROACH FOR MITRAL VALVE SURGERY

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OBJECTIVE: Approaches to the mitral valve include left atriotomy through the interatrial groove and transeptal approach through the right atrium. Left atriotomy is more commonly used, but transeptal approach offers better mitral visualization in difficult cases. Transeptal approach has been associated with more atrial arrhythmias, heart block, and difficulty in repair. Retrospectively, we compared surgical results in patients who underwent mitral valve surgery using the vertical transeptal approach with those in patients undergoing conventional left atriotomy.

METHODS: We studied 287 cases of mitral valve surgery in our hospital from 1999 to 2010. The patient population was divided into two comparative groups: group I (50 cases) was represented by the transeptal approach and group II (237 cases) composed the left atriotomy through the interatrial groove. Each group was compared according to their operative and postoperative findings.

RESULTS: Preoperative data of both groups were shown on Table1. In group 1, there were 8 valvular reconstructions and 42 valvular replacements. Mean (+/- SD) CPBT was 157.59±73.94 min and mean ischemia time was 107.64±44.73 min. Total postoperative bleeding was 326.14±147.7 ml. There was 1 surgical re-exploration for bleeding. ICU stay time was 3.18±1.3 day, hospital stay time was 8.41±5.26 day. Three patient in this group died (mortality 6%). Among 15 patients in atrial fibrillation preoperatively, two had temporary, two had stable sinus rhythm. Among patients with preoperative sinus rhythm, 7 (20%) had episodes of atrial fibrillation and two (5.7%) temporary atrioventricular block. In group 2, 65 mitral reconstructions and 172 mitral replacements were performed. Mean CPBT was 135.1±80 min and mean ischemia time was 93.2±60.7 min. Total postoperative bleeding was 455.2±205.4 ml. There was 7 surgical re-exploration for bleeding. ICU stay time was 3.5±1.48 day, hospital stay time was 8.29±4. 20 patients in this group died (mortality rate %6.9). Among 96 patients with preoperative atrial fibrillation, 24 (25%) had temporary, 8 (8.3%) had conversion to stable sinus rhythm. Among those in sinus rhythm preoperatively, 5 (3.5%) had temporary, 10 (7%) had stable atrial fibrillation. There was no difference between two groups in ICU and hospital stay, aortic cross clamp duration and CPB duration were shorter in Group 2 than Group 1.

CONCLUSIONS: Transeptal extended atriotomy provides excellent exposure for mitral valve surgery. Disadvantage of minimally increased ischemia time is minor compared with the superior and more complete surgical reconstruction achieved.

Table 1. Preoperative data

		Group 1	Group 2
Case(n)		50	237
Mean Age		58±15,5	57.1±12,2
Gender	Male	22 (%44)	133 (%56,1)
	Female	28 (%56)	104 (%43,9)
Tricuspid Valve Disease		34 (%68)	58 (%24,47)
Coronary Artery Disease		21 (%42)	97 (40,93)
Left Atrium Diameter		57±9,6 mm	51±7,8 mm

26 March 2011, Saturday / 17:00-18:30 Coronary Surgery: Technical Tips - Oral Presentations

OP-284 THE COMPARISON OF BOTH IMA-HARVESTING TECHNIQUES

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OBJECTIVE: It is still a matter of discussion whether skeletonized or pedicled technique is more effective. The aim of this study is comparison of skeletonized and pedicled technique.

METHODS: Two hundred seventeen patients undergone isolated coronary artery bypass graft surgery were grouped according to harvesting technique of IMA (163 pedicled, Group P versus 54 skeletonized, Group S) between June and September 2010. Postoperative hemorrhage, number of blood transfused, operative and postoperative data were analyzed prospectively.

RESULTS: Total average amount of drainage was significantly lower in Group S (850.00 ± 382.77 mL versus 1064.72 ± 537.88 mL; p = 0.007). Also the number of blood transfused was significantly lower in Group S (1.50 ± 1.24 U versus 2.88 ± 2.29 U; p < 0.001). There was no significant difference between group P and group S according to incidence of deep sternal wound infection (p = 0.077). But it was noteworthy that there was no deep sternal wound infection in group S. The incidence of superficial wound infection was higher in Group P (pedicled 17.9% versus skeletonized 5.6%, p = 0.027). Mean intensive care unit stay (3.99 ± 5.07 days versus, 1.98 ± 2.12 days; p = 0.005) and mean postoperative in-hospital stays (9.72 ± 6.30 days versus, 6.57 ± 2.37 days; p < 0.001) were significantly lower in group S.

CONCLUSIONS: There is no significant difference between the skeletonized and the pedicled technique according to complications, but skeletonized technique has lower hemorrhage and needs lower blood transfusion. Skeletonized technique also shortens mean intensive care unit and in-hospital stays.

OP-285 CORRELATION OF AORTIC CROSS CLAMP TIME AND TROPONIN I LEVELS FOR ELECTIVE CORONARY ARTERY BYPASS GRAFT OPERATIONS

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OBJECTIVE: In this present study, we studied the correlation between aortic cross clamp time (CCT) and Troponin I (TnI) levels for elective coronary artery bypass graft (CABG) operations in 73 patients.

METHODS: Male to female ratio was 38:35. TnI measurements were recorded 5 times for each patient; before the application of cross clamp (CC), after the removal of the CC and in three consecutive postoperative days in our cardiovascular surgery intensive care unit. Other perioperative supplementary data such as; age, sex, Euroscore, co-morbidities (diabetes, hypertension), smoking history, echocardiographic results, coronary artery bypass graft number and type, operation time and postoperative clinical situations (intravenous inotropic necessity, onsets of atrial fibrillation, defibrillation, re-intubation) were also recorded to clarify the conditions which might directly affect the TnI level measurements postoperatively. Furthermore, parameters of intensive care unit were also recorded as intubation time, daily bleeding volumes and blood and blood product usage. As a final data, patients's intensive care unit and total hospitalization days were also presented in this prospective study.

RESULTS: Mean age was 64.2±8.1 years. Euroscore value was 2.3±1.4. Mean values were 210.7±95.6 minutes for operation time, 61±49.7 minutes for CCT, 143±16.2 minutes for CPB time and 530.4±48 minutes for intubation time. All patient underwent for 3 vessel coronary surgery with left intermammary artery and vena saphena magna grafts. Postoperative bleeding volumes were 650.5±210.5 ml, 230.8±90.4 ml, 100.9±110.3 ml for postoperative day 1,2,3, respectively. Overall intensive care unit stays were 4.7±3.4 days and hospitalizations were 9.4±6.3 days. Postoperative atrial fibrillations and re-intubations were not associated with elevated TnI levels in our study group. On the other hand postoperative ventricular fibrillations and de-fibrillations presented a strong connection with TnI peaks in 4 patients. TnI measurements in these cases were approximately three times higher when compared to other cases with similar CCT values. Average correlations between CCT and TnI levels in four different measurements were summarized as; 30-40 minutes (1.228, 1.310, 1.217, 0.863 ng/ml), 41-50 minutes (1.403, 1.437, 1.266, 1.223 ng/ml), 51-60 minutes (5.166, 5.485, 6.776, 6.444 ng/ml), 61-70 minutes (5.895, 4.768, 6.255, 4.937 ng/ml), 71-80 minutes (5.467, 5.525, 6.528, 5.269 ng/ml), 81-90 minutes

(6.538, 7.762, 7.920, 6.330 ng/ml), 91-100 minutes (9.971, 10.301, 9.305, 10.914 ng/ml), 101-110 minutes (15.674, 11.897, 11.563, 12.448 ng/ml). TnI measurements were significantly higher with longer CCT.

CONCLUSIONS: Among patients undergoing elective coronary artery bypass graft operations, there is a direct and linear correlation between aortic cross clamp time and postoperative Troponin I levels.

OP-287 THE RESULTS OF THE EARLY REVASCULARIZATION IN ACUTE MYOCARDIAL INFARCTION

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OBJECTIVE: The optimal timing for a patient to undergo CABG after myocardial infarction is unclear, because there have been no randomized trials to answer this question. Unstable patients often need to early and urgent surgery. Also these patients are the most surgical risky patients. We try to give some new perspective for the surgical timing for the acute myocardial infarction beyond the evaluation of the results of these patients.

METHODS: We have analyzed the 217 unstable patient's surgical results after acute myocardial infarction with early revascularization. Thirty six patients were performed surgery with cardiopulmonary resuscitation from the angiography table or from the intensive care unit. The main reasons for the early surgery are; i- hemodynamic instability, ii- cardiopulmonary resuscitation, iii- in spite of medical or intra aortic balloon treatment continuous cardiac unstable pain, iv- early 6 to 12 hours of anterior S-T myocardial infarction with a critical LAD lesion, v- malignant arrhythmia.

RESULTS: 59 patients of the 79 CPR patient were alive (74.68%). In all cases mortality rate was %14.28 (31 patients). Mortality rate was 7.97% (11 patients) when excluded the CPR patients (138 alive patients). The average EF was 47.8 at the second month of the surgery and the NYHA functional capacity was 0-I in 161 patients, II in 17 patients and III in 8 patients.

CONCLUSIONS: The possible increased risk of early surgery may be balanced against the potential for improved quality of life, life saving results and decreased hospital stay costs.

OP-288 JACKSON PRATT DRAIN DECREASES THE RISK OF PERICARDIAL EFFUSION AND ATRIAL FIBRILLATION IN PATIENTS WITH SCHEDULED CORONARY BYPASS OPERATIONS

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OBJECTIVE: Jackson Pratt (JP) Drain positioning posterior pericardium is discussed upon the risk of postoperative pericardial effusion and atrial fibrillation.

METHODS: 175 CABG patients scheduled for surgery and JP Drain used are included in the study (Group A). In this group of patients, JP Drain is placed in posterior pericardium as well as placing 36 Fr silicon drains in the anterior mediastinum and left thoracic space. For the second group, 340 CABG patients (Group B) Only 36 Fr Silicon drainage tubes are placed in the anterior mediastinum and left thoracic space in this second group of patients. All operations were performed via aortic and two stage venous cannula on pump, with heart arrested through crossclamping and antegrade cardioplegia. Before discharging the patients, routine echocardiography is applied whether effusion is present or not. Preoperative and postoperative variables of both groups are compared each other.

RESULTS: Preoperative characteristics of the two groups are very similar statistically. Two patients (1.14 %) were reopened due to hemorrhage while four patients (1.17%) operated on again for the same reason (not significant statistically). Average drainage volume was 600 ml in A group postoperatively while it was 550 ml in B group, (Quartile range was 350-200 ml and 350-1350 ml respectively) (not significant statistically). Mild to moderate pericardial effusion was detected in 8 patients in A Group (4.57%). Of them, 3 was in the anterior, 1 was in the posterior, half of all ones were both in anterior and in posteriorly localised. In B Group, mild to moderate and severe pericardial effusion were experienced in 58 patients (17.05%) significant statistically. Of them, 7 had anterior, 22 had posterior and 29 had both space localised. Pericardial effusions presented no clinical signs and requires no surgery. Four effusions in B group were so massive and necessitated surgery in three patients. Atrial Fibrillation has occurred postoperatively in 14 patients in A group (8%) whereas in 64 patients in B group (17.77%) statistically significant.

CONCLUSIONS: The risk of development of Postoperative Atrial Fibrillation and Pericardial Effusion has decreased significantly in patients inserted JP Drain in A group in this retrospective study. There was no even one patient who had massive pericardial effusion required surgery in A group. On the other hand, pericardial effusion is an important risk factor for postoperative Atrial Fibrillation even though many factors may cause postoperative Atrial Fibrillation. As a result, we think that JP Drain can decrease the risk of pericardial effusion and Atrial Fibrillation by draining posterior pericardium effectively.

OP-289 TITANIUM STERNAL FIXATION SYSTEM FOR THE TREATMENT OF STERNAL DEHISCENCE AND MEDIASTINITIS AFTER OPEN HEART SURGERY

O. Oto¹, G. Albayrak¹, M. Bal¹, F. Maltepe², K. Metin¹, B. Ugurlu¹

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Department of Cardiovascular Surgery, Izmir, Turkey

²Dokuz Eylul University Faculty of Medicine
Department of Anesthesia and Reanimation

OBJECTIVE: Failure of sternal wound healing and infection are rare but serious problems after median sternotomy with high morbidity and mortality rates. The incidence for mediastinitis ranges between 0,16% and 11,5%. Standard approach is partial sternal excision, debridement and mediastinal irrigation. In recurrent cases or resistance to surgical treatment, a multidisciplinary approach is necessary, which is one of the most difficult situations in cardiac surgery. We present here a novel sternal fixation system (Synthes TM) in a case of mediastinitis.

METHODS: CABG was performed to a 80 years old male with DM and COPD. There was a postoperative purulent drainage on sternotomy which was followed by dehiscence. The sternal fixation system was applied after partial sternal resection, cutaneous and subcutaneous debridement. The system contains 2,4 mm thick titanium plaques, which are attached to the ribs with 3 mm screws on both sides (Picture 1).

CONCLUSIONS: Early mediastinitis after CABG is rare but an important condition with serious consequences. Systemic antibiotics in addition to aggressive surgical treatment is necessary. Even with this technique, the success of the treatment is difficult. We think that novel sternal fixation systems are very helpful and safe for the surgical treatment of mediastinitis to stabilize the bone segments.

Sternal fixation system



26 March 2011, Saturday / 15:30-17:00
Perfusion Course - Oral Presentations

OP-290 THE EFFECT OF OPERATIVE STRESS ON PERFUSIONISTS

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OBJECTIVE: Stress is a psychological and physical response to events that upset personal balance in some way (fight or flight). Stress is most often caused by lack of control or feeling of powerlessness under circumstances. Perfusionists' stress level can

go up especially when there is no clearcut communication between the surgeons and the perfusionists that can lead not to follow safety protocols during panic situations during the surgery.

METHODS: Questionary was sent to 40 cardiac surgeons and 85 perfusionists in the Kingdom of Saudi Arabia. In the form there were 5 questions. Those are;

-I feel stress with less experienced surgeon/perfusionist (yes/no)

-I feel less stress when I review the case with the surgeon / perfusionist (yes/no)

-I feel stress when the surgeon/perfusionist does not communicate clearly.(yes/no)

-I feel stress during emergency situations when the surgeon/perfusionist demonstrates panic(yes/no)

-I feel stress when the surgeon blames me for things that are not my fault.(yes/no)

RESULTS: Evaluation of the responses both from the surgeons and perfusionists showed that the major stress factor is lack of communication between the surgeons and perfusionists during the procedures.

CONCLUSIONS: It has been concluded that, both perfusionists and surgeons should be open and very clear to each other for their requests especially during some unexpected complications in the procedure. This communication can help to follow the safety protocols more easily even under very difficult conditions.

25 March 2011, Friday / 15:30-17:00 Novel Solutions for Cardiovascular Medicine - Video Presentations

VP-004 PROXIMAL BRACHIAL ARTERY CANNULATION FOR MINIMALLY INVASIVE APPROACH IN ASCENDING AORTIC ANEURYSM

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OBJECTIVE: Upper half mini-sternotomy approach is a useful method for aortic valve surgery. We use this technique routinely in our institution. The surgical exposure is excellent, even with an incision less than 5 cm. According to our experience with valve surgery, we think that surgery for the aneurysms of the ascending aorta are also suitable for minimally invasive approach. To improve the surgical exposure without disturbing a physiological cardiopulmonary bypass, the arterial cannulation can be done via the proximal brachial artery at the axilla.

METHODS: The arterial cannula can be inserted through the proximal right brachial artery after preparation of the axillary area through a 1 cm incision. A 18 F peripheral arterial cannula can easily be inserted through that vessel in an adult case. The venous return can be established with a "two-stage" single venous cannula, which can be inserted from the right atrial appendage through a small incision below the xyphoid process, consequently the place of the chest tube.

RESULTS: We have operated a 59 years old woman with ascending aortic aneurysm with limited upper sternotomy. Right brachial artery and right atrium have been cannulated. After establishing the CPB, the ascending aorta has been replaced with a 24 mm tubular Dacron graft. The brachial artery has been repaired with 6/0 polypropylene after decannulation. The postoperative course of the case was uneventful.

CONCLUSIONS: Minimally invasive approach is a new era in cardiovascular surgery. It brings the safety of the standart procedures and advantages of the small incisions together. Creative methods are always needed in this field of surgery. Brachial artery cannulation is a safe and useful route cardiopulmonary bypass. Excellent surgical exposure and good CPB conditions are the benefits without any risk of complication and morbidity.

25 March 2011, Friday / 08:30-10:00 Arteriovenous Fistulas: Problems, Solutions - Video Presentations

VP-007 ANEURYSMS OF ARTERIO- VENOUS FISTULAS SEEN IN END STAGE RENAL FAILURE PATIENTS

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OBJECTIVE: The aim of this study is to evaluate the aneurysm developing in Arterio-Venous Fistulas (AVF) in End Stage Renal Failure (ESRF) patients.

METHODS: Between january 2006 and january 2010 200 patients who have ESRF disease had 232 AVF operations and 27 of them have aneurysm in their AVF evaluated. 113 (56 %) of the patients were male and 87 (44 %) were female of the AVF operation underwent. 17 (62 %) of the patients were male and 10 (38 %) of the patients were female who have aneurysm developed in AVF's. All patients have ESRF disease and treated with hemodialysis (HD). Patients evaluated according to their AVF localizations, functionality and ESRF disease duration.

RESULTS: The mean age of the male patients was 41,50 (±16,53), and the female patients was 43,37 (±17,65) who have aneurysm in the AVF'S. The mean duration ESRF of male patients was 53 (± 26) months and female patients was 56 (± 24) months who have aneurysm in the AVF'S. AVF localizations of 27 patients who had aneurysms are; Right Radial AVF 3 (10 %), Right high AVF 1 (15%), Right Brachial AVF 7 (30%), Left Radial AVF 1 (5%), Left High AVF 4 (15%), Left Brachial AVF 8 (35%). The mean fistula flow of the male patients was 1632±911.26) ml and female patients was 1117.63±726.33 ml. The patients who have problems in HD access assessed by Cardiovascular surgeon's consultation and Radiologist handled Doppler USG.

CONCLUSIONS: Aneurysm developed significantly more in men compared to females and brachial location compared to forearm. It is to be preferred the forearm for A-V fistula operation considered the risk of aneurysm development.

25 March 2011, Friday / 10:30-12:00 Diseases of Carotid Artery and Aorta: What We Offer to Solve Critical Problems - Video Presentations

VP-008 A COMPARISON BETWEEN MINILAPAROTOMY AND CONVENTIONAL APPROACH FOR THE SURGICAL THERAPY OF AORTAILIAC OCCLUSIVE DISEASE

D. Odabasi, H. Ekim

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University, Van, Turkey

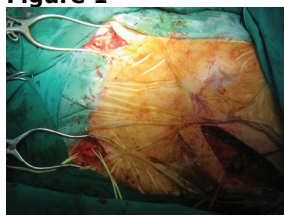
OBJECTIVE: To search for less traumatizing measures for Aortic Occlusive Disease (AOD) surgeries to improve the recovery from surgery. Another objective was comparison of retroperitoneal minilaparotomy (RML) with conventional transperitoneal classic median laparotomy (TCML) with respect to per-operative and post-operative outcome and complications.

METHODS: It was a retrospective comparative study. All patients undergoing AOD surgery were enrolled. Our comparative data of 20 patients who had AOD surgery by TCML (TCML group) performed from January 2003 to December 2006 and 20 cases of patients who had AOD surgery by RML (RLM group) performed from January 2006 to December 2009 is presented. Chi-square and Fischer test with significance of p value being taken at 0.05 were used for categorical data, while student's t test was used for continuous data.

RESULTS: Mean age, gender, the operation and aortic occlusion time was similar between the TCML and RLM groups. The length of stay in the intensive care unit (ICU) and total hospital stay in the RLM group was statistically shorter compared to the TCML group ($p < 0.05$). Major complications were rare in both the groups.

CONCLUSIONS: During AOD surgery, RLM appears to be an attractive alternative to traditional TCML with fewer complications.

Figure 1



25 March 2011, Friday / 10:30-12:00 Unusual Cases of Congenital Cardiovascular Anomalies - Video Presentations

VP-012 SINGLE CORONARY ARTERY ARISING FROM THE RIGHT SINUS OF VALSALVA

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³Department of Cardiology, Bitlis State Hospital, Bitlis, Turkey

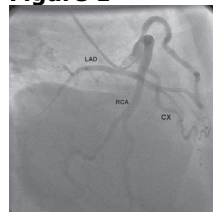
⁴Department of Anotomy, Yuzuncu Yil Univesity, Van, Turkey

OBJECTIVE: Anomalous of single coronary artery arising from the right sinus of valsalva is a very rare congenital anomaly. It is usually diagnosed incidentally during coronary angiography or on postmortem evaluations. The treatment strategy for single coronary artery is not clear. The course and associated coronary atherosclerosis should guide the therapy. In this paper, we present a case of single coronary artery in which left main coronary artery originating from the right sinus of valsalva.

CASE: A 54-years-old woman was admitted to the cardiology department chest pain associated with effort since two mounths aggreviated last three days. She had hypertension as risk factors for atherosclerosis. Physical examination and electrocardiography was normal. Cardiovascular stress test was syptom positive. The left coronary artery ostium could not be cannulated by left Judkins catheter. Selective cannulation of the right sinus of Valsalva demonstrated a single coronary artery originating from the right sinus of Valsalva, and giving off branches to the RCA and the left coronary system (Figure 1,2). No significant coronary lumen narrowing was found. The single coronary artery was classified anterior type.

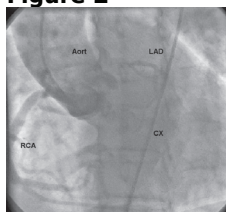
CONCLUSIONS: Single coronary artery anomaly is important to recognize becuse it can lead to dangerous clinical situations such as myocardial ischemia and sudden cardiac death especially in young adults.

Figure 1



LAD: Left Anterior descending Arter Cx: Circumflex Arter
RCA: Right Coronary Arter

Figure 2



LAD: Left Anterior descending Arter CX: Circumflex Arter
RCA: Right Coronary Arter

26 March 2011, Saturday / 08:30-10:00 Peripheral Venous Diseases Revisited - Video Presentations

VP-009 MANAGEMENT OF COMBINED FEMORAL ARTERY AND VEIN INJURIES

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OBJECTIVE: The aim of this study was to review our experience with combined injuries to the femoral artery and vein, and to analyze the role of venous repair.

METHODS: Thirty two patients with penetrating injuries of the both femoral artery and vein underwent surgical management at our hospital from May 1999 to August 2009. Primary vascular repair was carried out whenever possible; if not possible the interposition graft was used.

RESULTS: This study group consisted of 27 males and 5 females, ranging in age from 15 to 72 years with a mean age of 28.3 years. The mechanism of injury included gunshot wounds in 18 patients and stab wounds in 14 patients. Primary arterial repair was performed in 17 patients. Autogenous saphenous vein graft was used in nine patients and vein patch in two patients. Polytetrafluoroethylene (PTFE) graft was used in four patients. All patients had associated venous injuries of which 24 patients had primary venous repair, five had vein graft interposition, and two had PTFE graft interposition. Seven patients had fasciotomies. Graft thrombosis occurred in three arterial repairs. Above-knee amputation was required in two patients with femur fracture.

CONCLUSIONS: Patients with combined femoral artery and vein injuries can be managed successfully with clinical assessment alone. In these dual vascular injuries, both the femoral artery and vein injuries should be repaired to avoid complications. If venous ligation becomes compulsory, adjuvant therapies and techniques should be recommended such as the use of fasciotomy, anticoagulation treatment, elevation of the lower limb and compression stockings.

24 March 2011, Thursday / 13:30-15:00 Intriguing Images for Cardiovascular Specialists - Poster Discussions

PP-002 THE ANOMALOUS ORIGIN OF THE LEFT CORONARY ARTERY FROM THE RIGHT AORTIC SINUS OF VALSALVA

H. Yaliniz, O. K. Salih, M. S. Topcuoglu, H.

Poyrazoglu, A. Atalay, M. Aslan, I. Bayraktar, Y.

Basturk, Z. Duman, B. Ciftci, V. Keklik, T. Ulus

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OBJECTIVE: In this case report, we present the left main coronary artery originated from the right aortic sinus.

METHODS: A 36-year-old-male came to our hospital with a complaint of exertional chest pain. Electrocardiography showed suggesting anterolateral ischemia. Cardiac enzymes were normal. Transthoracic echocardiography (ECG) likewise showed no abnormalities. The patient was referred for coronary catheterization. Coronary angiography revealed a solitary coronary ostium at the right sinus valsalva, which gave rise to all coronary arteries (Fig.1). However, anomalous coronary arteries identified consensually with 16- section multi-detector row Computer tomography(MDCT). The initial course of the LMCA in this patient was between the aorta and pulmonary artery (Fig.2). The course and distribution of the right coronary artery were normal in this patient. Coronary artery bypass grafting (LIMA-LAD) was performed.

RESULTS: There was no morbidity and mortality. There was eventful postoperative courses.

CONCLUSIONS: In our case, origin of the LMCA was from the right sinus of valsalva. Origin of the LMCA from the right sinus with a course between the aorta and the pulmonary trunk is associated with sudden death in the absence of other cardiac abnormalities. In our case, A courses of the LMCA is have been reported between the aorta and the pulmonary trunk. In Cheitlin's series, 27% of patients with this anomaly died suddenly, either during or immediately after exercise. Most sudden death occurred in young men. Most young patient who die suddenly with this anomaly, however, do have prodromal ischemic symptoms. Ischemia is thought to be caused by compression of the LMCA between the aorta and pulmonary trunk during exercise, a spasm or kinking of the LMCA, acute angulation of the LMCA, or an anatomic abnormality at the orifice of the ostium. In our case had been performed echocardiography, coronary angiography and MDCT, and Type 2 coronary artery anomaly had been showed. To date, the main diagnostic method for the detection of coronary anomalies has been selective coronary angiography. Although coronary angiography is an effective diagnostic tool, it is clearly invasive and associated with procedural morbidity (1.5%) and mortality (0.15 %) risks. Magnetic resonance coronary angiography has been demonstrated to be highly accurate in the identification of anomalous coronary arteries, but this technique may not be feasible in all patients. MDCT, that provides an excellent overview of the

cardiac and complex vascular anatomy, and could be helpful for planning future cardiovascular therapeutic approaches, either interventional or surgical.

Figure1

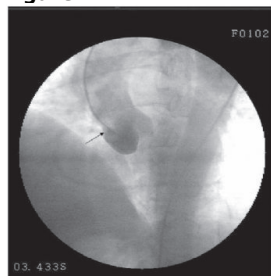


Figure 1. Coronary artery anomaly showing at the coronary angiography (: a solitary coronary ostium at the right sinus valsalva)

Figure2

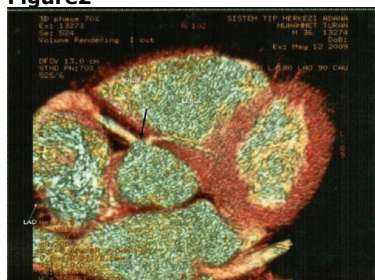


Figure 2. 16-section multi-detector row Computer tomography(MDCT).(: The initial course of the LMCA in this patient was between the aorta and pulmonary artery)

PP-008 SINGLE VENTRICLE IN AN ADULT PATIENT DIAGNOSED BY COMPUTERIZED TOMOGRAPHY ANGIOGRAPHY

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OBJECTIVE: Single ventricle (SV) is a rare congenital cardiac syndrome with limited survival. We present the case of the patient who had this defect. We report the CT angiography appearance of single ventricle who did not undergo surgical intervention and survived until 29 years old.

METHODS: We explored his individual and family history, clinical course of his congenital disease until 29 years old. We also completed physical examination and laboratory findings as well as his cardiovascular imaging process including electrocardiography, echocardiography and computerized tomography angiography.

RESULTS: The patient was admitted to the hospital because the complaints of exercise dyspnea and cyanosis on hands and feet. He described a squatting and syncope 1 week ago. His clinical situation has been stable except squatting since his childhood. There was no special feature in his interrogation regarding his individual or family history. In his physical examination, blood pressure 130/70 mmHg, pulse rate 96/min, body temperature 36.2°C and 21/min respiration rate were determined. Both lungs

were clear and 3-4 /6 systolic regurgitation heard on all auscultation regions. 3 cm hepatomegaly and club fingers were detected in his systemic examination. Rhythm was sinus, left anterior hemiblock (LAHB) and lack of R progression on EKG. Mild cardiomegaly on telegraphy. As a child, the patient had normal growth and mental development. He described had marked cyanosis right after a long physical activity. Transthoracic echocardiography revealed a single ventricle and rudimentary right ventricle were seen. The LV enddiastolic diameter was 97 mm, low EF (42%), gr. I-II mitral regurgitation. Transcutaneous oxygen saturation was 89%, hb 20 gr/dl, Htc %61. CT angiography revealed ASD, VSD, hypoplastic septum, rudimentary right ventricle, pulmonary stenosis and single ventricle which had both aorta and pulmonary artery outlets.

CONCLUSIONS: We have presented the case who had single ventricle. Only 10 cases of unoperated SV in adult patients so far, however this is the first case who comprehensively studied by CT angiography as the first time in the literature.

**PP-013 THE ROLE OF INTRAVASCULAR
ULTRASONID GUIDANCE IN THE TREATMENT OF
INTRAMURAL HEMATOMA DID NOT RESOLVED
AFTER SPONTANEOUS CORONARY ARTERY
DISSECTION AND CAUSED ACUTE MYOCARDIAL
INFARCTION**

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⁴Department of Cardiology, Sarikamis Army District Hospital, Kars, Turkey

OBJECTIVE: The prognosis of patients with spontaneous coronary artery dissection (SCAD) is generally poor and the majority of them are diagnosed postmortem. Various therapeutic options include medical therapy, PCI and surgery have been utilized, but the optimal strategy is not yet to be defined. The current use of intravascular ultrasound (IVUS) can facilitate the diagnosis and the treatment of SCAD.

METHODS: A 30 year-old female without any cardiovascular risk factors admitted to our hospital for resting squeezing chest pain continuing one hour. She did not have a history of pregnancy. Resting ECG showed ST segment elevation in leads V2-V6. Transthoracic echocardiography showed hypokinesia in the mid-apical segments of anterolateral left ventricular wall and apical segment of left ventricular. Afterwards, the patient underwent to CAG for the evaluation of coronary arteries. The CAG revealed a long spiral dissection involving the proximal and mid segments of LAD with TIMI 2 flow. Because of the disappearance of ST-segment elevation during CAG, primary PCI was not performed and treatment with aspirin, unfractionated heparin, tirofiban and a beta-blocker was started. Her symptoms were resolved with this therapy, and control CAG and IVUS examination were performed

for investigating the presence and the extent of the dissection on the second day of hospitalization. The control CAG revealed that LAD was narrowed without any evidence of intimal flap and coronary flow impairment. IVUS examination demonstrated medial dissection with an intramural hematoma starting from the proximal segment of LAD and progressing into distal segment of LAD, and no evidence of atherosclerosis.

In light of the foregoing analysis, we decided to implant two stents in LAD. A 3.0x20 mm stent was implanted into the proximal segment and a 2.5x20 mm stent was implanted into the distal segment of LAD. The lumen area was optimal and the procedural result was excellent with TIMI-3 flow distally. She discharged at a very good condition with an optimal medical treatment. At 3-month control she did not have any complaint and control CAG revealed no significant in-stent restenotic tissue.

CONCLUSIONS: In conclusion, the principal abnormality observed in SCAD is the development of intramural hematoma and can cause acute coronary syndrome. PCI can be necessary to restore distal flow in a such narrowed vessel and IVUS can guide PCI to confirm the placement of guidewire in the true lumen, sealing the dissection, adequate stent expansion, the adequate compression of intramural hematoma after stent implantation.

PP-014 SPONTANEOUS LEFT MAIN CORONARY ARTERY SPASM AND INTRAVASCULAR ULTRASOUND FINDINGS

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OBJECTIVE: Vasospasm of the left main coronary artery (LMCA) is rare. Although most of the vasospasms of LMCA are iatrogenic due to catheter induced, spontaneous spasm of LMCA is relatively uncommon and the mechanism does not been known exactly. Moreover, intravascular ultrasound findings (IVUS) may be elucidatory in some selected cases.

METHODS: A 62-year-old smoker woman without a history of any cardiovascular disease was admitted to the hospital because of typical resting chest pain. An admission 12-lead ECG showed ST elevation in lead aVR and ST depression in all leads. Vital parameters were within normal ranges. Standard biochemical tests, cardiac enzymes and troponin T were within normal limits. She was diagnosed as acute coronary syndrome, and then, patient was transferred to the coronary intensive care unit. She was treated with intravenous infusion of nitrate and heparin at recommended doses. Her chest pain was relieved after the administration of medications and ST segment changes were disappeared at follow up ECG after 10 minutes. There was no regional wall motion abnormalities in two-dimensional echocardiographic examination. Elective CAG was performed and did not reveal any atherosclerotic changes in any coronary arteries. Subsequently, an IVUS examination was performed to detect whether any

ruptured and/or partially thrombotic atherosclerotic plaques, which might be responsible for the development of acute coronary syndrome, was present or not. In the IVUS examination (40 MHz Atlantis SR Pro, Boston Scientific, ABD), there were minimal atherosclerotic changes with negative remodeling (Remodeling Index: 0.90) in the distal segment of LMCA, but there was no ruptured and/or partially thrombotic plaque in LMCA. However, there was no atherosclerotic disease in the proximal segment of the LMCA. We recommended a provocation test with an intracoronary injection of acetylcholine to reproduce the clinical syndrome, but patient did not accept this test because of risks. Thus, we presumed that LMCA spasm resulted in vasospastic angina and was leading to anginal chest pain in our patient on the basis of ECG and IVUS findings. Medical treatment with calcium channel blocker (diltiazem 120 mg tb 1x1), isosorbide-5-mononitrat (20 mg 2x1), and aspirine (100 mg 1x1) were given. She was adviced to stop smoking. The patient had free of anginal chest pain under these medications at follow-up control after six months.

CONCLUSIONS: In conclusion, vasospasm of LMCA is a rare but potential life-threatening condition. IVUS examination at the time of CAG may be helpful and guides the physicians to make an exact decision.

24 March 2011, Thursday / 15:00-16:30 Coronary Artery Diseases: Situational Dialogues - Poster Discussions

PP-028 ACUTE ANTERIOR MYOCARDIAL INFARCTION IN A PATIENT WITH OSLER-WEBER-RENDU DISEASE

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Bezmialem Vakif Universitesi Tip Fakultesi Hastanesi, Istanbul, Turkey

OBJECTIVE: Osler-Weber-Rendu disease or Hereditary hemorrhagic telangiectasia (HHT) is an uncommon vascular disorder characterized by epistaxis, mucocutaneous telangiectases and visceral arteriovenous malformations. Even though cardiac manifestations such as coronary artery aneurysm and non ST Elevation myocardial infarction has been reported previously, there is no substantial data about ST Elevation myocardial infarction and treatment approach in literature. We aimed to present a rare complication of a rare disease and discuss how to manage such a patient.

METHODS: A 51 year old male who had diagnosis of Osler-Weber-Rendu disease (Hereditary haemorrhagic telangiectasia-HHT) presented with massive gastrointestinal and nasal bleeding to emergency service. His heart rate was 120 bpm, blood pressure: 90-60 mm Hg and ECG was within normal limits. Physical exam was remarkable with perinasal and perioral telangiectasia. Lab results on admission showed Hgb: 2.9 gr/dl and Htc: 9%. Because of the HHT-related recurrent severe epistaxis and gastrointestinal bleeding causing anemia he had undergone multiple sessions of blood transfusions in the past. During his evaluation, he complained of

chest pain which radiated to back and left arm. ECG revealed an acute anterior myocardial infarction. A bolus iv hydration and blood transfusion initiated. We performed bedside echocardiography which showed severe hypokinesia in anterior and lateral walls. **RESULTS:** The patient admitted to coronary care unit and monitored. Symptomatic treatment such as morphine, nitrat and oxygen started. Neither any antiaggregant and trombotic therapy nor primary percutaneous intervention could not started because of active bleeding. Troponin levels were increased to 100 ng/ml on the second day and is ECG showed Q waves on V1-V4 and bimodal T waves on V4-V6. After giving blood supply and increasing the hemoglobine level to 7 gr/dl.

CONCLUSIONS: The most common underlying pathology for coronary artery disease is endothelial dysfunction and inherited thrombophilia such as factor V Leiden. Additionally we think that mutation of endoglin which has been shown to be responsible for HHT might play a role in coronary vascular lesions. Because endoglin encode proteins expressed on vascular endothelial cells and may lead cellular responses such as proliferation and adhesion. The treatment approach in such a patient is controversial. Because of active bleeding trombotics are contraindicated. Primary PCI maybe an option however the patients Hb level on admission was 2.9 gr/dl so we did not perform angiography with this Hb levels. We must keep in mind that patients with Osler-Weber Rendu has not a coagulation disorder so if they do not how active bleeding, anticoagulant medicines like aspirin and clopidogrel can be prescribed.

25 March 2011, Friday / 10:30-12:00 Unusual Cases of Congenital Cardiovascular Anomalies - Poster Discussions

PP-048 THE PATIENT WITH EBSTEIN'S ANOMALY OF THE TRICUSPID VALVE UNDERWENT A NEW SURGICAL REPAIR MODIFIED FROM CARPENTIER'S PROCEDURE
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OBJECTIVE: Ebstein's anomaly is a rare 1-in 5 of every 200 000 live births and in 1% of all congenital anomalies are observed. In this case report, 22-year-old Type B for the correction of Ebstein's anomaly, tricuspid valve in order to ensure the normal anatomical and physiological functions of this report of a new procedure.

METHODS: Severe cardiomegaly and dilation of the right structures of the patient was detected in echocardiography, the free movement in all leaflets of tricuspid valve was detected right ventricle to the apex. Patient in NYHA class II-III and cyanosis were not observed.

RESULTS: The anterior leaflet is displaced from annulus of the right atrium, atrialized right ventricular plication was performed with 2.0 Ethibond sutures. the anterior leaflet re-sutured with 4.0 prolene to the anulus. Tricuspid annuloplasty was performed using a 33mm St.Jude ring. The patient's postoperative period was uneventful.

CONCLUSIONS: This case report described a new technique with the treatment of Ebstein's anomaly were excellent and we think that tricuspid valve would be preserved from the replacement.

PP-051 SANTRAL VENOZ EMBOLIZASYON SONUCU, SAG VENTRIKUL ICINDEKI YABANCI CISMIN CIKARTILMASI; OLGU SUNUMU

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OBJECTIVE: Intrakardiyak yabancı cisim embolizasyonları nadir görülen bir durum olduğundan, bu cisimlere yaklaşım konusu literatürde az rastlanır bir durumdur. Intrakardiyak yabancı cisim embolizasyonlarının en sık nedenleri; kateteriyatrojenik parçaları, kalp pili elektrodu veya stenttir. Nadiren, travmatik yabancı cisimler periferik veya santral damarlara geçebilir ve kalp bosluklarına embolize olabilir.

METHODS: Medyan sternotomi yapıldı. Ardından aorto-bicaval venöz kanulasyon gerçekleştirildi. 28°C'lik orta derecede hipotermi altında antegrad izotermik potasyumlu kan kardiyoplejisi ile kardiyak arrest sağlandı. Ardından sağ atriotomi yapıldı. Sağ atriumdan yabancı cisim ulaşamadı. Sağ ventrikul apexine yakın yaklaşık 3cm'lik transvers ventrikulotomi yapıldı. Yabancı cismin sağ ventrikul trabekülleri arasında olduğu görüldü. 1.2 cm uzunluğundaki uçları keskin metal parça dikkatli bir şekilde çıkarıldı.

RESULTS: Kalp içindeki yabancı cisimler embolize olduğu lokalizasyonda iskemiye ve enfarkta neden olabileceği gibi aritmilere, endokardite, rijit yapıda olanlar ise ventrikul veya damar ruptürüne yol açabilirler. Bizim vakamızda yabancı cismin giriş noktasının subklavian ven ve arterin lokalizasyonunda olması, o bölgede cilt-altı amfizem ve hematoma olmaması, PA AC grafilerinde hemotoraks, pnömotoraks olmaması, operasyon sırasında perikardiyal intakt olması ve perikardiyal mayisi olmaması nedeniyle bulgular bize kalp içersinden çıkarılan yabancı cismin sağ subklavian ven yoluyla sağ kalbe ulaştığını düşündürmüştür. Yabancı cismin çapı 5 mm'den fazla olmadığı, düzgun şekilli olduğu ve hasta asemptomatik kaldığı zaman, endokardit için antibiyotik profilaksisi ile konservatif tedavi ve düzenli yıllık takip tavsiye edilir. Ancak çapı 5 mm aşıyorsa, şekli düzensizse veya semptomatik olduğunda (perkutan kateter ya da cerrahi müdahale ile) çıkarılmasını düşünmek evrensel olarak kabul edilmektedir.

CONCLUSIONS: Sonuç olarak kalp içersine yabancı cisim embolizasyonlarında hızlı ve doğru radyolojik yöntemler ile yabancı cismin lokalizasyonun ve

buyuklugunun belirlenmesi, mevcut uygulanacak yontemin belirlenmesinde onemli rol oynar.

PP-055 SURGICAL MANAGEMENT OF TETRALOGY OF FALLOT WITH ABSENT LEFT PULMONARY ARTERY

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OBJECTIVE: Tetralogy of Fallot with unilateral absence of the pulmonary artery is a rare congenital heart defect that still represents a surgical challenge.

METHODS: A 4,5-year-old girl was presented with deep cyanosis with tetralogy of Fallot with absence of left pulmonary artery and hypoplastic right pulmonary artery. Preoperative CT angiography revealed a left pulmonary artery originated from atypical patent ductus. Extrapericardial left pulmonary artery was unifocalized along with total correction.

RESULTS: Complete repair was accomplished successfully and postoperative course was uneventful. Follow-up CT angiography revealed the patent left pulmonary artery without stenosis.

CONCLUSIONS: The ideal repair of unilateral absence of the pulmonary artery is aimed not only at correcting intracardiac defects but also at restoring physiologic blood flow in the ipsilateral lung which made complete repair possible instead of palliation.

PP-056 REPAIR OF TRUNCUS ARTERIOSUS IN A PULMONARY HYPERTENSIVE PATIENT WITH THE AID OF NITRIC OXIDE

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OBJECTIVE: Repair of truncus arteriosus (TA) in neonatal and early infancy period has become standard practice worldwide. It is a rare congenital heart disease appearing in 0.034 to 0.56 per 1,000 newborns and representing 1.4% to 2.8% of all cases of congenital heart disease. Without surgical treatment, 80% of patients die within the first year of life, usually in early infancy.

METHODS: In this report we present a boy at age of three years with type I truncus arteriosus. This patient was pulmonary hypertensive at the preoperative period naturally (RPA=59 mmHg, LPA=53 mmHg as mean pressures). We operated the patient with the aid of nitric oxide (NO) which was begun after tracheal intubation, and continued during the early postoperative period with the highest dose at the termination of the extracorporeal circulation.

RESULTS: Early postoperative period of the patient was uneventful and doing well now with standart medication of inhaled iloprost.

CONCLUSIONS: In conclusion, our experience encourages the repair of TA as early as possible in life, but in selected cases which we expect to respond to surgical treatment together with pulmonary vasodilators as in this patient, limits may be safely forced for total biventricular repair.

PP-057 SURGICAL TREATMENT OF AORTIC COARCTATION: FOURTEEN-YEAR EXPERIENCE

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OBJECTIVE: Patients who underwent surgical correction of coarctation of the aorta because of the early and late mortality, residual hypertension and other complications were reviewed.

METHODS: Between 1996 and 2010, 22 patients (8 females, 14 males, mean age 14.5, range 10 days-40 years) were operated with the diagnosis of aortic coarctation. The most common presenting symptom was fatigue. The most common additional pathology (8 patients) had PDA. Resection and end-to-end anastomosis in 9 patients, 4 patients with graft interposition and aortoplasty patch was performed in 9 patients.

RESULTS: 1 patient postoperative 6 days died. There were 5 cases of hypertension requiring medical treatment in the postoperative period. Mean hospital stay was 7.5 days, follow-up 1-5 (average 2 years) patient-years, respectively. None of the cases of neurological sequelae, residual stenosis and pseudoaneurysm was detected.

CONCLUSIONS: Every age group aortic coarctation, hypertension may develop secondary to reduce morbidity and mortality should be treated. Constitute an important problem in surgical treatment of coarctation of the aorta in old age group, and we think he saw these patients for surgery. However in terms of complications late after surgery, these patients should be under regular surveillance.

PP-058 LEFT PULMONARY ARTERY ANEURYSM AFTER TOTAL CORRECTION + PULMONARY ARTERY PATCH PLASTY SURGERY

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OBJECTIVE: Tetralogy of Fallot is a common congenital cardiac disorder and its components are four different cardiac abnormalities which are ventricular septal defect, pulmonary stenosis, right ventricular hypertrophy and overriding aorta. Successful correction surgeries within last fifty years made it possible for the patients to survive from infancy to adulthood. We presented a patient referred to our clinic with a diagnosis of pulmonary artery aneurysm as a late onset result of total correction surgery.

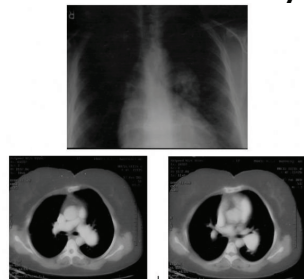
METHODS: Total Correction + Pulmonary Artery Patchplasty operation in 1977 with a diagnosis of Tetralogy of Fallot performed to a forty-one years old female patient. She referred to Thoracic Diseases Clinic because of dispnea. After detection of aneurysm on pulmonary artery in Thoracic CT imaging she was consulted to our clinic.

RESULTS: Thoracic CT imaging revealed a 7x4,5 cm aneurismatic dilatation on left pulmonary artery (Picture 1). Echocardiographic evaluations showed

right ventricular hypertrophy, mild infundibular narrowing on pulmonary artery with a pulmonary arterial pressure about 40 mm Hg and an ejection fraction about 70%. The other clinical and laboratory evaluations were not characteristic. We did not consider any surgical approach to the pathology on pulmonary artery. Periodic follow up with CT imaging and echocardiography is suggested.

CONCLUSIONS: Pulmonary artery aneurysm is a rare clinical condition. Half of the pulmonary artery aneurysms are related with congenital cardiac disorders. Pulmonary artery aneurysm diagnosed patients have the risk for rupture or dissection of aneurysm, mostly patients are lost cause of rupture of the aneurysm. Because of this, correction surgery is suggested. But there are risks of surgical treatment, long term outcomes are unknown and results are variable. Dispnea, chest pain, hemoptysis, the size of the aneurysm can be early predictive signs of rupture which is a mortal future complication of aneurysms. Low or none pulmonary hypertension decreases the risk for rupture. No demonstration of such signs, having dispnea unrelated to the aneurysm and a low pulmonary arterial pressure made us suggest periodic follow-up to our patient.

Picture 1. Thoracic X-ray and CT imaging



PP-059 RIGHT VENTRICULAR OUTFLOW PATCH RECONSTRUCTION OF A FALLOT TETROLOGY WITH ABNORMAL CORONARY ARTERY USING MOBILIZATION TECHNIQUE

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OBJECTIVE: The incidence of a major coronary artery crossing the right ventricular outflow tract in tetralogy of Fallot is between 5% and 12%. Many different techniques have been described for repair of tetralogy of Fallot with a coronary anomaly. We are presenting successful transannular patchplasty below the mobilized coronary artery in Fallot Tetralogy patient with abnormal coronary artery.

METHODS: A 17-year-old child was accepted to our clinic with symptoms of reduced effort capacity (NYHA class II) and severe cyanosis. There was a systolic murmur of 3/6 degree on the left side of the sternum. A perimembranous ventricular septal defect (VSD), dextraposition of the aorta, and a 130 mmHg gradient across the RVOT were determined on echocardiography. The McGoon index was greater than 2. Cardiac catheterization showed abnormal course of coronary artery.

RESULTS: After opening the pericardium the anomalous Coronary course was seen to transverse the RVOT anteriorly. Following its course, the origin of the LAD from the RCA could be inspected on the anterior surface of the heart. Cardiopulmonary bypass was initiated and intermittent tepid blood cardioplegia was given in an antegrade fashion. After cardioplegic arrest, right atrium was opened and coronary artery was mobilized laterally 3-4 cm and a vertical infundibulotomy incision was made over pulmonary artery, pulmonary valve cusps were thick and had severe commissural fusion. The pulmonary valve leaflets were excised and incision was extended from pulmonary annulus below the mobilized coronary artery through the RVOT. Hypertrophied infundibular muscle bundles were divided and resected through this incision. Ventricular septal defect was closed with a Dacron patch with interrupted pledgeted sutures via right atrium. Ventriculotomy was closed with using Dacron graft.

CONCLUSIONS: Mobilization technique provides sufficient exposure to relieve the RVOT, anomalous coronary artery stayed intact and after RVOT resection transannular patch relieved the outflow satisfactorily. Many different techniques are used for repair of tetralogy of Fallot with a coronary anomaly, but this method appears to be easy and effective.

**25 March 2011, Friday / 13:30-15:00
Coronary Circulation: An Odessa Poster Discussions**

PP-063 ELECTROCARDIOGRAPHIC PARAMETERS IN CORONARY SLOW FLOW

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OBJECTIVE: Coronary slow flow (CSF) is characterized by delayed opacification of coronary arteries in the absence epicardial occlusive disease. Increased QT dispersion (QTD) is generally associated with heterogeneity of ventricular repolarization and which is a key factor in the development of serious and fatal arrhythmias associated various conditions. P wave dispersion (PWD) is a recent electrocardiographic (ECG) marker that has been reported to be influenced by the autonomic tone. In this study we compared P wave duration-PWD and corrected QT duration (QTc) and dispersion between patient with CSF and control subjects.

METHODS: The study included 50 patients having CSF and 40 subjects having normal coronary arteries in coronary angiography. The patients were evaluated with 12-leads electrocardiography, the maximum, minimum P wave duration, PWD and maximum, minimum QT duration were measured

manually, QTc intervals was calculated with Bazett's formula.

RESULTS: Coronary slow flow was observed in left anterior descending artery (LAD) in 24 (48%) patients, in Circumflex artery (Cx) in 12 (24%) patients and in right coronary artery (RCA) in 14 (28%) patients. Baseline clinical characteristics of the study population were shown in table 1. Maximum P wave duration and PWD were higher in CSF group (94.7 ± 7.5 msec vs 105.1 ± 10.8 msec, $p < 0.001$, 25.4 ± 6.2 msec vs 34.8 ± 9.7 msec $p < 0.001$, respectively). Moreover, QTc max and QTcd were longer in CSF group (405.2 ± 24.6 msec vs 435.3 ± 27.1 , $p < 0.001$, 36.7 ± 10.4 msec vs 63.7 ± 14.8 msec, $p < 0.001$ respectively).

CONCLUSIONS: SCF phenomenon was found to be associated with prolonged P-wave duration and increased PWD, QT duration and QTD. The possible mechanisms may be micro vascular ischemia and/or altered autonomic control of the cardiovascular system.

PP-067 CIRCUMFLEX ARTERY ANOMALY ORIGINING FROM RIGHT PULMONARY ARTERY LEADING TO MYOCARDIAL ISCHEMIA ASSOCIATION WITH SINUS VALSALVA ANEURYSM AND CX- BRONCHIAL ARTERY FISTULA

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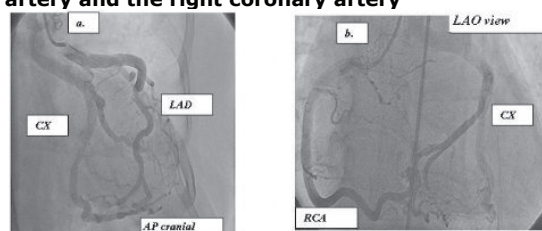
OBJECTIVE: Anomalies of the coronary artery are congenital diseases with various variations and pathophysiological mechanisms presenting as different conditions in different age groups. Circumflex coronary artery anomaly originated from pulmonary artery is extremely rare especially in the adult population. In the present case report, a late symptomatic patient with anomalous circumflex artery from the pulmonary artery is presented.

RESULTS: A 63 years old female patient applied to the hospital with palpitations, chest pain, exertional dyspnea, and sweating. On electrocardiogram (ECG) there was normal sinus rhythm and complete right bundle branch block (RBBB). Transthoracic echocardiogram revealed akinesis at the middle and basal portions of the posterior wall and hypokinesis at the middle and basal portions of the lateral wall. The ejection fraction was calculated as 40% with the modified Simpson method and there was a mild aortic insufficiency. On coronary angiography, the left anterior descending (LAD) artery showed ectasia and originated alone from the left coronary ostium, along with the right coronary artery (RCA) originating from the right coronary sinus. Neither RCA nor LAD showed atherosclerotic disease and ventriculogram revealed hypokinesis at the apex, inferior, and posterior walls. The left circumflex artery (Cx) showed a late retrograde filling from RCA and LAD by collateral flow and it was drained to the pulmonary artery. MSCT was performed with the aim of

confirming the anatomic origin and course of anomalous Cx artery from the pulmonary artery. MSCT revealed that the Cx artery originated from the right pulmonary artery. At the level of the aortic root, there was an aneurysmatic dilatation in 33x30 mm dimensions which was suggestive of sinus valsalva aneurysm. On the other hand, general dilatation and tortuosity was detected at bronchial arteries and MSCT identified a circumflex artery to bronchial artery fistula. The patient was referred with plans of future cardiac surgery.

CONCLUSIONS: In the present case report, an adult patient presenting with signs and symptoms of myocardial ischemia had a very rare condition as anomalous circumflex artery arising from the pulmonary artery. As far as we are concerned, this is the first case in the literature revealing the association of anomalous circumflex artery originating from the pulmonary artery, bronchial artery fistula and sinus valsalva aneurysm. In addition, this case report is a successful example of MSCT use in coronary anomaly patients in whom the origin could not be clarified with conventional coronary angiography.

X-ray coronary angiography shows the retrograde filling of an anomalous left circumflex artery through collateral vessels provided by left anterior descending artery and the right coronary artery



**25 March 2011, Friday / 15:30-17:00
Coronary Surgery: Where Are We Standing? - Poster Discussions**

PP-072 OUR RESULTS OF CORONARY ARTERY BYPASS SURGERY IN PATIENTS WITH LOW EJECTION FRACTION

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OBJECTIVE: Despite improvements in medical therapies and surgical techniques, the management of patients with coronary artery disease and low ejection fraction is still challenging. Current treatment options include intensive medical therapy, surgical revascularization, ventricular remodeling, and heart transplantation. Medical treatment alone is problematic because of limited long-term survival. The aim of this study is determine long-term survival, identify preoperative factors predictive of a favorable outcome, and assess functional improvement after coronary artery bypass grafting in patients with low ejection fraction.

METHODS: Between January 2005 and January 2010, 320 patients who underwent coronary artery

bypass grafting and had a preoperative left ventricular ejection fraction between 20% to 35% were included. left ventricular ejection fraction was determined by uniplanar or biplanar ventriculography during left heart catheterization and transthoracic echocardiography. Functional improvement was evaluated through echocardiography and gated scintigraphy at exercise/rest. 221 patients were male (69%) and 99 were female (31%). The mean age was 67,2 + 8,69. Ejection Fraction was 30-35% in 234 patients (73%) and 20-30% in 86 patients (27%). Survival was determined by Kaplan-Meier analysis.

RESULTS: An average of 3.01 coronary bypass grafts per patient were performed. In-hospital mortality was 1,9% (6 patients). All procedures were performed using cardiopulmonary bypass and hypothermia of 32° Centigrade. The coronary endarterectomy procedure was performed in 138 patients (43%). Only internal thoracic artery and saphen vein were used as conduit.

CONCLUSIONS: In conclusion, CABG can be safely performed in low-EF patients with minimal postoperative morbidity and mortality. Preoperative evaluation of myocardial viability in this group of patients using PET scanning or dobutamine echocardiography might additionally improve outcomes of this surgical approach. Low-EF patients could greatly benefit with respect to increased postoperative EF, increased long-term survival, improvement in NYHA classification, and higher quality of life.

PP-073 CORONARY BYPASS SURGERY IN PATIENTS WITH DIALYSIS-DEPENDENT BECAUSE OF RENAL INSUFFICIENCY

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OBJECTIVE: Chronic renal failure is commonly considered a significant factor for increased morbidity and mortality after cardiac surgery. The risk of cardiac surgery in dialysis patients is increased compared with other patient groups. We analyzed early and long term results following coronary bypass surgery.

METHODS: From January 2005 to January 2010, 110 patients underwent cardiac surgery with a mean age was 59.9 years (range 31-71 years). Dialysis dependent patients undergoing cardiac surgery was prospectively collected and analysed retrospectively. We reviewed our experience retrospectively. All patients were New York Heart Association (NYHA) class >2 preoperatively. They were followed up with quality of life and functional capacity.

RESULTS: New York Heart Association class was I-II in 83% (91) on long term follow up. All patients who awaiting renal transplants received their transplant in the first six months post-operatively. The overall survival at one year was 96%. In-hospital mortality was 1,8% (2 patients). The main postoperative morbidities were pulmonary complications 15% (17) and multi-organ failure 7% (8).

CONCLUSIONS: Cardiac surgery in dialysis patients is associated with an acceptable hospital mortality.

The quality of life of long term survivors is increased significantly. Thus we advocate surgical treatment in patients with symptomatic heart disease. Early diagnosis and surgical intervention in the NYHA functional class II may lead to a lower perioperative mortality.

PP-075 OFF-PUMP CORONARY ARTERY BYPASS SURGERY IN PATIENTS WITH RENAL INSUFFICIENCY: 3 YEARS EXPERIENCE

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OBJECTIVE: Coronary artery disease remains a major cause of mortality and morbidity in patients with renal insufficiency. Patients with impaired renal function who undergo coronary artery bypass grafting (CABG) operations carry a significant operative risk and may require a prolonged hospital care. the impaired renal function contribute to adverse operative outcome. The aim of this study was to investigate the impact renal dysfunction on short-term outcome of patients undergoing coronary artery bypass surgery.

METHODS: : Between January 2007 and October 2010 thirty-eight patients whose creatinine levels greater than 2.5 mg/dl were included. Whereas 4 four patient were having hemodialysis, the remaining 34 were on medical treatment only. Thirty patients were male (%79) and Eight patients were female (%21) patients aged 46 to 74 (median 60.1 years). All patients were operated with off-pump technique.

RESULTS: The hospital mortality was %5.88 (2 patient) in non dialysis group and %33.33 (1 patient) in the dialysis group. Post operative acute renal failure requiring hemodialysis was seen in 4 patients (%11.7) in non dialysis group. After surgery we observed in 5 patients (%13.2) low cardiac output, 1 patient (%2.7) pulmonary complication, 1 patient (%2.7) wound infection and 4 patient (%10.6) rhythm disturbances. There was no any significant difference in the average length of post operative intensive care unit stay (hours) and in-hospital stay between non dialysis and chronic dialysis group.

CONCLUSIONS: We conclude that under a well-prepared dialysis program and meticulous perioperative management, off-pump coronary artery bypass grafting can be performed in patients with renal dysfunction with increased but acceptable perioperative morbidity and mortality risks.

PP-076 EFFECT OF LIDOCAINE ENRICHED CARIOPLEGIA ON ISCHEMIA REPERFUSION INJURY UNDERGOING CORONARY BYPASS SURGERY

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OBJECTIVE: Various cardioplegic solutions are being used as pharmacological arrest agent to reduce the ischemia-reperfusion injury as return to normotensive-normothermic conditions following the hypotensive- hypothermic period during the CPB. Anti-arrhythmic agent lidocaine can protect the myocardium from both ischemia and reperfusion injury by blocking the sodium and calcium channels and protects the cell membranes from reactive oxygen species. In this study, we added lidocaine into the cardioplegic solution and searched its positive effects on to the ischemia and reperfusion injury by checking cardiac enzyme levels, hemodynamic parameters and cardiac performance status.

METHODS: Ages between 50-70 and EF more than 40% total 36 patients who undergone CABG operation divided into two groups. One group is given 2mg/kg lidocaine added cardioplegia whereas the other group is given cardioplegia without lidocaine. Comparison is made between postoperative AF incidence, positive inotropic and defibrillation requirements, postoperative 6th and 24th hour troponin and CK-MB levels.

RESULTS: No significant differences were found statistically between postoperative AF incidence, positive inotropic support and defibrillation requirements, postoperative 6th and 24th hours troponin and CK-MB levels.

CONCLUSIONS: The 6th and 24th hour troponin and CK-MB levels in lidocaine group is lower than the other group but not statistically significant. Cardioplegia with this dosage of lidocaine has no effect on the postoperative AF incidence and positive inotropic and defibrillation requirements.

PP-077 PREDICTORS OF REINTERVENTION AFTER CORONARY ARTERY BYPASS GRAFTING

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OBJECTIVE: A requirement for reintervention after coronary artery bypass grafting (CABG) is common. Our aim was to determine the predictors of reintervention in patients with symptoms of recurrent ischemia after CABG.

METHODS: Our study included 485 patients who underwent CABG from a population of patients with coronary angiography control from our clinic between the years 2003 and 2010. The patients' demographic characteristics, the presence of CAD (coronary artery

disease) risk factors (diabetes mellitus, hypertension, age, gender, smoking, family history), ECG (electrocardiography) changes, troponin and CKMB levels, and left ventricular function were evaluated retrospectively in terms of time elapsed after CABG. The patients who had undergone percutaneous coronary intervention (PCI) after CABG and for whom re-operation was decided were recorded. **RESULTS:** Diabetes mellitus ($p < 0.001$), smoking ($p < 0.001$), family history ($p < 0.001$), HT ($p < 0.001$), ECG changes ($p < 0.001$), 50% and higher EF were found to be independent predictors of reintervention. **CONCLUSIONS:** Reintervention after CABG is common. This rate is especially high in patients with risk factors for atherosclerosis and those who have ECG changes and normal EF. Knowledge of these risk factors is useful in the determination of CABG requirement. Modification of atherosclerosis risk factors may play an important role in reducing reintervention.

PP-078 ON-PUMP CARDIOPULMONER BYPASS VERSUS OFF-PUMP CORONARY ARTERY BYPASS GRAFTING SURGERY: RENAL AND LIVER FUNCTION TESTS

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OBJECTIVE: In our study we aimed that search the effect of on-pump cardiopulmonary bypass (CPB) and off-pump coronary artery bypass grafting (CABG) surgery techniques on liver and renal function.

METHODS: Sixty four patients that were undergone CABG were incorporated the study and was arranged two groups: on-pump CPB (40) and off-pump CABG (24). The blood samples were collected for preoperative and postoperative levels of 24 and 48 hours blood urea nitrogen (BUN), creatinine, aspartate aminotransferase (AST), Alanine aminotransferase (ALT) and AST to ALT ratio (AST/ALT).

RESULTS: The patients of on-pump CPB and off-pump CABG mean age (61.9 ± 9.4 , 60.4 ± 11.1 ; $p > 0.05$), body mass index (BMI), clinical and demographic features were similar. There were no statistically significant difference in levels of preoperative BUN, creatinine, AST, ALT, AST to ALT ratio. The postoperative 24 hours plasma levels of creatinine, AST, AST/ALT were lower in off-pump CABG but BUN and ALT levels were similar among the two groups. The postoperative 48 hours plasma levels of BUN, creatinine, AST, AST/ALT were lower in off-pump CABG but levels of ALT were similar between two groups.

CONCLUSIONS: In our study we established that the off-pump CABG has lower negative effect on liver and renal function than on-pump CPB.

PP-079 THE IMPACT OF PREVIOUS PERCUTANEOUS CORONARY INTERVENTION ON POSTOPERATIVE RESULTS, IN PATIENTS UNDERGOING CORONARY ARTERY BYPASS SURGERY

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OBJECTIVE: The widespread use of percutaneous coronary intervention (PCI) has resulted in an increasing number of patients being referred for coronary artery bypass graft surgery (CABG) who have undergone prior PCI. The aim of this study is to determine the association between previous PCI and outcomes after CABG.

METHODS: Between January 2008 – January 2009 54 patients undergoing elective CABG (group 1) were compared to 46 who had CABG after previous PCI (group 2). Mean follow-up was 12 months. In group 1 ratio between female and male was 12/42, in group 2 it was 9/37.

RESULTS: The average time interval to CABG following initial PCI was 18,5 months. There was no significantly difference in demographic features and risk factors between two groups ($p>0.05$). Also there was no statistically significant difference in intraoperative and postoperative data (0.05). In hospital mortality was 1 patients (2%) in group 1 and 1 patients (2%) in group 2. In group 1, 2 patients (4%) and in group 2, 3 patients (7%) had cardiac mortality. Total mortality was 3 patients (6%) in group 1 and 4 patients (9%) in group 2. There was no statistically significant difference between two groups ($p>0.05$). When rehospitalisation numbers were considered during one year because of cardiac reason were 2 patients (4%) in group 1 and 3 patients (7%) in group 2. All cause rehospitalisation numbers were 5 patients (10%) in group 1 and 6 patients (14%) in group 2. There was no significantly difference between two groups ($p>0.05$).

CONCLUSIONS: Previous PCI does not significantly influence the CABG outcome in 12 months follow up period.

PP-080 DIFFICULTY DIAGNOSED PULMONARY EMBOLISM AFTER CORONARY ARTERY BYPASS SURGERY. CLINICIAN UPTAKE OF DIAGNOSIS AND PROPHYLAXIS

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OBJECTIVE: Pulmonary embolism after CABG is not a frequent complication. Early diagnosis of pulmonary embolism (PE) after CABG may be delayed because of postoperative particularly left pleural effusion, left lower lobe atelectasis, left hemidiaphragm paralysis, and swelling in the vein harvest site. Hence, cardiac surgeons should consider the diagnosis if any suspicion of pulmonary embolism exist, because early diagnosis and treatment can dramatically reduce the mortality of the disease. We present a case report of a patient who difficulty diagnosed with early postoperative pulmonary embolism after CABG and especially discuss diagnosis and prophylaxis.

METHODS: A 53-year old women was operated on pump 3-vessel coronary artery by pass grafting with in our surgical ward. She admitted to our hospital with difficulties in deep breathing and atypical chest pain localized on the sternum for last 2 days and mild swelling in the vein harvested leg on her 10th postoperative day. The other signs and routine laboratory tests were in normal. The chest x-ray showed large left-sided pleural effusion, slightly increased left hemidiaphragm and mild right pleural effusion and mediastinum was normal. The Elisa D-Dimer was above 1000ng/ml. The contrast enhanced spiral chest CT revealed hypodense filling defect in the right main pulmonary artery and right mild pleural effusion and left mild-moderate pleural effusion and compression atelectasis in the left lower lobe. The venous doppler ultrasonography showed thrombi in the proximal part of right leg. (in the leg of non-harvested vein). She was hospitalized for ten days. Her PaO₂ was 93% on room air. She was resuscitated with oxygen by mask and initiated on low molecular weight heparin (LMWH) as a bridge to warfarin in the therapeutic dose.

RESULTS: She was discharge home uneventfully. One year follow up, there is no residual thrombi and she was free of dyspnea.

CONCLUSIONS: Haemodynamically stable PE after CABG surgery sometimes is difficulty diagnosed because of the clinical progress of recent coronary surgery. This may be delayed for PE diagnosis and may lead to increase mortality and morbidity of PE. Hence, rapid diagnosis tools such as D-Dimer, Echocardiography, Spiral CT scan can provide rapid and correct diagnosis of PE. Better results for prevention and diagnosis of PE after CABG surgery can be achieved with a combination of these strategies.

**25 March 2011, Friday / 17:00-18:30
Ongoing Controversies in Disease of
Aorta - Poster Discussions**

PP-081 PULMONARY EMBOLISM DUE TO BIOLOGICAL GLUE AFTER REPAIR OF TYPE A AORTIC DISSECTION

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Biological glue is increasingly used in cardiac surgery. We report a case of type A aortic dissection repair that was complicated by subsequent pulmonary embolism due to Bioglue (Cryolife Inc. Hennesaw GA, USA). To our knowledge this is the first report of a case with this complication.

PP-082 RETROSPECTIF ANALYSIS OF CARDIAC MANIFESTATIONS OF OUR PATIENTS WITH MARFAN SYNDROME

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OBJECTIVE: Marfan syndrome is an autosomal dominant connective tissue disorder affecting mainly cardiovascular system, eyes and skeleton. However, the most serious complication in patients with Marfan syndrome (MS) is progressive aortic root dilatation, aortic dissection or regurgitation. We have reviewed all patients with MS in our hospital over a six year period to determine the symptoms during application, diagnostic and clinical aspects, treatment modalities and long term follow-up.

METHODS: The medical records of all patients with MS in Yuzuncu Yil University Department of Cardiology from January 2004 to May 2010 were reviewed. MS was defined by clinical and Ghent criteria. Individuals without a family history of MS require major criteria in at least two different organ systems and involvement of a third organ. Individuals carrying an FBN1 mutation known to cause MS or cases with a positive family history require one major criterion and involvement of an additional organ to diagnosis of MS.

RESULTS: Eleven patients have diagnosis of MS according to Ghent criteria. Patients with mean age of 37.5 years. In our patient group wasn't a presence woman. Main complaint of patients was dispnea. Primary findings in physical examination were apical systolo-diastolic murmur, mediastinal enlargement at chest X-ray. Aortic root dilatation, aortic regurgitation was seen echocardiographically. Mean follow-up time was 3.8 years. During follow-up six patients died. Main cause of die was aortic complication

CONCLUSIONS: Early detection and close monitoring of the MS very important for prevent complications. MS patients should be followed closely especially in terms of cardiovascular complications.

PP-083 ANTEGRADE SELECTIVE CEREBRAL PERFUSION ALONG WITH RIGHT CAROTID ENDARTERECTOMY: TWO CASES

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Yuksekk Ihtisas Hospital, Ankara, Turkey

OBJECTIVE: Two cases of aortic surgery performed by antegrade selective cerebral perfusion (ASCP) along with right carotid endarterectomy are discussed.

METHODS: Two patients were admitted to the hospital with aneurysmal dilatation of aorta and right carotid artery stenosis. One of them was a 69 year-old male patient with an ascending aortic aneurysm (5.1 cm) and aneurysmal dilatation of the aortic arch (4.6 cm). Duplex ultrasound demonstrated 70% to 99% stenosis in the right internal carotid artery. The other patient was 58 year-old male patient with an aortic arch aneurysm (6.5 cm) and 70-80% stenosis in the right internal carotid artery. In each patient carotid endarterectomy was performed and the arteriotomy was closed with patch. Subsequently, brachial artery cannulation was performed. Ascending aorta was replaced with a supracoronary Dacron graft. During the arch reconstruction, open distal technique was employed with continuous right brachial artery ASCP. Also for the second patient elephant trunk technique was performed after total arch replacement.

CONCLUSIONS: ASCP is proved to be a safe method for brain protection. ASCP is suitable, technically simple, not time consuming and providing optimal repair chance in arcus aortic repair requiring surgery. Also cardiopulmonary bypass and operation times are shorter and deep hypothermia is not needed. Even in complex aortic surgery with coexistence of other situations as carotid artery stenosis, ASCP via brachial artery cannulation may be used as an alternative to other modalities.

PP-086 LOWER LIMB ISCHEMIA DUE TO TRAUMATIC ABDOMINAL AORTIC DISSECTION WITHOUT ABDOMINAL ORGAN INJURIES.; REPORT OF A CASE AND REVIEW OF THE LITERATURES

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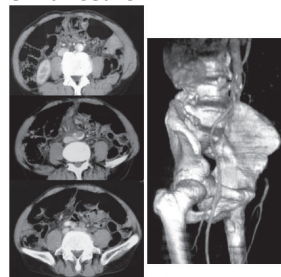
OBJECTIVE: Dissection of the abdominal Aorta due to blunt trauma not associated with other injury is very rare entity. We will report a case and review of the literatures.

METHODS: A 80-year-old male, who had been crushed against a wall by a snow blower for 4 hours, was admitted to our hospital. He showed stable vital signs and complained lumbago with right lower limb numbness, therefore, orthopedist was called at first. However, he had been felt left lower limb pain after one hour. Left lower extremity pulses were not palpated. A computed tomography scanography with contrast media demonstrated dissection of the infra-renal abdominal Aorta, extending to the left common iliac artery that was occluded by thrombosed false lumen. Other finding was not present in the abdomen. Emergent femoro-femoral bypass using Dacron prosthesis was performed, and the left lower limb perfusion was started 8 hours after the accident. In spite of massive medical support for limb ischemia, progression of the left leg necrosis necessitated a left femoral amputation.

RESULTS: There are seven cases of the same as ours, in the last 45 years. Before CT-era (up to 1970's), all of three were diagnosed by angiography, on the other hand recent four by CT. Surgery was applied to six cases, and the aortic stent to the remainder.

CONCLUSIONS: Early diagnosis with CT scanography and less invasive procedure should be essential to the blunt traumatic Abdominal Aortic Dissection associate with lower limb ischemia.

enhanced CT



The left common iliac artery was occluded by thrombosed false lumen.

PP-087 SURGICAL REPAIR OF A GIANT ASCENDING AORTA ANEURYSM IN AN ASEPTOMATIC MARFAN SYNDROME PATIENT

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OBJECTIVE: A 27-year-old, asymptomatic, male patient that underwent routine physical examination prior to army enrolment, had a $\frac{3}{4}$ diastolic murmur audible over the right upper sternal border. He was referred to our center and the transthoracic echocardiography revealed severe aortic regurgitation (AR) and a giant ascending aorta aneurysm. Further examination suggested Marfan syndrome as his arm span was greater than height and very flexible joints were present at the upper extremities. Angiographic CT-scan revealed ascending aorta reaching a diameter of 10.8 cm while arcus and descending aorta were within normal parameters.

METHODS: He underwent aortic root replacement and aneurysm repair with Bentall technique (27mm prosthetic bileaflet valved graft, St. Jude Medical, Inc, St. Paul, MN) using femoral arterial cannulation and right atrial venous cannulation.

RESULTS: Postoperative course was uneventful and the patient was discharged after 1 week. Control echocardiographic data confirmed normal prosthetic valve function, normal conduit view and absence of pericardial effusion.

CONCLUSIONS: The surgical treatment of cardiovascular disorders of Marfan syndrome is a challenging topic. Surgical experience affects the selection of the repair technique and detailed strategy should be planned prior to surgery. The presence of such a giant aneurysm in an asymptomatic patient makes this an interesting case emphasizing the importance of cardiac screening in individuals with physical anomalies or dysmorphism.

PP-088 AORTIC ARCH PSEUDOANEURYSM ON PENETRATING ULCER: DELAYED CLOSURE AFTER ENDOVASCULAR TREATMENT

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OBJECTIVE: Standard open repair of true or false aneurysms of the aortic arch usually require cardiopulmonary bypass, hypothermia and circulatory arrest, associated with increased mortality and morbidity rates. Thus, an alternative strategy that avoids cardiopulmonary bypass (CPB) and hypothermic circulatory arrest would benefit the patient. Endovascular stent-grafting has developed as a safe and effective treatment for descending aortic pathologies. We share our experience with the endovascular approach to pseudoaneurysm of the aortic arch in a patient with high risk for aortic arch replacement under extracorporeal circulation.

METHODS: A 65-year-old patient with history of hypertension, chronic obstructive pulmonary disease, non-insulin dependent diabetes, obesity, and hyperlipidemia was referred to our Hospital for

evaluation of thoracic pain and dysphonia. A chest Computerized Tomography (CT) scan showed a penetrating ulcer 1,2 cm distal to the origin of the left common carotid artery and immediately proximal to the left subclavian artery. A large pseudoaneurysmal sac measuring 63 mm x 67 mm, was located on the anterior left side of the aortic arch towards the wall chest. The patient's EuroSCORE was 13, and predictive mortality was 41,12%. We approached the aortic arch through a left femoral artery approach. Endoprosthesis was introduced under fluoroscopy control and controlled hypotension (80 mm Hg). Medtronic Valiant endoprosthesis with a diameter of 26 mm and a length of 100 mm was used. The endoprosthesis was deployed in such a way that the freeflow was on the origin of the left common carotid artery. Fluoroscopy was performed to confirm appropriate graft deployment and the presence of small type 1 endoleak partially refilling the pseudoaneurysm.

RESULTS: Patient's pain resolved soon after placement of the stent graft. A CT scan, performed 7 days later, confirmed the presence of a small endoleak with slow pseudoaneurysm refilling. The postoperative period was event free, and the patient was discharged on day 8. A follow-up at twenty days after the procedure, suggested progressive thrombosis of the pseudoaneurysm sac and, at 3 months, demonstrated occlusion of the pseudoaneurysm with complete resolution of the endoleak. The patient is actually alive and completely asymptomatic.

CONCLUSIONS: The endovascular treatment should be considered as a potential alternative to conventional aortic arch aneurysm surgery in high-risk patients. Our case shows that an optimal result can be obtained in selected cases through a progressive obliteration of the pseudoaneurysm sac, secondary to the hemodynamic changes triggered by the endovascular prosthesis.

PP-089 CASE OF HUGE ASCENDING AORTIC ANEURYSM

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OBJECTIVE: Aneurysm is defined as a vessel diameter 1.5 times normal. However, with 37 mm used as the upper limit of normal, this definition would imply that an ascending aorta would have to be >5.5 cm to be considered aneurysmal. Blood pressure has a marginal effect on aortic diameter. The incidence of ascending aortic dilatation in the general population has been increasing over the past 3 decades, partly because of the larger aging population as well as the higher frequency of incidental findings since the advent of computerized tomography (CT) and 2-dimensional echocardiography. 65-year-old female patient was admitted to our clinic with complaining of back pain and shortness of breath. In her history, 3-vessel

coronary arter bypass greft surgery had before)12 years ago, hypertension and diabetes mellitus for 15 years and dialysis for 4 years. was Dialysis was coming in for 4 years. On physical examination, blood pressure: 125/70 mm Hg, heart rate: 78 beats / min, were rhythmic. 2 / 6 systolic murmur and 1 / 6 diastolic murmur was were heard at the aortic and the mesocardiac focus respectively. An additional ECG was normal except for left ventricular hypertrophy. Transthoracic echocardiography demonstrated normal ejection fraction (55%) and dilatation of ascending aorta (82 mm). Surgical treatment was recommended but she refused. surgery, The patient discharged on medical treatment.

CONCLUSIONS: Aortic diameter is a significant predictor of dissection and rupture of aorta, particularly when the ascending aorta reaches 6 cm. From a database of 1600 thoracic aneurysms and dissections, those >6 cm had annual rates of rupture, dissection, and aorta-related death of 3.6%, 3.7%, and 10.8%, respectively; the cumulative rate of any of those events was 14.1%, more than double the rate of adverse events for aneurysms between 5 and 6 cm (6.5%).

PP-090 ASENDING AORTIC REPLACEMENT WITH COMPOSITE GRAFT IN PATIENTS A WITH ASENDING AORT ANEURYSM AND AORT VALVE INSUFFICIENCY: EXPERIENCE OF PUBLIC HOSPITAL

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OBJECTIVE: Composite valve replacement procedure for ascending aortic aneurysms with aortic valve insufficiency is widely applied in the present. The most commonly used surgical treatments are Bentall procedure, Carrel Patch and Cabrol techniques. Although these procedures are similar in approach, they differ in management of bleeding of coronary anastomosis which is one of the major complication. The aim of this study was to investigate retrospectively early and midterm results of Bentall procedure.

METHODS: Between January 2006 and January 2009, 8 patients with ascending aortic aneurysm were operated in our clinic. In all patients, Bentall procedure were performed. In this study, We investigated the early and midterm outcomes of 8 patients. Six of the patients were male and two were female. Average age was 52.87±11.55 years with range between 32 to 63 years.

RESULTS: No mortality was observed in the early post operative period. One patient died related to intracranial bleeding in the late post operative period.

CONCLUSIONS: Surgical procedure of Bentall can be applied with success in the early and mid-term in experienced and physical infrastructured environment even it is in the state hospitals with currently more technological facilities and perioperative monitoring systems.

PP-091 RUPTURED ABDOMINAL AORTIC ANEURYSM SURGERY FOR OCTOGENARIANS

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OBJECTIVE: The purpose of this study is to evaluate the morbidity and mortality of ruptured abdominal aortic aneurysm (rAAA) in octogenarians.

METHODS: We reviewed octogenarians undergoing emergent rAAA repair at our hospital between January 2009 and December 2010.

RESULTS: Six patients underwent rAAA repair through a standard transperitoneal approach. There were 3 men and 3 women with a median age of 83 years (range 79–88 years). The mean diameter of the aneurysms was 7.2 ± 1.4 cm. The overall 30-day mortality was 50%.

CONCLUSIONS: Although the elderly patients have an increased risk of having cardiac and cerebrovascular events in the postoperative period, the treatment of rAAA in these patients should be surgery.

PP-092 MASSIVE HEMOPTYSIS DUE TO AORTOBRONCHIAL FISTULA ORIGINATED FROM A HUGE ASCENDING AORTA ANEURYSM

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OBJECTIVE: The massive hemoptysis is a rare but fatal complication of the thoracic aneurysms. It is generally seen with the fistula of the bronchi with archus or descending aorta diseases. A case of massive hemoptysis due to aortobronchial fistula originated from a huge ascending aorta aneurysm is reported.

METHODS: A 82-year-old man was admitted to the emergency service with shortness of breath, nocturnal dyspnea and hemomptysis. He had hypertension and smoking history for 40 years. The computerized tomography scan examination demonstrated chronic Type II aortic dissection and aneurysm formation of the ascending aorta and he had coronary artery stenosis on left anterior descending and diagonal artery discovered during coronary angiogram.

RESULTS: He underwent emergency surgery for ascending aorta replacement and repair of the aortobronchial communication. Axillary artery and femoral vein cannulation and deep hypothermic circulatory arrest and antegrade cerebral perfusion procedure (23 Oc, 22 min) were chosen to replace the ascending aorta. Saphenous vein was used for coronary revascularization of the left anterior descending and diagonal artery. The adhesion between the lung and aneurysm was resected and primarily sutured. The patient was died on postoperative day five because of multiorgan failure.

CONCLUSIONS: Aortobronchial fistula is a rare complication of the thoracic aorta aneurysms and usually is seen on descending aorta. It was also reported as a fistula between archus aorta and trachea. It is rarely seen on ascending aorta and has

a mortal progress because of late diagnosis. Aortobronchial fistula as an unusual cause of hemoptysis, should be kept in mind and needs emergent treatment before massive course.

PP-093 AORTIC COARCTATION EXPERIENCES IN ADULTS

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OBJECTIVE: Aortic coarctation is a congenital anomaly which is rarely seen in adult population, and mostly treated in childhood. Untreated patients who have aortic coarctation die before 50 years old because of hypertension and unrelated disorders. **METHODS:** 7 adult patients operated between January 1999-December 2010 were studied retrospectively. Median sternotomy in 1 patient and left thoracotomy for the others were the approaches. One patient underwent AVR operation later. Mean age was 29.8 (17-60 years).

RESULTS: Patch plasty with PTFE graft to 5 patients, bypass with 8 mm PTFE to 1 patient and PTFE graft interposition to descending aorta to 1 patient were the operations. Aortic clamp time for patch plasty was 43±15min and 52±12 min for bypass graft interposition. No neurological complications were determined postoperatively. Coarctation was distally to left subclavian artery in 6 patients, and proximally in 1 patient. Patch plasty with PTFE graft to 4 young and 1 elderly patient, ascending aorta-descending aorta bypass operation to middle aged 1 patient and graft interposition to descending aorta to 1 patient were the operations.

CONCLUSIONS: Aortic coarctation, which mostly seen on descending aorta distally to left subclavian artery, can be seen in a large clinical table which includes asymptomatic cases to cardiac collapse. Mostly, hypertension in the upper part of body is determined. Poststenotic aneurysms can develop distally to the coarcted segment and proximally. Hypertension usually improve after surgical treatment of aortic coarctation. Bypass operation between proximal and distal healthy vascular wall is a safe method with low morbidity and mortality rates in elderly. As an alternative and paliative teratment, bypass between left subclavian artery and descending aorta can be performed because of slimming of aorta on proximally to coarctation.

PP-095 GIANT AORTIC ANEURYSM WITH STANFORD TYPE A AORTIC DISSECTION AFTER AORTIC VALVE REPLACEMENT-CASE REPORT

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OBJECTIVE: Giant pseudo aneurysm of the aorta is

a rare but dreadful complication occurring several months or years after aortic surgery [1-3]. Thoracic aortic aneurysms tend to be asymptomatic and were previously often diagnosed only after a complication such as dissection or rupture occurred [3-4]. We present a case of giant root and ascending aneurysm with Stanford type A aortic dissection occurring 6 year after aortic valve replacement.

METHODS: A 71-year-old man, with a history of aortic valve replacement surgery performed 6 years ago, presented with increasing interscapular and back pain started 3 days before. The patient's physical exam revealed a well-healed median sternotomy incision, 100/60 mmHg of blood pressure, 86 beats/min of heart rate, equal blood pressures in all 4 extremities and diminished lung sounds at right lower hemithorax. **RESULTS:** The laboratory showed only elevated creatinin kinase levels while hemoglobin and hematocrit levels were in normal limits. Chest X ray revealed enlargement of mediastinum. A CT scan of the chest demonstrated an intimal flap separating the true and false lumen, aneurysm of the ascending thoracic aorta measuring approximately 11 cm in diameter and pleural effusion at right hemothorax. Transthoracic echocardiography showed a markedly enlarged aortic root and ascending aorta, intimal flap in the aorta, normal prosthetic valve function and 50% ventricular ejection fraction. His previous echocardiography performed 5 months before, revealed an enlarged ascending aorta with 5 cm diameter and normal prosthetic valve function. Because of his stable condition management included only pain therapy and his immediately transportation to cardiovascular surgery center in another hospital. The patient was discharged 3 days after diagnoses because he had not accepted the emergent operation.

CONCLUSIONS: Giant aneurysm of ascending aorta is rare after cardiac surgery(<0.001). The interval between valve replacement and dissection varies from 2 to 70 months [1,2,5]. Postoperative imaging after surgical replacement leads to an increase in the diagnosis of aortic aneurysms, which allowed elective treatment prior to the development of a complication. Pleural effusion and enlarged diameter are associated with potential rupture[2-5]. Untreated acute type A dissection has a %40-60 mortality risk within 48 hours of the event [6]. Surgical treatment is mandatory, surgical approach and its timing varies according to the location, size and etiology of an aneurysm [2-7]. Our case is unique because of 11 cm diameter of the aorta and 6 years interval between recent surgery and dissection. The case also emphasizes the importance of radiologic imaging.

25 March 2011, Friday / 08:30-10:00
Time to Focus on Peripheral
Vasculature - Poster Discussions

PP-098 APPLICATION OF VENA CAVA-FILTER FOR PROPHYLAXIS OF PULMONARY THROMBOEMBOLISM

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OBJECTIVE: The patients with deep vein thrombosis (DVT) having one of the most feared complication of pulmonary thromboembolism (PTE). In this study, we were analyzed results of treatment of 48 patients, in whom deep veins thrombosis of vena cava system had occurred.

METHODS: Between 2000 and 2010 years, 48 patients with DVT was installed vena cava filter (CVF) by fluoroscopic image. The group consisted of 17 women and 31 men, whose age ranged from 20 to 77 years (average: 51.3). Extremity venous Doppler Ultrasonography, Computed Tomography, Angiography, and Echocardiography were performed in all patients prior to VCF insertion. Cordis brand in 11 of patients with temporary, 37 patients permanent Vena Tech LP filter was installed brand. Intervention was performed through the femoral vein in 44 patients, and the jugular and subclavian vein in four patients.

RESULTS: In two patients, persistent bleeding due to the use of anticoagulation had occurred and drug was discontinued. In one patient, filter was escape to the renal vein. Mortality was not found.

CONCLUSIONS: PTE after DVT is a major clinical problem in terms of mortality and morbidity. VCFs installed by experienced cardiologists are decreased risk of PTE and its complications.

PP-099 IATROGENIC HAEMOTHORAX DUE TO CONTRALATERAL SUBCLAVIAN CATHETERIZATION

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OBJECTIVE: Contralateral hemothorax after subclavian vein cannulation is a rare complication of this procedure(1). We report one case of contralateral hemothorax due to left subclavian vein cannulation for hemodialysis.

METHODS: 44 year old female patient suffering from chronic renal failure for four years admitted for urgent hemodialysis catheter access because of hemodialysis graft infection. After left subclavian vein catheterisation, she was started hemodialysis. Immediately after the hemodialysis onset, the patient feels chest pain and shortness of breath and hemodialysis was discontinued. Chest X-ray was revealed large right pleural effusion. We gave

contrast through left subclavian catheter to make sure whether the catheter tip perforated into right thorax. Upon chest X-ray was taken after contrast injection. We found contrast image in the right thorax.

RESULTS: After left subclavian vein catheter was withdrawn, we placed chest tube through right thorax and approximately 2200cc blood was drained. The patient was hemodynamically stable.

CONCLUSIONS: Hemothorax is an emergency situation that requires rapid diagnosis. We should be noted that contralateral hemothorax may happen with subclavian vein catheterisation.

PP-100 FAST RECANALIZATION OF COMPLETELY OCCLUDED ILIO-POPLITEAL PROSTHETIC GRAFT WITH EKOS® ULTRASOUND-ENHANCED TREATMENT

U. Cetinkok

Department of Cardiovascular Surgery, The Public Hospital, Corum, Turkey

OBJECTIVE: Ultrasound enhanced thrombolysis was performed in the treatment of prosthetic graft thrombosis. 51-year-old male with 14 days old symptoms presented with 65 cm clot and completely occluded ilio-popliteal prosthetic graft.

METHODS: 51-year-old male with 14 days old symptoms presented with 65 cm clot and completely occluded ilio-popliteal prosthetic graft. 40 cm and 30 cm Ekosonic® thrombolysis catheters were placed across the occluded graft. 1 ml/h of rTPA was infused.

RESULTS: The occluded graft was recanalized within 3 hours.

CONCLUSIONS: Ultrasound accelerated thrombolysis is a successful treatment for the prosthetic graft thrombosis.

PP-101 ACCELERATED THROMBOLYSIS TREATMENT WITH ULTRASOUND (EKOS®) IN THE ACUTE ARTERIAL OCCLUSIONS

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OBJECTIVE: Ultrasound accelerated thrombolysis was performed in the treatment of acute arterial thrombosis.

METHODS: 72-year-old male presented with both left radial and ulnar arteries thrombosed. 24 cm Ekosonic® thrombolysis catheter placed across the radial artery. 1 ml/hour infusion of rTPA was performed.

RESULTS: The time for complete lysis was 4.2 hours in the patient.

CONCLUSIONS: Successful clot lysis can be achieved in a short time using ultrasound - enhanced thrombolysis in acute arterial thrombosis.

PP-103 SURGICAL MANAGEMENT OF A PATIENT WITH SMALL AORTA SYNDROME: REPORT OF A CASE AND REVIEW OF THE LITERATURE

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OBJECTIVE: Small aorta syndrome (SAS) is defined as a syndrome of peripheral obliterating arterial disease characterized by aortoiliac steno-occlusion. It

typically occurs in young women of small stature with relatively typical risk factors. We present here, a 51-year-old female with 2-year history of bilateral intermittent claudication who was referred to our clinic and diagnosed as having SAS.

METHODS: A 51-year-old woman presented with complaints of severe low back pain and pain radiating down the back of the legs into the soles of her feet after walking around distance of 100 meters. Physical examination revealed 160 cm slim lady who had a blood pressure of 140/85 mmHg. A systolic bruit was heard over the distal abdominal aorta. Arteriography showed tapering of the lower abdominal aorta with a 90% stenosis just proximal to the bifurcation. Furthermore a gradual narrowing of the common iliac and femoral arteries was present. There were neither thrombotic occlusions nor any atherosclerotic changes in the artery wall. The surgical procedure involved a local endarterectomy and the insertion of a Dacron patch fashioned in the shape of an inverted "Y". A bifurcated dacron graft is sutured to both of the external iliac arteries when iliac arteries are involved in the disease proces.

RESULTS: Early postoperative course was uneventful and the patient was discharged on the 7th postoperative day. After the operation, the resting doppler pressures in both ankles were normal and she was completely symptom free 6 months after surgery.

CONCLUSIONS: Preferred surgical methods for reconstruction in patients with small vessels remain somewhat controversial; some authorities think the small size of the aorta and iliac vessels makes endarterectomy unsuitable, while others favoring bypass techniques advocate the use of end-to-side proximal aortic anastomosis to avoid size discrepancies with the usual prosthetic grafts. In our opinion because the disease in such patients is frequently localized, aortoiliac endarterectomy may often still be utilized. Although the small size of the vessels demands more care and occasionally requires the use of patch closures.

PP-104 OUR EXPERIENCES OF SYPATHECTOMY OPERATIONS

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OBJECTIVE: Sympathectomy operation is surgically disruption of integrity of sympathetic nerves which is correlate with upper and lower extremities. However some centers don't prefer performing sympathectomy operation in these days, it has indication in hyperhydrosis, peripheral arterial occlusive disease, Buerger's disease and Raynaud's phenomenon clinically.

METHODS: Between the dates of January 1984 and July 2010, 88 patients (11 women, 77 men; mean age 44,8±19 years) who underwent to sympathectomy operation in our clinic investigated retrospectively. Of these, 47 patients had Buerger's disease, 27 patients had atherosclerotic peripheral arterial disease, 2 patients had hyperhydrosis and 6 patients had Raynaud's phenomenon. Lumbar sympathectomy

operation and thoracic sympathectomy operation were performed in 68 and 20 patients respectively. In addition to sympathectomy operation, extremity amputation was requisite in 7 patients who has Buerger's disease. Recurrence wasn't seen in patients with hyperhydrosis and Buerger's disease.

CONCLUSIONS: Thoracic and lumbar sympathectomy operations were performed in our clinic in order that healing of ischemic wound and reducing of amputation level in Buerger's disease and atherosclerotic peripheral arterial disease, as well as abolishing of symptoms of Raynaud's phenomenon and hyperhydrosis.

PP-105 A RARE CASE OF POPLITEAL VENOUS ANEURYSM

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OBJECTIVE: Popliteal venous aneurysms (PVAs) are an uncommon but potentially life-threatening disease because they can be a source for pulmonary emboli (PE). Early diagnosis is fundamental in order to prevent the thromboembolic events or other major complications. We report a case of a patient with a popliteal venous aneurysm of the right popliteal fossa, with local symptoms and pain during palpation.

METHODS: A 32-year-old, healthy patient who presented to us with localised swelling and pain in the right popliteal fossa. Color-Doppler ultrasonography was performed to identify the true origins of this lesion. Subsequently, angio-computed tomography (ACT) confirmed a 42x68 mm oval mass in the left popliteal fossa continuous with the popliteal veins. The popliteal fossa was explored through a posterior approach through an S-shaped incision and the patient underwent tangential aneurysmectomy and lateral venorrhaphy.

RESULTS: Recovery was uneventful and remaining asymptomatic. Postoperatively, oral anticoagulation with warfarin was initiated for 6 months; follow-up investigations using duplex ultrasonography at 1, 6 and 12 months showed a patent popliteal vein with no thrombotic changes.

CONCLUSIONS: Because of the unpredictable risk of thromboembolic complications, surgical treatment that is accompanied by a low morbidity rate is indicated in all PVAs. Tangential aneurysmectomy with lateral venorrhaphy is the procedure of choice. Whenever possible, we recommend early surgical repair of both symptomatic and asymptomatic popliteal venous aneurysms, because they are associated with a risk of pulmonary embolism and death if left untreated.

PP-106 SHORT-TERM RESULTS OF SIMULTANEOUS CAROTID AND CORONARY ARTERY SURGERY

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OBJECTIVE: Surgical management of significant carotid artery disease in patients requiring coronary artery by-pass surgery is controversial. We reviewed

our results of coronary artery surgery and carotid endarterectomy done as combined procedure
METHODS: Between 2007 and 2010, 6 consecutive patients underwent simultaneous carotid endarterectomy and myocardial revascularization in the cardiovascular surgery department of Ataturk University. All patients were male. Mean age of the patients was 61 ± 2 years; range 53 to 74 years. Indication of carotid endarterectomy was more than 90% carotid stenosis with or without ulceration. Carotid angiography were performed in the 6 patients after doppler ultrasonography. Only 1 patient had bilateral carotid stenosis. None of the patients had history of stroke. Endarterectomy was performed before simultaneously.

RESULTS: We performed carotid surgery at the right side in the 5 patients and at the left side in the only 1 patient. Carotid surgery was done before median sternotomy. Endarterectomy was done with extraction of calcific plaque from both CCA, ICA and ECA if it was necessary. For the carotid artery repair, a saphenous vein was used in the 5 patients and pericardial patch was used in the 1 patient. Carotid shunt was used in the 3 patients. In these patients, carotid artery was clamped for 6 minutes. After systemic heparinization, cardiopulmonary by-pass was established with mild hypothermia and cardioplegic arrest. The average number of grafts were 3 ± 0.8 with average operative time of 4.6 ± 0.6 hours. Weaning started after 6-8 hours. At the first examination, speech, vision and other neurologic functions were normal in all the patients. They were shifted from intensive care unit on second postoperative day. Mean hospital stay was 7 and 10 days. None of the patients died and there were no neurological or cardiac problem in postoperative early period. At the same time we reviewed the patients who were 60 years old or older and underwent coronary artery surgery in our center in the last 1 year. 11 patients had carotid stenosis range 50% to 69% in the 85 patients. All of the patients were asymptomatic. Only coronary by-pass was performed and was not seen as a neurological complication in the postoperative period.

CONCLUSIONS: Surgical treatment of concomitant coronary and carotid artery disease is a safe and effective procedure. We believe that equally good results can be reproduced with low morbidity and mortality.

PP-108 CAROTIC-SUBCLAVIAN BYPASS AND CAROTIC-SUBCLAVIAN TRANSPOSITION IN SUBCLAVIAN ARTERY DISEASE CERRAHPASA EXPERIENCE

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OBJECTIVE: Atherosclerosis mostly affects the aorta and its branches (1). Commonly stenosis of subclavian and innominate artery are results of atherosclerosis. Proximal subclavian artery stenosis is related with arm claudication, rest hand pain, ischemic symptoms and vertebral artery syndrome (1,3). In vertebral artery syndrome cerebrovascular ischemic symptoms can be seen

due to stolen blood flow. In series, 72% of cases were left subclavian artery diseases, 16% were right subclavian artery disease and 10-12% were innominate artery disease (7 - 9). The surgical techniques for treatment are Transcatheter bypass graft, Endarterectomy, Subclavian-Carotid Trans and Extrathoracic bypasses (6). Carotico -Subclavian bypass operations, which are much more less invasive and more successful than axillo axillary bypass, are recommended for surgical treatment (2).

METHODS: Between 2000-2010 years, from 14 patients 8 were female and 6 were male. Range of age was 39 - 64. The symptoms of applying to the hospital were 7.1% of patients for shortness of breath, 50% of them have hand pain, 28.6% dizziness, 14.3% numbness, 7.1% tinnitus, 14.3% frosty hand. All the patients had Digital Subtraction Angiography analysis. In patients' history just two of them had another operation. We operated 9 of patients (64.3%) to carotico - subclavian graft bypass (6mm or 8mm PTFE graft), 5 (35.7%) of them to carotico - subclavian transposition technique. All the operations were under general anesthesia. The patients who underwent for the Carotico-subclavian graft bypasses had supraclavicular oblique incision. After systemic heparinization 6 or 8mm PTFE graft first end to side to carotid artery then end to side to subclavian artery anastomosed. The patients who operated for the Carotico - Subclavian Transposition had also the same supraclavicular incision. The proximal of subclavian artery ligated and with Prolene stitched, the distal of subclavian artery prepared and end to side anastomosed to carotid artery. After the operations all the patients' symptoms had gone, the radial artery pulse was palpable. The patients after the operation without any complication discharge from the hospital.

CONCLUSIONS: In supraclavicular region lesions like this Carotico - subclavian graft bypass and Carotico - Subclavian Transposition is less invasive and more successful operation technique. Also in the Carotico - Subclavian Transposition technique we don't use the prosthetic graft and in this case postoperation the infection risk decreases. The carotico subclavian graft bypass and carotico subclavian transposition operation in our clinic was successful and we want to share this with you.

PP-109 PAGET-SCHROETTER SYNDROME

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OBJECTIVE: Primary axillary-subclavian vein thrombosis was first described by Paget in 1875 and von Schroetter in 1884 and was named the 'Paget Schroetter syndrome' by Hughes in 1948. It is most often the consequence of chronic compression of the subclavian vein at the level of the thoracic outlet. Optimal management of this syndrome is still controversial because the outcomes of different strategies have been reported.

METHODS: A 43 year old man and 46 year old woman were admitted 3 months ago. Two patients had a painful swelling of the right arm. He is a lorry driver and she is a housewife. In two patients was diagnosed doppler ultrasonography. They didn't have

any coagulopathy, genetics disorder, thoracic outlet syndrome. In their short story two patients used their upper extremity repetitive and strenuous activity. They were treated with heparin only 10 days, analgesic anti-inflammatory drug. After they were treated this drugs who use asetilsalisilik acid 100 mg. They were not treated with compression sock. They have still, oedema and dilated superficial veins in the right upper limb. They are disturbed from this condition which is influence life quality. In venography axillary- subclavian vein is still thrombosis. But colleteral veins to be formed. We use a warfarin to held INR between 2 and 3 about six months and promise compression sock. Six months latter they have been much better than initially but not enough.

RESULTS: Paget-schroetter syndrome occurs predominantly in young, otherwise healthy People who participate in repetitive upper extremity activity. The initial symptoms were vague and misleading. And than diagnosis was delayed. Early diagnosis is important because major thromboembolic complication is visible and resulting in symptomatic, fatal pulmonary embolism (1). The treatment goals are to relieve the acute symptoms of venous occlusion, prevent pulmonary embolism and avoid development of post- thrombotic syndrome (2). Thrombolysis and anticoagulation are the mainstay of treatment.

CONCLUSIONS: This case study serves as a reminder for treatment's importance. It is important to be aware this syndrome. Treatment is the most important thing in this event. If you give inadequate therapy to patients who have a big problem all they life so that we must give adequate treatment this patient with heparin, urokinase or recombinant tissue plasminogen activator.

PP-110 INTRAARTERIAL COMPUTED TOMOGRAPHIC IMAGING OF AORTIC ANEURYSMS AND PERIPHERAL VASCULAR DISEASE AND COMCOMITTANT CORONARY ANGIOGRAPHY

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OBJECTIVE: The prevalence of coronary artery disease in peripheral vascular disease patients is very high in number. Considering comorbidities of peripheral artery disease such as coronary artery disease, congestive heart failure, chronic renal failure, and diabetes mellitus, it is an obvious need to use less contrast agents for more high quality imaging methods. This prospective study aims to execute the efficacy and safety of multislice computed tomographic angiography (MSCTA), made via a pigtail catheter left in descending aorta following coronary angiography. We analyzed the renal functions of 4 patients who need peripheral MSCTA with a known history of peripheric arterial

disease including the abdominal aortic aneurysm, and used amount of contrast dye in this new combined imaging technique.

METHODS: There were 4 patients (mean age 58,78 ±2.7) who underwent coronary angiography and multislice computed tomography between the dates of December 2010 and January 2011. One of 4 patients had an abdominal ultrasonography which showed an abdominal aortic aneurysm whereas 3 of them had peripheral arterial Doppler ultrasonography previously.

RESULTS: There were 1 female, 3 male patients. Three of our patients had non hemodialysis dependent chronic renal failure. The mean plasma creatinin value was 1.8mg/dl ±0.8. One patient whose plasma creatinin value was 2.6; had juxtarenal aortic aneurysm that carries the highest risk of contrast induced nephropathy. The mean amount of non ionic radiocontrast (Iohexol; Omnipaque 350mg/50ml, GE healthcare, Oslo, Norway) used in coronary angiography was 92.4ml ±12.4 whereas the mean amount of radiocontrast (iobitriol; Xenetix 350, 350mg/ml; Guerbet, France) 26.91ml±4.1

CONCLUSIONS: In the patients with concurrent peripheral arterial and coronary artery disease early timing of treatment is extremely important because of the nature of these two disease. Latency in treatment of aortic aneurysms may lead becoming unfit for endoluminal treatment or rupture of the aneurysm whereas peripheral arterial diseases cause loss of related limb. Considering the progressive nature of the peripheral vascular diseases, loss of any time can be intolerable. This new method provides fast getting access to the high quality images with lowered organ damage by using less radiocontrast in amount.

PP-111 TREATMENT OF GROIN LYMPHOCELE BY SCLEROSING AGENT: CASE REPORT

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OBJECTIVE: Lymphatic leaks after lower extremity vascular surgery can be a major source of morbidity causing increased length of stay, wound healing complications, and increased cost. 1% to 4% of femoral dissections clinically appear as lymphocele or lymph fistula. Lymphoceles and lymph fistulas of the femoral regions have been reported after lymph node biopsy, arterial reconstruction, saphanous vein harvest and other procedures. Lymphatic leaks after lower extremity vascular surgery can be major source of morbidity causing increased length of stay, wound healing complications, and increased cost.

METHODS: A 78 year-old man was referred for coronary bypass surgery. His physical examination was normal. He underwent 4 vessels coronary bypass surgery. His lesser saphenous vein was not suitable for grafting so that saphenous vein graft was harvested from right groin by open technique. There was no complication. There was swelling and skin necrosis on the lateral side of the incision on the patient's right groin. Under sterilized conditions, the

swollen region was opened using a 0.5-cm width incision, and copious amounts of serous fluid were drained on postoperative day 5. Cultures of the fluid sample were negative, and biochemical markers showed transudate. A pressure dressing was applied to the wound. On postoperative day 8, the patient had a fever of greater than 38 °C, therefore intravenous antibiotic therapy was initiated. On postoperative day 14, the debridement procedure was performed in the operating room. Under local anesthesia, the wound was opened at the site of the old incision. Necrotic skin was excised. Medial wound lip was separated under the skin tissue. Drainage continued daily, resulting in approximately 100-150 ml of fluid; on postoperative day 18, a sterile talk powder solution (4 gr talk powder + 20ml 0,5 % bupivacaine hydrochloride + 30 ml 0,9 % NaCl) was given through drain line and pressure dressing was maintained. Serous leakage began to decrease but did not cease; approximately 20-30 ml of fluid continued to leak. For this reason, a second talk was given into the drain hole. After the second administration of talk solution, the drainage ceased and the dressings were dry.

CONCLUSIONS: If there is sterile, cavitated serous leak and unchanged lymph leak after conservative therapy sclerosing agent instillation can be performed. Advantages of this technique are faster wound healing, closure of cavitation and faster discharge with complete healing than other techniques. As a department, we offer use this treatment modality for lymphocele after groin surgery.

25 March 2011, Friday / 10:30-12:00 How to Approach the Valvular Heart Diseases - Poster Discussions

PP-112 SHOULD WE EXCISE EXTENSIVE MITRAL ANNULAR CALCIFICATION OR NOT?

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OBJECTIVE: Mitral annular calcification (MAC) is a degenerative disease and associated with atherosclerosis and chronic kidney disease. MAC is seen 10% of patients older than 50 years of age and involves the annulus to varying degrees, extending into the adjoining myocardium or even into papillary muscle. Extensive MAC is a technical challenge in mitral valve surgery.

CASE: A 71-years-old man admitted the hospital with dyspnea and chest pain. Echocardiography revealed moderate mitral stenosis, severe mitral regurgitation and mitral annular calcification. Coronary angiograms showed two vessel coronary diseases. At surgery the patient placed on cardiopulmonary bypass and cardiac arrest was achieved with antegrade cardioplegia. After completing the revascularization of the left anterior

descending artery and diagonal artery, mitral valve exposure obtained through left atriotomy. Severe calcification was identified on the posterior mitral leaflet and annulus, anterior leaflet was less calcified and anterior annulus was clean. Both leaflets were excised and posterior annular calcification was excised by patience and carefully. A size of 33-mm St. Jude valve could be state on mitral annulus using 2-0 ethibond sutures.

RESULTS: Post operative period was uneventful. Post operative and third month's echocardiography revealed the prosthetic valve functions normally without any perivalvular leakage.

CONCLUSIONS: Decalcification has been described by several authors. It is a complex and time-consuming technique. Decalcification of the annulus allow to seating the prosthetic valve on anatomical position. But may result some serious complications such as atrioventricular groove rupture, injury to the circumflex coronary artery and embolisation of calcium. Partial decalcification can lead to valve dehiscence and persistent paravalvular leak. Several techniques were used for avoiding this complications and we think that in proper cases annular decalcification should be performed by patience and prosthetic valve should be seated on anatomical position.

Valvular Heart Diseases: From Medical to Surgical Solutions - Poster Presentations

PP-122 DE BAKEY TYPE II ACUTE AORTIC DISSECTION WITH ABERRANT RIGHT SUBCLAVIAN ARTERY

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OBJECTIVE: The aberrant right subclavian artery is one of the most common abnormalities in aortic arch whereas its combination with aortic dissection is very rare. A case of De Bakey type II acute aortic dissection having an aberrant right subclavian artery with a normal left aortic arch in a 75-year-old woman, who underwent coronary artery bypass operation three years ago, was reported.

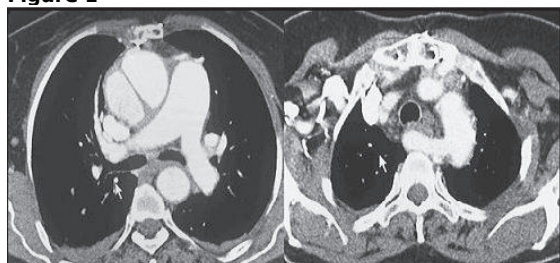
METHODS: The computerized tomography scan examination demonstrated Type II aortic dissection and aneurysm of the ascending aorta with an aberrant right subclavian artery passing behind the esophagus and trachea without aneurysm formation (Figure 1). She did not have any symptoms of tracheo-esophageal compression.

RESULTS: Femoral artery and vein cannulation and deep hypothermic circulatory arrest procedure (20 °C, 10 min) were chosen to replace the ascending aorta although axillary artery cannulation and antegrade cerebral perfusion is the preferred method when applying aortic surgery in our clinical practice.

CONCLUSIONS: The incidence of arch vessel anomalies is approaching 30% with common brachiocephalic trunk seen as the most frequent anomaly. Isolated left vertebral artery and aberrant right subclavian artery are second and third most

common seen respectively. The combination of the anomaly with type III dissection is generally seen with dissection involving the aberrant right subclavian artery. However type II dissection and aneurysm of the ascending aorta with an aberrant right subclavian artery without aneurysm formation was not reported previously. Not only the dissection and aneurysm formation but the congenital anomalies of the aortic arch should be evaluated carefully preoperatively to decide the surgical approach.

Figure 1



Type II aortic dissection and aneurysm of the ascending aorta with an aberrant right subclavian artery passing behind the esophagus and trachea without aneurysm formation

PP-123 TRANSIENT UNILATERAL MYDRIASIS DEVELOPING DURING THE POST OPERATIVE PHASE OF CHRONIC TYPE I DISSECTION

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OBJECTIVE: Neuro-ophthalmologic findings may be encountered in events of aortic dissection over 50% particularly if carotid extension is involved. Besides being a potential reason for application, temporary unilateral mydriasis without neurological deficit is a very rare case during the post operative period. In this study, we evaluated this case which developed with our patient operated for chronic Type I dissection, along with the possible causes.

CASE: 48 years old male patient who applied to the external center 3 days ago upon increased severity in the intermittent, severe pain in his chest onset 3 months ago, was transferred to our clinic after being diagnosed with Type I dissection upon the examinations. The patient had a hypertension, hyperlipidaemia, smoking and chronic kidney failure history. The patient underwent surgery. Ascending and total arcus aorta replacement has been performed using the elephant trunk technique with antegrade and left carotis perfusion at 21.5° C hypothermia. The left eye developed painless mydriasis at the 24th post operative hour. The neurological examination revealed a highly lethargic light reflex. Ophthalmologic fundus examination was normal. No diplopia was present. Other ocular eye actions and sharpness of vision was normal. No deficit has been found during the neurological examination. Mydriasis disappeared at hour 48. The patient who stayed at the ICU for 2 days has been released from the hospital on day 8 of the post operative period.

CONCLUSIONS: Although chest pain constitutes 70% of the causes of clinical application, more than

50% of carotid dissections may be accompanied by ophthalmologic findings. Painfull Horner syndrome is the most common neuro-ophthalmologic symptom (44.5%) of dissections extended to carotid arteries. Patophysiologically, aneurysm developed in the posterior communicant artery associated with carotid dissection may be a cause of mydriasis. Iris, cilier ganglion or oculomotor nerve ischemia secondary to the dissection, symphathetic carotid plexus excitation associated with lesion or trauma in the carotid artery are also named as the reasons among further mechanisms. Temporary unilateral mydriasis is not only a highly rare cause of clinical presentation in cases of dissection; it is also less likely to occur during the post operative period. Regardless of the reason, it should be noted that although neuro-ophthalmologic findings are a reason for admission for cases of dissection, they may also occur during the post operative period and while being temporary, require the patients to be observed in terms of neurological complications.

PP-124 A RARE PATIENT: CELIAC ARTERY THROMBOZIS WITH SUPERIOR MESENTERIC ARTERY STENOZIS

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OBJECTIVE: Celiac artery thrombozsis is an ischemic disorder that presents with acute abdominal pain. If diagnoses and treatment was delayed it would be a very high mortality and morbidity. It has associated with cardiovascular events typically. Most frequent etiology is atherosclerosis. %20-%30 of cases when associated with Superior Mesenteric Artery (SMA) involvement may have chronic mesenteric ischemia symptoms. To increase the blood flow is the principal treatment. In this report we presented a case of thrombosis of celiac artery associated with superior mesenteric artery stenoses which was treated sucessfully with iliac artery to SMA bypass grafting.

METHODS: 44 years old male patient presented with suddenly starting abdominal pain, vomiting and nausea. Splenic infarct with perisplenic abccss formation and thrombocytoses was diagnosed in case. Splenectomy was performed. Because of persistance of abdominal pain, abdominal CT was done to patient. CT demonstrated thrombosis in celiac artery and SMA and he was referred to general surgery department of our institution. We performed abdominal Digital Subtraction Angiography (DSA) which revealed significant stenoses in the origin of SMA and no visualization of celiac artery. Besides it was seen that SMA was visualised with riolan arc from inferior mesenteric artery. With these findings the patient was operated and bypass performed from left common iliac artery to mesenteric artery using 8mm heparinized politetrafluorethylene (PTFE) graft.

RESULTS: Postoperatively his symptoms regressed. Oral feeding was started. He was discharged seamlessly. Graft patency was seen in control DSA. He was reffered to haematology for the investigation of the etiology of thrombocytosis.

CONCLUSIONS: Bypass grafting is safe and affective treatment option in mesenteric ischemia. Many case reports were declared showing the beneficial effects of early diagnoses with DSA and early revascularization in acute mesenteric ischemia. Acute mesenteric ischemia is disorder that seen more frequent than expected. Therefore angiography and revascularization which was done immediately is life saving when once suspected from mesenteric ischemia.

Postoperative control DSA



PP-125 ADULT INCIDENTAL ASYMPTOMATIC SYMMETRICAL DOUBLE AORTIC ARCH CASE AS A VARIATION OF CONGENITAL VASCULAR RING MALFORMATION

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OBJECTIVE: We report a case of a rare and asymptomatic vascular ring in adult. A 47 years old female patient administered to our department with a sporadic computerized tomography scans revealing a double aortic arch.

METHODS: A computed tomography scan (CT) was presented by the patient which was performed by pulmonology department as a part of a routine preoperative evaluation for elective cholecystectomy. Patient was referred to our department due to CT angiography findings of double aortic arch that presents at the anterior view of double aortic arch with a split after ascending aorta. Posterior brach of double aortic arch gives origin to the truncus brachiocephalicus and arteria carotis communis sinistra with arteria subclavica sinistra arise from the anterior branch, respectively from proximally to distally. From the posterior aspect, descending aorta reunites right after arteria subclavica sinistra distinction.

RESULTS: A vascular ring presents a complex of anomalous anatomy of aortic arch and related vascular structures which encircle trachea and esophagus as a 'ring' which presents only less than 1% of all congenital cardiac abnormalities. Vascular ring may be with or without concomitant congenital defects free of any geographical predominance. Most of cases among vascular ring in a percentage of 85-95% are double aortic arch as in our case and right aortic.

CONCLUSIONS: Especially symptom-free adults may not necessitate surgery. Nevertheless we

advocate that even cases like ours may require close follow-up with regular laboratory studies and appropriate physical examination. Detention of surgery is with irreversible complications of respiratory system which may lead to a severe morbidity and death.

PP-130 ASPERGILLUS ENDOCARDITIS OF THE NATIVE MITRAL VALVE IN A BONE MARROW TRANSPLANT PATIENT

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OBJECTIVE: Fungal endocarditis is an uncommon infection with reported occurrence of 1.3% to 6% of infective endocarditis cases. There are predisposing conditions such as cardiac abnormalities, prosthetic heart valves, indwelling central venous catheters, prolonged use of broad spectrum antibiotics and intravenous drug abuse. In rare occasion, infection occurs in patients who have not had cardiac surgery. We present a case of native mitral valve Aspergillus endocarditis in a patient who had allogeneic stem cell transplantation in past due to myelodysplastic syndrome.

CASE: A 36-year-old male, who had received allogeneic stem cell transplantation on June 2010 for myelodysplastic syndrome, his early post-transplant period was complicated with acute graft versus host disease (GVHD), cytomegalovirus and BK virus infections. Prednisolone, cyclosporine and ganciclovir/valaciclovir treatments were started for GVHD and viral infections. Four months later, the patient presented with fatigue and dyspnea. At the time of admission, his vitals were normal. No evidence of endocarditis was found on physical examination. Two weeks after the admission, the patient was started to be febrile regardless of antibiotic treatment. A chest X-ray demonstrated consolidation in the left upper lobe and right lower lobe of lung parenchyma. Computerized tomography revealed with bilateral multiple cavitory lesions on lung parenchyma suggesting that pulmonary Aspergillosis. However, blood cultures and serological tests for Aspergillus were negative. During hospital stay, the patient developed a new onset of cardiac murmur and purpuric skin lesions appeared at physical examination and echocardiogram showed mobile vegetation (1x0.6 cm) on the anterior mitral valve leaflet with grade ¾ mitral regurgitation suggesting caused by ruptured chordae tendineae. On December 2010, he underwent emergent mitral valve replacement. The explanted mitral valve revealed the presence of yellow white vegetation on the anterior leaflet with ruptured papillary muscle head. Fungal stain of the vegetation was consistent with Aspergillus, and culture subsequently grew Aspergillus flavus. Unfortunately, the patient died of cerebrovascular accident and refractory septic shock 7 days after mitral valve replacement surgery.

CONCLUSIONS: Native valves infective endocarditis

caused by *Aspergillus* species is uncommon. However, it has very high mortality despite aggressive surgical and medical therapy options.

PP-131 AORTIC PERFORATION DURING PERCUTANEOUS MITRAL VALVULOPLASTY AND ITS SURGICAL TREATMENT WITH CONCOMITTANT AORTIC AND MITRAL VALVE REPLACEMENT FOR A 38 WEEK PRETERM PREGNANT WOMAN

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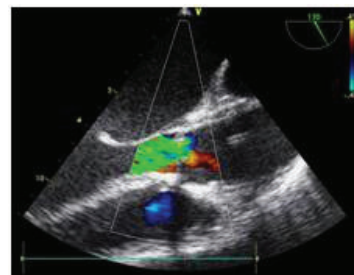
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OBJECTIVE: Normal gestation is associated with a hyperdynamic adaptive state. Haemodynamic changes associated with pregnancy expose these patients to cardiac decompensation. Balloon valvuloplasty in pregnant women with severely symptomatic mitral stenosis may be a suitable modality for only highly selected patient subgroup whose Wilkin's score is lower or equal to 8. **METHODS:** 34 years old female patient admitted to emergency department with worsening dyspnea on rest and cough. She had a history of rheumatic fever when she was 12 and mild dyspnea during his first pregnancy. Also she has been diagnosed with moderate mitral and aortic stenosis. She has been followed up for any hemodynamic change during the first trimester. At the time of admittance, there were no abnormal finding other than mild leukocytosis. Chest x-ray was normal and echocardiography showed the mitral valve area was 0,9 cm² with 24mmHg gradient. Left atrial measurement in diameter was 47mm. The patient's Wilkin's score was 8 and we decided on balloon valvuloplasty. During the procedure, aortic perforation occurred unexpectedly and clearly demonstrated with transesophageal echocardiography (figure1). The catheter left at the perforation side and the patient moved to operating room.

RESULTS: After the patient was transferred to the operating room, caesarean section was performed immediately and she delivered a 38w healthy baby. After the birth mitral valve replacement, aortic valve replacement and aortic repairment was done successfully.

CONCLUSIONS: The circulatory changes represent an additional burden on the cardiovascular system of women with rheumatic mitral stenosis (MS) complicated with aortic stenosis (AS). Life-threatening complications can occur in pregnant women with severe MS and AS.. The narrowed mitral valve orifice causes a decrease in cardiac output and an increase in pulmonary artery pressure and capillary wedge pressure, which can result in pulmonary oedema. Complications of balloon valvuloplasty should be known and watched carefully by clinicians for a perfect management of valvular heart disease during pregnancy.

TEE



Transesophageal echocardiography shows percutaneous transluminal catheter stuck in the aortic wall

PP-132 ESSENTIAL THROMBOCYTOSIS AND MITRAL VALVE REPLACEMENT

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OBJECTIVE: Here we present a case with essential thrombocytosis to whom bioprosthetic mitral valve replacement was applied at Bursa Yuksek Ihtisas Hospital Cardiovascular Surgery Department.

METHODS: A 76 year-old female patient that has been diagnosed as essential thrombocytosis referred to our hospital with dyspnea and palpitation. The patient was receiving hydroxyurea and antiagregant treatment. The patient had an atrial fibrillation on the ECG. Her echocardiographic and cardiac catheterization studies revealed severe mitral stenosis and a 30% stenosis at the CxOM1. Her routine blood tests revealed a thrombocyte count of 334000/mm³.

RESULTS: The patient underwent a mitral valve replacement with a bioprosthetic valve and a radiofrequency ablation. Patient had no postoperative problems and was discharged with anticoagulant and antiagregant therapy and at one month postoperatively hydroxyurea therapy is started again.

CONCLUSIONS: As far as our review in the literature we identified only two other case of essential thrombocytosis receiving mitral valve replacement. Eight months after operation the patient has no hemodynamic problems and is followed with close monitoring of her platelet count.

PP-133 A CASE OF INFECTIVE ENDOCARDITIS RESULTING FROM BRUCELLA MELITENSIS

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OBJECTIVE: Brucellosis is an anthroponozoonotic infection and its worldwide distribution especially in developing countries. Brucellosis is frequently transmitted to humans via direct contact with infected animal tissues and consumption of infected unpasteurized dairy products. The prevalence of the

disease is high in the Mediterranean Basin, the Arabian Peninsula, the Indian Subcontinent, Mexico and Central and South America. Turkey is also endemic country and the most common species is *Brucella melitensis*. *Brucella* infection has a wide range of clinical complications. gastrointestinal, hematologic, musculoskeletal, genitourinary, nervous, mucous membranes and respiratory complications are observed. Cardiovascular complications, which include endocarditis, myocarditis and pericarditis, occur in less than 2% of patients with brucellosis. *Brucella* endocarditis, although a rare complication of brucellosis, is the main cause of death from this disease. It usually involves the aortic valve and typically requires immediate surgical valve replacement.

CASE: 17-year-old male patient was admitted to our emergency department complaining with ongoing fever for 10 days, fatigue, and shortness of breath. There wasn't disease known his history. He lives in the village and had recently consumed fresh cheese. On physical examination, blood pressure: 110/60 mm Hg, heart rate: 86 beats / min, were rhythmic. Laboratory **FINDINGS:** sedimentation 68 mm, CRP 137 mg / l, WBC 16,000, respectively. *Brucella melitensis* was isolated from blood culture after 1 week. In transthoracic echocardiography, severe aortic valve stenosis and a 17x10 mm in diameter on the movable cover vegetation on the aortic valve was were seen. The patient was hospitalized with a diagnosis of infective endocarditis. The patient was consulted with infectious diseases and cardiovascular surgery, medical treatment was started and surgical operation was planned.

Diagnostic and Therapeutic Perspectives in Heart Failure - Poster Presentations

PP-144 COMPARISON OF MEAN PLATELET VOLUME IN PATIENTS WITH IDIOPATHIC AND ISCHEMIC CARDIOMYOPATHY

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OBJECTIVE: Cardiomyopathy (CMP) is a disorder associated with an increased risk of thrombo-embolism due to blood stasis, platelet activation and altered coagulation status. In the present study, we aimed to investigate mean platelet volume (MPV) in patients with idiopathic CMP and ischemic CMP and to compare those of controls.

METHODS: A total of 100 subjects with idiopathic CMP (n=35), ischemic CMP (n= 35) and controls (n=30) were included to study. MPV values were measured in all participants. All subjects underwent transthoracic echocardiographic and angiographic evaluation.

RESULTS: MPV values were significantly higher in patients with idiopathic CMP and ischemic CMP than in the controls (9.03 ± 1.3 vs. 8.77 ± 0.9 vs. 7.95 ± 1.0 fl, respectively). The MPV values were also higher in patients with idiopathic than ischemic CMP

although it was not statistically significant ($p=0.328$). MPV values were found to be positively correlated with left ventricular end diastolic-systolic diameters and left atrial diameter but inversely correlated with left ventricle ejection fraction.
CONCLUSIONS: Both patients with idiopathic CMP and ischemic CMP have higher MPV values indicating tendency to platelet aggregation regardless of the etiology when compared to controls and an enlarged and dysfunctional left ventricle may also be associated with higher MPV values.

PP-145 EFFECTS OF LEVOSIMENDAN ON PROINFLAMMATORY CYTOKINES, BRAIN NATRIURETIC PEPTIDE AND MATRIX METALLOPROTEINASE-1 IN CARDIAC FAILURE PATIENTS WITH OR WITHOUT ANEMIA

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OBJECTIVE: Levosimendan is a new inodilator that does not cause increase in myocardial oxygen demand, significant cardiac arrhythmias, ischemia and tolerance while strengthening myofibrile contraction, supporting cardiovascular function and impaired organ function of decompensated cardiac failure patients with two-sided effect. Anemia is a deteriorating situation that causes increase of drug dosing in patients with heart failure. In our study we compared the efficacy of levosimendan treatment in decompensated cardiac failure patients with or without anemia.

METHODS: Forty-six patients with ejection fraction under 35% in echocardiographic examination, class 3 and 4 cardiac failure according to New York Heart Association was separated into two groups as 23 with anemia and 23 without anemia. Twenty-four hours levosimendan treatment was added to the traditional cardiac failure treatment of these patients. Samples were taken to measure serum tumor necrotizing factor alpha, aminoterminal pro-brain natriuretic peptide and matrix metalloproteinase-1 levels before and after the administration.

RESULTS: There was no significant difference between serum tumor necrotizing alpha and matrix metalloproteinase-1 levels before and after the treatment. Aminoterminal pro-brain natriuretic peptide level decreased in both groups after the treatment ($p=,068$, $p=,052$). Significant restoration of functional capacity was seen in both groups assessed according to New York Heart Association ($p=0.001$).

CONCLUSIONS: Levosimendan treatment shows similar effects in cardiac failure patients with anemia to that of patients without anemia. However the early effect of this treatment on tumor necrotizing factor alpha, aminoterminal pro-brain natriuretic peptide and matrix metalloproteinase-1 levels is not evident. It provides significant improvement in functional capacity.

PP-146 GASTROINTESTINAL STROMAL TUMOR PRESENTING WITH CONGESTIVE HEART FAILURE

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A 41 year-old man was referred to emergency department with dyspnea. His blood pressure was 190/100 mmHg and heart rate was 110 beat/minute. On examination, a grade 1/6 systolic ejection murmur and S3 gallop were audible at the apical region. Both of the lung fields have inspiratory rales from base to apex, an irregular solid mass palpated at lower abdomen with abdominal palpation. ECG showed sinus tachycardia and chest radiography showed pulmonary congestion with Kerley B line. Echocardiography revealed that left ventricular global hypokinesis with ejection fraction 20% and mild mitral insufficiency. He was admitted to intensive care unit with diagnosis of congestive heart failure. After stabilization abdominal ultrasonography showed an intraperitoneal giant mass. For further evaluation abdominopelvic MRI revealed intraperitoneal two giant masses in the right side of pelvis with diameter 10x10x8 cm and 8,2x6,5x5,3 cm and suggest a malign mesenchymal tumor. Tumor was removed with successful resection and pathologic examination showed malign gastrointestinal stromal tumor(GIST) with CD117 positive. After surgery imatinib treatment is administered to patient. Follow up was achieved after surgery, two weeks later, a month later and three month later with echocardiography. Left ventricular systolic function was improved every visit and ejection fraction was 62% after 3 month. Interstitial cells of Cajal that GISTs are originate from controls possibly neurotransmission. Studies were demonstrated similarities between Cajal cells and GISTs with presence of cytoplasmic vesicles. GISTs have neuroendocrine function by which hormones and neurotransmitters are released. Many of evidence support the idea that neurohormonal activation plays an important role at pathophysiology of heart failure.

PP-147 A CASE OF HEART FAILURE WITH MULTIPLE VENTRICULAR THROMBI

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OBJECTIVE: The most common (mainly) causes of intra-ventricular thrombus are acute myocardial infarction, heart failure, cardiomyopathy and ventricular aneurysms. The main factors affecting the formation of thrombus are endocardial damage, akinetic or dyskinetic wall motion and stasis. Treatment of intracardiac thrombus uses oral anticoagulants, thrombolytic therapy and surgical treatment can be selected in some cases.

CASE: 45-year-old male patient was admitted to our emergency department with complaints of severe

shortness of breath. In his history, (diagnosis of heart failure with irregular medical treatment for five years) the 5 years before the diagnosis of heart failure, didn't use regular medical treatment. On physical examination, blood pressure: 115/70 mm Hg, heart rate: 74 beats / min, were rhythmic. 2 / 6 systolic murmur was heard at mitral focus. An additional ECG was unremarkable except for lower voltage. Transthoracic echocardiography showed left ventricular ejection fraction of 25%, mild-moderate mitral valve regurgitation, mild tricuspid valve regurgitation and multiple thrombi moving in the left ventricle. Emergency surgery was recommended but (but) (the) patient refused operation. Thrombolytic infusion was started. The patient died two days later.

CONCLUSIONS: Left ventricular thrombus is a common complication of myocardial infarction. Therapeutic options for thrombi include antithrombotic, anticoagulant therapy, thrombolysis, or surgical removal of the thrombus. Protruding of thrombi is associated with high incidences of embolization.

PP-153 INDUCTION THERAPY AFTER HEART TRANSPLANTATION: A COMPARISON OF ANTI-THYMOCYTE GLOBULIN AND INTERLEUKIN-2 RECEPTOR ANTAGONISTS

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OBJECTIVE: Heart transplantation is a widely accepted therapy for most patients with end-stage heart failure despite optimal heart failure medications. The use of interleukin-2 receptor (IL-2R) antagonists (a fully humanized anti-IL-2R daclizumab and a chimeric anti-IL-2R basiliximab) or polyclonal anti-lymphocyte preparation (anti-thymocyte globulin-ATG) for induction therapy has significantly reduced the incidence of acute rejection episodes after heart transplantation.

METHODS: From July 1998 to July 2010, 36 patients (3 female-33 male) underwent heart transplantation (HT) were studied retrospectively. For induction therapy, 10 HT recipients received IL-2R antagonists, 26 recipients received ATG. Rejection grading was performed according to the 1990 and 2004 International Society for Heart and Lung Transplantation (ISHLT) scale.

RESULTS: In 14 (58%) patients, acute rejection was determined by endomyocardial biopsy who received ATG, in the first year. In IL-2R antagonists group, acute rejection was determined in 3 (33%) patients.

CONCLUSIONS: Patients received IL-2R antagonists had a significant reduction in acute rejection, treatment required grade 2R or higher rejection was determined only in 1 patient. In conclusion, induction therapy with IL-2R antagonists was well-tolerated, easy to use, safe, cheap and effective after HT.

Cardiovascular Surgery: Unusual Observations - Poster Presentations

PP-158 BLUNT CHEST TRAUMA WITH SEVERE PULMONARY CONTUSION AND TRAUMATIC DISSECTION OF THE PROXIMAL LEFT ANTERIOR DESCENDING ARTERY

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HISTORY AND ADMISSION FINDINGS: A 46-year-old man suffered a blunt trauma to his chest due to fall a massive glass block. He was admitted to hospital because of severe sternal and left chest pain that started 30 min after the accident. Admission physical examination indicated stable cardiopulmonary status in a fully conscious person with no obvious physical signs, in particular no contusion or other injury to the chest or fractures. **INVESTIGATIONS:** ECG, echocardiography, chest radiography and routine laboratory tests on admission failed to reveal any diagnostic abnormality. But subsequent ECG and biochemical tests suggested evolution of an acute anterior wall infarction, leading to the patient's to the an urgent coronary angiogram.

DIAGNOSIS AND TREATMENT: Transthoracic echocardiography showed severe distal septal hypokinesis, mild to moderate distal anterior hypokinesis and apikinesis. Urgent coronary angiogram showed proximal left anterior descending artery (LAD) dissection with superimposed thrombosis, resulting in total occlusion. Other coronary arteries were angiographically normal. A bare metal stent was deployed in the proximal LAD. In spite of re-angioplasty, a residual lesion of proximal LAD was detected at the compliation of the case. Immediatly after completion of these interventions, the patient developed shock and ventricular fibrillation. After cardiopulmonary resuscitation, adrenalin and lidocaine infusion were started and the patient was taken to urgently for a coronary artery bypass graft. At surgery he underwent a single bypass graft as follows: left internal mammary artery to LAD. After operation due to pulmonary contusion respiratory support was required for 42 days. **CONCLUSIONS:** The possiblity of severe injury of the heart after blunt chest trauma demands careful follow-up monitoring and, if indicated, coronary bypass grafting and angiography with stent placement may all be considered urgent treatment options for this condition.

PP-159 SINGLE CENTER RETROSPEKTIF ANALYSIS OF INCIDENCE OF NEUROLOGICAL COMPLICATIONS AT HYPOTHERMIC INTERMITTANT CROSS CLAMPING TECHNIC

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OBJECTIVE: Stroke is major complications at coronary surgery which is observed %1-4. A case of 3729 isolated coronary artery bypass were taken to be assessed in terms of mortality and morbidity used hypothermic intermittant cross clamping technique by same operation team in between january 2002- december 2007.

METHODS: Operated by same team patients were included this study. As a risk of preoperative neurological dysfunction were taken age, previous neurological disease, peripheral vascular disease (>%50 ratio), renal failure, asendan aort calcifications, manipulated on aort and numerous of cross clamping were evaluated.

RESULTS: Our patients were incidence of Norological complication is %2.4. Norological complication primary cause at patients who died. perioperativ hypotension, hypoperfusion and tromboembolism was main reasons for norological complication. Carotid and aortoiliac disease, myocardial injury and previously cerebrovascular events have been risk factors developed complication after coronary artery bypass surgery.

CONCLUSIONS: Increased of euroscor risk number was corelated development neurological complications.

PP-160 CONCOMITANT EMERGENCY CABG AND LEFT VENTRICULAR ANEURYSM RESECTION: INESCAPABLE SURGICAL TREATMENT OF A RUNNING AWAY PATIENT

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OBJECTIVE: Myocardial infarction (MI) may result in development of left ventricular (LV) aneurysm that may lead to congestive heart failure, ventricular tachyarrhythmia and mural thrombi. Majority of the LV aneurysms develop secondary to acute MI and coronary artery bypass grafting (CABG) is considered to be an essential part of treatment of these aneurysms. In this case, we present a patient with coronary artery disease and LV aneurysm, who rejected surgical treatment, but then had to be operated under emergency conditions.

METHODS: 65 years old male patient was admitted to our hospital with unstable angina pectoris. Two months prior to this admission, coronary angiography was performed which revealed critical in stent stenosis at the proximal LAD segment, total occlusion of the stent in circumflex coronary artery and critical proximal right coronary artery stenosis. Apical LV aneurysm with mural thrombus was determined in ventriculography. Ventricular tachycardia attacks were encountered twice in his hospitalization period.

Surgical treatment was suggested to the patient but he rejected. Two months after discharge, he was admitted to our clinic with severe chest pain accepting 'whatever necessary for his treatment'. Preoperative echocardiography revealed apical LV aneurysm at the size of 5x4 cm with thrombus formation. Ejection fraction was 45%. During the preoperative preparation period in intensive care unit, hypotension and bradycardia developed. Hemodynamic stability was provided with intravenous adrenaline administration and external cardiac massage was avoided in order not to cause systemic embolization of the intracardiac thrombus. The patient was operated under cardiopulmonary bypass. Following cross clamping, antegrade and retrograde cold blood cardioplegia was administered. LV aneurysm sac was incised and thrombus was evacuated. Aneurysm sac was excised, walls of the aneurysm were closed between two layers of Teflon felt using 0 monofilament interrupted horizontal mattress sutures reinforced with two layers of running 2-0 monofilament sutures. Afterwards, surgical revascularization of obtuse marginalis branch of circumflex coronary artery and posterior descending branch of right coronary artery with saphenous vein grafts and LITA-LAD anastomosis were completed. The postoperative course was uneventful and the patient was discharged six days after surgery.

RESULTS: The patient was successfully operated, both surgical coronary arterial revascularization and resection of the LV aneurysm was performed.

CONCLUSIONS: Concomitant CABG and LV aneurysm surgery is a well defined treatment option in patients with ischemic coronary artery disease and LV aneurysm. In this case, we present a patient with unstable angina pectoris whom we performed this procedure in emergency conditions.

PP-161 MASSIVE SUBEPICARDIAL HEMATOMA FORMATION DISSECTING WHOLE EPICARDIUM FOLLOWING PERCUTANEOUS CORONARY INTERVENTION

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OBJECTIVE: Percutaneous coronary intervention (PCI) is widely utilized in the era of cardiovascular diseases. Although rare, life threatening complications may be encountered such as coronary artery dissection and perforation. In this case we present a case with massive subepicardial hematoma formation with hemopericardium following PCI for circumflex artery lesion.

METHODS: PCI was performed in a 60 years old male patient with total occlusion of circumflex coronary artery accompanied with 50% stenosis of right coronary artery before the crux. Any critical lesion was not encountered in LAD. After the procedure of balloon inflation for the totally occluded circumflex artery lesion, extravasation was observed on cineangiography. With worsening hemodynamic instability in the catheterization lab, we proceeded with urgent surgery. Following midline sternotomy and pericardiotomy, 700 cc hemorrhagic fluid was drained with improving systemic arterial blood

pressure. Massive subepicardial hematoma formation was encountered, even extending to great vessels. Anteriorly, epicardial dissection was performed and limited drainage of the subepicardial hematoma was obtained. The site of active bleeding could not be located, but there were multiple foci of epicardial extravasation. The integrity of cardiac layers was heavily destroyed; therefore neither identification of the target vessels nor their surgical revascularization (by means of cardiopulmonary bypass or beating heart technique) could not be achieved. The multiple foci of epicardial bleeding were controlled with biological glue administration. Any hemodynamic complication was not encountered in the postoperative course. Serial control echocardiographic evaluations revealed ejection fraction of 50% that was not different from preoperative studies. Residual pericardial effusion was not detected. Despite sufficient cardiac performance, following discharge from the cardiovascular ward, the patient died at the fifteenth day of surgery due to respiratory insufficiency.

RESULTS: Subepicardial hematoma formation following PCI is a rare complication which may lead to lethal consequences. In our patient, we proceeded with urgent surgery in order to provide hemodynamic stability and prevent dissection to expand into myocardial and endocardial layers. Considering the non-critical atherosclerotic lesions, only the control of bleeding was achieved without surgical revascularization of the target vessels.

CONCLUSIONS: Although this complication is reported in patients with prior coronary artery bypass grafting (CABG), as in our case, it can be encountered in non-CABG patients. To reduce the risk of such a complication, careful crossing of the totally occluded coronary lesions with guide wires is critical.

PP-162 SUCCESFULLY TREATED CEREBRAL AIR EMBOLISM WITH HYPERBARIC OXYGEN THERAPY AFTER CORONARY ARTERY BYPASS GRAFTING

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OBJECTIVE: Cerebral air embolism is a rare complication of cardiac surgery that can result in serious brain damage or fatality. The incidence of this complication is estimated 0.1%. Several treatment modalities were suggested for arterial air embolism, but hyperbaric oxygen (HBO) is main therapy for this complication. We reported the case of cerebral air embolism succesfully treated with HBO therapy after the operation of coronary artery bypass grafting (CABG).

CASE: 63 years old male patient with history of hypertension and diabetes mellitus admitted to our clinic for CABG. After the preoperative preparation, he underwent to CABG operation. The patient extubated at postoperative 17th hour. He had a cerebrovascular accident at postoperative 26th hour. Computerized tomography revealed air bubbles at right and left frontal, left oxipital region of brain. The patient underwent six session of HBO therapy. Control tomography revealed that decrease of

bubbles and improvement of ischemia. The patient was discharged at postoperative 27th day with minimal neurologic deficit.

CONCLUSIONS: Arterial air embolism is a rare but devastating complication of cardiac operation with CPB. Air bubbles obstructing the cerebral arteries can cause severe neurologic disability and death. According to Boyle's law, a 6-fold increase in the atmospheric pressure will decrease the gas-bubble volume and diameter to 16.6% and 55% of its original size, respectively. HBO induces cerebral vasoconstriction and decreases intracranial pressure. It may also inhibit the persistent adherence of leukocytes to cerebral endothelium. HBO is the specific therapy for air embolism during or after cardiac operations. Recovery might completely achieved by administration of HBO therapy as soon as possible after the diagnosis of arterial air embolism.

PP-163 IS CORONARY BYPASS IN DEXTROCARDIA WITH SITUS INVERSUS HARD? (CASE REPORT)

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OBJECTIVE: Situs inversus with dextrocardia is rare but the incidence of atherosclerotic heart disease is similar in patients who have situs solitus. Those patients who are admitted to coronary surgery, good surgical results are obtained with some technical alterations whether the position of the heart itself affects the grafts' choice. We described a patient who presented with coronary artery disease with situs inversus totalis.

METHODS: A 58-year-old man who was known to have dextrocardia with situs inversus was admitted to our hospital with stable angina. He had unregulated insulin dependent diabetes mellitus. Ten years ago, he underwent right coronary artery angioplasty with stenting. There were some members had also coronary artery disease in his family. Following coronary angiography the patient proceeded to coronary artery bypass grafting. The chest was entered through a median sternotomy. Initial findings were exactly the mirror image of a normally positioned heart. The right internal thoracic artery was harvesting with the surgeon standing on the left side of patient and saphenous vein graft was harvesting by second operator. The procedure started as an on-pump operation. The surgeon performed other procedures of the operation on the right side of the patient. A saphenous vein graft was anastomosed to posterior descending coronary artery. Then the second vein graft was anastomosed sequentially to first obtuse marginatus coronary artery and first diagonal branch. Right internal thoracic artery was anastomosed to left anterior descending artery, as usual. X-clamp time continued 36 minutes. Cardiopulmonary bypass lasted 55 minutes. After accurate haemostasis and reversal of

the heparin the chest was closed in routine fashion. **RESULTS:** Postoperatively, the patient was uncomplicated. He was discharged from hospital postoperative 6th day.

CONCLUSIONS: With the exception of a mirror image coronary anatomy, this patient with dextrocardia and situs inversus presented no unusual challenge to a completely on-pump coronary revascularization and surgeons can perform without any difficulty while standing on the routine side of the patient, except right internal thoracic artery harvesting procedure.

PP-164 THE IMPACT OF CARDIOPULMONARY BYPASS ON OXIDATIVE STRESS IN PATIENTS WITH CAD

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OBJECTIVE: The aim of this study was to examine the oxidative stress in coronary artery bypass grafting (CABG) patients. We examined oxidant and antioxidant markers before and after cardiopulmonary bypass in peripheral venous and coronary sinus blood samples.

METHODS: 34 patients were enrolled to the study who was hospitalized for elective coronary bypass surgery. Blood samples were drawn for biochemical analysis from the peripheral venous and coronary sinus before and after cardiopulmonary bypass

RESULTS: Mean age was 62.43±9.75 years, mean cross clamp time was 86±31.21 min; mean CPB time was 130.47±43.98 min. Coronary sinus LOOH levels were significantly increased (5.73±5.92; 9.28±5.16 µmol TBLOOH/L), catalase levels in coronary sinus (15.13±3.01; 7.16±4.24 U/L), and in peripheral vein sample (14.13±2.18; 7.03±4.98 U/L) were significantly decreased after CPB.

CONCLUSIONS: Oxidative stress accompanies major surgery, especially cardiac surgery with cardiopulmonary bypass. The nature of these oxidative events leads to depletion of plasma antioxidants, increased lipid peroxidation, and formation of other damaging metabolites. This study showed that CABG surgery induced oxidative stress that affects coronary sinus as well as peripheral circulation. Clinicians might focus on to limit oxidative stress during CPB with new treatment modalities.

PP-165 VENTRICULAR SEPTAL RUPTURE ANEVRIZMA BY IN CASE PRESENTATION WITH LEFT VENTRICULAR:

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OBJECTIVE: Myocardial infarction left ventricular aneurysm developed after, segmental left ventricular wall, with transmural fibrosis occurs. Such as acute myocardial infarction can occur immediately after,

May occur after weeks or months. The incidence of myocardial infarction following the development of 10-is 31%. Myocardial infarction rate of 1-2% early in the left ventricular free wall rupture, ventricular septal defect or may develop. Left ventricular thrombus in the segment may occur and aneurysms, peripheral or cerebral embolism may result.

METHODS: In this study; We offer ventricular aneurysm and coronary artery disease and determined by preoperative ventricular septal rupture in a patient treated surgically because of Preoperative clinic set aneurysmectomy and endoanevrizmorafi classical technique, we offer clinical and hemodynamic result. Forty seven-year-old male patient, November 2, 2010 at Ataturk University, Cardiology Department, was admitted with chest pain. The coronary angiography; 100% occluded LAD, Diagonal1 at 70%, Diagonal2 at 60% of lesions, RCA 'records were also. ECHO at the EF was 27%. There was no problem with valves. Myocardial perfusion SPECT report: Lateral segment of the left ventricular reversible perfusion defect (ischemia), distal anterior, apical, septal and inferior segments of the distal partially reversible (infarct and ischemia) perfusion defects were. The patient was operated on over to our clinic. Median sternotomy was performed. Moderate hypothermia cardiopulmonary by-pass' has been switched on. First, Ao-PL (saphenous vein), Ao-OM1 (sequential saphenous vein) bypass graft distal anastomoses were performed. Left ventricular aneurysm apexinde was great. Ventriculotomy was performed. Approximately 3x3 cm in size had a thrombus adherent to the apical septum. Ventricular septal aneurysm had eroded. Ventricular septal rupture developed. But the transition did not. Ventricular septal defect was closed by thrombus. Thrombus was scrubbed. Aneurysmectomy was. Scott began myocardial wall of the support sutures. Continue with Dacron graft patch of about 3x3 cm ventricular septal rupture was repaired with sutures. Ventriculotomy was closed with sutures with Teflon felt one by one. LIMA-LAD anastomosis was performed. Then Ao-D1 (saphenous Y, on the sequential saphenous vein grafts) were performed.

RESULTS: . Endoanevrizmorafi, calcified aneurysms of the posterior face of ventricular aneurysms following myocardial infarction and not caused by developing infarction ventricular septal defects can also be applie. We have used this technique to repair the ventricular septal rupture.

CONCLUSIONS: In our patient, hospital mortality did not find. Endoanevrizmorafi, a technique that is superior to classical anevrizmectomy. If possible complete revascularization in patients with aneurysmectomy or endoanevrizmorafi be made.

PP-166 RISK FACTORS FOR POSTOPERATIVE STROKE AFTER CABG SURGERY

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OBJECTIVE: Postoperative stroke is a serious adverse event after coronary artery bypass grafting.

Aim of this study is to investigate the risk factors for postoperative stroke.

METHODS: Between 1999 and 2010, 1978 patients, who underwent isolated CABG were retrospectively enrolled. Postoperative stroke was defined as severe adverse neurological events including permanent deficits or cerebral lesions within postoperatively.

RESULTS: Totally 14 patients (0,07%) were determined with stroke. Most of patients with stroke had risk factors like diabetes mellitus, hypertension, chronic obstructive lung disease, previous cerebrovascular event, preoperatively. Most of patients had paresis with arm and leg, losing conscious and aphasia. One patient that performed Bilaterally Carotid endarterectomy in the same operation with CABG had epileptic symptoms, postoperatively. Nine patients externed after completing treatment. Five patients died after stroke, with concerned and combined problems. Peripheral arterial diseases, age over 60 years, low cardiac output, chronic obstructive lung disease, previous cerebrovascular event, renal insufficiency, atrial fibrillation, body mass index, emergency operations and severe coronary arterial disease were determinated risk factors for postoperatively cerebrovascular disease.

CONCLUSIONS: Stroke after CABG is associated with high morbidity, mortality and alonged hospital stay. Treatment or modifications of perioperative risk factors, decrease stroke after CABG. Treatment of patients with critical carotid stenosis may reduce the incidence of postoperative stroke.

PP-167 FIGURE-OF-EIGHT VS. STERNAL WEAVE CLOSURE OF MEDIAN STERNOTOMY IN DIABETIC OBESE PATIENTS UNDERGOING CORONARY ARTERY BYPASS GRAFTING

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OBJECTIVE: Sternal dehiscence is a serious and potentially devastating complication following median sternotomy. The optimal technique for sternal closure is unclear. The purpose of this prospective study was to compare the incidence of sternal dehiscence after sternal weave and figure-of-eight suturing in diabetic obese patients undergoing coronary artery bypass grafting.

METHODS: This study enrolled 150 diabetic and obese patients among 950 patients that underwent coronary artery bypass grafting between January 2008 and January 2010. Exclusion criteria were redo surgery, sternal fractures, reexploration for bleeding and off-midline sternotomy. The patients were randomly assigned to group A (Figure-of eight closure, n=75) or group B (Sternal weave closure, n=75). Obesity was defined as body mass index (BMI) >30 kg/m². The sternum was closed using no. 6 steel wires. In group A, the the wires were passed through the sternum approximately 1-1,5 cm lateral to the midline. The 2 free ends of the wire were pulled and then crossed in a figure-of-8 configuration. Using a rotary movement of the wrist along with a vertical pull on the wires, the wires were twisted tightly until the two bone edges approximated. In group B, 2 trans-manubrial and 4

parasternal single wire loops were placed around bilateral continuous vertical pericostal weave. Diagnosis of sternal dehiscence was made according to clinical examination and chest radiography. All patients were followed up for one year. Statistical analysis was performed to compare groups, using the SPSS 12. A p value <.05 was considered significant. **RESULTS:** The overall sternal dehiscence was % 5.3. There were 8 sternal dehiscence cases documented: 7 in group A and 1 in group B. In group A, 5 patients had noninfective sternal dehiscence and 2 patients were reoperated due to mediastinitis. Also, 2 of the noninfected patients presenting deep-seated pain with a feeling of bony crepitus needed reoperation. The other 3 patients in group A and 1 patient in group B were given chest binder support. Pain and bony crepitus decreased in follow-up period of one year. Sternal dehiscence was significantly lower in group B (p<0.05).

CONCLUSIONS: Reinforced closure techniques are generally used to treat sternal dehiscence cases. In this study, we used prophylactic sternal weave for diabetic obese patients. We conclude that, although it takes much more time when compared to routine closure, it significantly decreases sternal dehiscence probability in diabetic obese patients.

PP-169 PREDICTORS OF ADVERS EVENTS AFTER SURGICAL VENTRICULAR RESTORATION DUE TO ADVANCED ISCHAEMIC CARDIOMYOPATHY WITH LEFT VENTRICLE ANEURYSMS

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OBJECTIVE: The objective of surgical ventricular restoration (SVR) is to resect or exclude all akinetic or dyskinetic non-functioning portions of the ventricular cavity and restore the left ventricle (LV) size and shape. The aim of this study was to identify the predictors of adverse outcomes after the SVR. **METHODS:** Between April 2008 and December 2010, 197 patients affected by ischaemic cardiomyopathy received SVR at our clinic. Inclusion criteria were: no associated procedure except CABG, absent to 2+ MR, elective surgery, follow-up two months. A Cox multivariable regression model was selecting the predictors.

RESULTS: Early mortality was 6.09% (12/197). NYHA class and all echocardiographic functional variables significantly improved after SVR at the end of the two months in the alive patients. After the multivariate analysis we identified the predictors: i- EF <25% before surgery, ii-<25% EF restoration after the SVR, iii-<25% increase at the SV, iv-recurrent CHF (NYHA Class>III), v-LVESVI>90 ml/m², vi-poor sphericity index, vii-akinetic interventricular septum.

CONCLUSIONS: Despite advanced cardiomyopathy, SVR determines LV reduction and improved systolic function. Due to the results of our study predictors of the SVR documented. Also we believed that the restoration of the LV shape improves at the moderate MR.

PP-172 EFFECTIVITY OF EARLY WOUND DEBRIDMENT AND CLOSED IRRIGATION IN DEEP STERNAL WOUND INFECTION, OUR EXPERIENCE

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OBJECTIVE: Deep sternal wound infection (DSWI) is a serious complication of cardiac operations performed by median sternotomy; often has a late onset and is detected after patients are discharged from the hospital. Mortality for deep sternal wound infection is still high, ranging between 5 and 47% in spite of early diagnosis and treatment. Despite the breakthrough of new approaches in the treatment of deep sternal wound infection; the appropriate treatment is still a field of controversies. We reported the our experience and approach to DSWI.

METHODS: Between January 2007 and August 2010, 1562 patients who underwent an open heart surgery through a complete median sternotomy by the same surgery team with same perioperative infection control protocols at our hospital, were examined retrospectively. 39 (%0.025) patients hospitalised with sternal wound infection, 8 of them with a sternum dehiscence and positive wound cultures were accepted as deep sternal wound infection. Early wound debridement, removal of infected wires and sutures, closed irrigation with rifampisin, suitable intravenous antibiotic therapy and aggressive blood glucose level control in diabetic patients (5 of 8) were the main phases of our surgical approach to DSWI.

RESULTS: 6 patients discharged after completing antibiotic therapy without any other complication, 2 deaths occurred in patients who had the longest interval between the cardiac operation to wound debridement; with delayed healing and mandated repetitive plastic reconstruction.

CONCLUSIONS: Mediastinal infection is a dreadful complication of openheart surgery. Simple medical treatment is often ineffective. Infection may cause septicemia or propagate to the cardiac sutures leading to massive hemorrhage. The appropriate treatment of DSWI is still a matter of controversy: since Shumaker and Mandelbaum proposed closed chest catheter irrigation, this has been the treatment of choice for DSWI, but in the recent years plastic procedures either with omental or pectoralis muscle flaps have reported to have a high rate of success and short hospital stay. As known the time between the onset of symptoms and wound debridement has been one of the most important factors affecting DSWI prognosis. Delay in reoperation allows time for the infection to spread deeply into the chest cavity causing sepsis, involvement of cardiac sutures, and sternal osteomyelitis. We recommend early wound debridement and closed irrigation strategy which shortens the hospital stay and provides much more control on the infection site, in patients with wound dehiscence, sternal instability, and signs of systemic or local infection.

PP-173 EARLY RESULTS HEART INJURIES

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OBJECTIVE: We aimed to examine results of the emergency surgical interventions in heart injuries with high mortality and morbidity rates.

METHODS: Between March 1999-December 2010, 27 cases that operated due to cardiac injuries were reviewed retrospectively. There were 20(%74.07) males and 7(%25.93) females. The average time from injury to surgery was 65 ± 25 (30-120) minutes. Mean age was 38.5 (16-81). While diagnosis was corrected by computed tomography and echocardiographically in hemodinamically stabilized patients, in three patients cardiac injury was detected intraoperatively performed by other surgical clinics. Surgical approaches were median sternotomy in 17 patients, left lateral thoracotomy in 9 patients, right lateral thoracotomy in 1 patient and median upper abdominal and subxiphoidal incision in 5 cases. Firstly, cardiac hemorrhages was controlled with finger compression. Then sutured with tephlon pledget sutures or pericard supported 3-0 polypropylene sutures. Aorta and vena cava injuries were repaired by 3/0 and 4/0 polypropylene sutures. Case with branch of right coronary arterial injury was repaired by 4/0 polypropylene suture. The cases which had LAD and Cx injury, bypass procedure was performed with saphenous vein. Lung injury in three patients, diaphragma injury in 2 patients, stomach injury in 2 patients, liver, spleen and gall bladder injuries in 1patient, right renal artery and right ureter injuries in 1 patient, small intestine injury in 1patient were obtained as additional injuries. We used cardiopulmonary bypass in three cases.

RESULTS: Localization of injury site is frequently right ventricle with thirteen cases as in seen Table-2. Two of the cases died in Emergency Service, 4 intraoperatively and 1 postoperatively in intensive care unit (Mortality %25.9). Twenty patients that treated primarily repaired without postoperative complication and discharged from hospital while paraplegia was obtained in one case with descendan aorta and medulla spinalis injury.

CONCLUSIONS: Approximately %25 of trauma related deaths occurs because of chest injury. Six percent of chest injury cause cardiac wounds. Seventy percent of chest injuries are blunt trauma (motor vehicle accidents, etc.). The other %30 are penetrant trauma (knife or gunshot wounds, etc.). Iatrogenic injuries may occur secondary to diagnostic or therapeutic interventions. Iatrogenic injuries of heart and large blood vessels can be seen in coronary angioplasty, stent insertion and other surgical departments operations. Due to anatomic localization, cardiac injuries are mostly seen at the right ventricle and left ventricle follows it. Rapid transfer to emergency department, quick and accurate diagnosis and aggressive surgical repair will increase survival in penetrating cardiac injuries.

PP-174 BENEFITS IN LOCAL APPLICATION OF NEGATIVE PRESSURE FOR CHRONIC WOUNDS

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OBJECTIVE: Local application of negative pressure is a non-invasive method to accelerate wound healing for the chronic wounds. It has been a popular wound care product used in many patients with chronic wounds. Our goal is, in the exuding wound that including more than one layer of tissue and not suitable for surgical intervention (that has healing problems and high potential for becoming infected), to observe the results of local application of negative pressure.

METHODS: A total of 20 patients experienced wound healing problems were reviewed retrospectively. The system made the wound lips in contact with the polyvinyl alcohol sponge and polycarbon, drape with sealed transfer system, reproductive and anti-odor collection container with gel. Sponge shape was adapted to wound size to be cut with scissors, sterile drape produced with a special seal for the system satisfies the transfer line - the collection container - provided the device connection. 100 mmHg continuous negative pressure applied to the first 24 hours, the second 24 hours, 5 minutes after the time period is active, as the treatment continued for 2 min off. Dressing was opened every 72 hours, tissue debridement applied and after 1 day, a new dressing was used until it was ready for wound surgical intervention (primary closure / grafting).

RESULTS: 20 cases 13 were male (65%), 7 females (3%) and the mean age of 68.1 ± 6.97 , respectively. Sternal localization of incision wound in 9 patients (45%), saphenous vein localization in 8 patients (40%), the femoral localization in 2 patients (10%), the incision above the knee in 1 patient (5%), respectively (Table 1). Existing applications, the average size of 5 ± 2.4 sessions after the wound was shrinking at a rate of 40%. 70% of the wound closed, as a primary closure, 30% were closed with the grafting method.

CONCLUSIONS: The postoperative heal of the open wounds in the early period of local negative pressure applications, a significant reduction in wound area by the beginning of treatment, reduction in secretion and the development of infection, provides an increase of granulation tissue. In addition, neovascularization and increase in capillary flow were the advantages, such as the removal of exudate media and edema. This is a closed system, deep and chronic wounds heal in the postoperative stage of preparation for surgical treatment to be preferred in an efficient, easy to use. We believe that it is comfortable for the patient.

PP-175 EXAMINING THE JOB SATISFACTION AMONG PERFUSIONISTS

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OBJECTIVE: Nowadays, job satisfaction among health care professionals is increasingly being recognized as a measure of quality improvement programs. Low job satisfaction could reduce the efficiency and management of health services. The main purpose of this study is the job satisfaction of perfusionists.

METHODS: In the present study, randomly chosen 52 perfusionists completed a previously validated questionnaire designed to measure job satisfaction. The research questionnaire included a section on sociodemographic and job variables and a 10-item instrument specifically developed to measure job satisfaction among perfusionists. Alfa correlation for Split-half test is reliable and was higher than 0.60 for 10 items. Factor analysis identified with three factors.

RESULTS: Most participants were not completely satisfied with their job. The level of satisfaction increased with age, gender and it was significantly lower among public hospital staff compared to the private hospitals. Satisfaction levels are statistically associated with gender ($p < 0.05$). In the univariate analysis, the variables associated with job satisfaction were work setting ($p < 0.05$) and age ($p < 0.05$). In the multiple logistic regression analysis, the only variable associated with job satisfaction was work setting. Working in a public hospital was negatively associated with job satisfaction ($p < 0.05$).

CONCLUSIONS: Although the results of a single survey cannot be considered for making decisions in health care management and quality programmes; our findings suggest that interventions must be taken for increasing job satisfaction among perfusionists especially at public hospitals.

PP-177 TRANSPOSITION OF THE GREAT OMENTUM FOR INFECTED STERNOTOMY WOUNDS IN CARDIAC AND PERIPHERAL SURGERY

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OBJECTIVE: Pedicled omental flaps are used for the reconstruction of chest wall defects following debridement of sternal infections and mediastinitis. The main advantages of using an omental flap are its large size and bulk to fill large 3-dimensional dead spaces, long pedicle, and rich vascular and lymphatic networks. Opening of the chest cavity has brought the risk of sternal and mediastinal infection. The omentum flap can be used where other modalities have failed and in recurring infections.

METHODS: Our study, which includes two patients developed mediastinitis after coronary bypass surgery who is 62 year old male patient 13 days later from CABG; mediastinitis and sternal dehiscence were operated with omentoplasty and one month after was discharged. Other 60-year-old male patient who developed graft infection after peripheral artery surgery patient who has been wound infection in the femoral region after one year later from iliofemoral

femoropopliteal graft bypass operation; was operated with omental patch and he was discharged 20 days later. None of the patients had major intraabdominal complications postoperatively. With these techniques, pedicled omental flaps will be a reasonable treatment option for chest wall reconstruction and femoral region infections.

RESULTS: As a result; the omentum covers the sternal and femoral defects well and the closure was reliable.

New Observations in Congenital Cardiovascular Problems - Poster Presentations

PP-179 RECONSTRUCTION OF A NEW PULMONARY ARTERY TRUNK

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OBJECTIVE: Aneurysms of the main pulmonary artery are rare and may be idiopathic. We would like to report a rare case of post-stenotic aneurysm of the pulmonary trunk and its left branch in a 46-year-old man.

METHODS: Through a surgical approach the pulmonary trunk and its left branch were excised and reconstructed using a 28mm Dacron tube graft; the right pulmonary branch was then reimplanted on the right side of the tube.

RESULTS: The patient was discharged from hospital uneventfully.

CONCLUSIONS: We believe that surgical approach should be recommended to the patient because of the risk of rupture of the thin arterial wall. Our case demonstrated that pulmonary artery aneurysm is uneventfully resectable and a surgically correctable disease.

PP-180 A RETROSPECTIVE COMPARISON OF XENOGRFT PATCH (BOVINE PERICARDIUM) AND DACRON PATCH FOR CLOSURE OF INTRACARDIAC DEFECTS

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OBJECTIVE: A variety of patch materials has been used to close ventricular septal defect (VSD). Autologous pericardium, dacron patch and glutaraldehyde-preserved bovine pericardium are the most used.

METHODS: This retrospective study compared the immediate postoperative (first week) and mid-term (up to 5 years postoperation) results of 524 patients with intracardiac defect who corrected with bovine pericardium patch (group A) at between 1992-2003 years with 498 patients who corrected a dacron patch (group B) at between 2004-2010 years.

RESULTS: There were a cases of early (in the first week) mortality in either group and 6 month post-operative echocardiographical studies showed no evidence of calcification,thrombus formation, vegetations or aneurysm formation around patch. Recurrent ventricular septal defect due to dehiscence of the patch developed in 15 patient in group A and in 14 patient in group B. But this was not statistically significant.

CONCLUSIONS: We prefer bovine pericardium because of its elasticity and characteristic.

PP-181 ALONG WITH SECUNDUM ATRIAL SEPTAL DEFECT AND PULMONARY HYPERTENSION IN PREGNANCY CASE

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Atrial septal defect (ASD) is the most common congenital heart disease in adulthood. Although usually clinically asymptomatic in adult patients, it may become symptomatic with rhythm disorders and shortness of breath. Prognosis of pregnancy with congenital heart disease and health of infant were affected by location of cardiac defect, presence or absence of cyanosis, degree of pulmonary vascular resistance, hemoglobin level, factors such as the effects of functional capacity and a history of surgical repair. In this case, we presented a 29 years old, 15 weeks pregnant women with previously unknown congenital heart disease who had complaints of shortness of breath and palpitations. In physical examination we found a systolic murmur on mezo-cardiac focus 2 / 6 and tricuspid in focus 3 / 6. Transthoracic echocardiography showed that secundum type ASD (3 cm), severe right ventricular enlargement, moderate tricuspid regurgitation and increased pulmonary artery systolic pressure (60 mmHg). Pregnancy was terminated and the ASD was closed as an elective.

PP-182 SURGICAL CORRECTION OF TETRALOGY OF FALLOT WITH SMALL PULMONARY ANNULUS

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OBJECTIVE: The aim is to determine the outcome of repair of Tetralogy of Fallot (TOF) with small pulmonary annulus by preserving the pulmonary valve.

METHODS: Forty patients whom underwent repair of TOF operated by a single surgeon were available for review. The pulmonary annular size was based on preoperative transthoracic or intraoperative TEE measurement. All patients had pulmonary annular size with Z value of -2 or less.

RESULTS: The mean age of the patients were 6.2 years (range from 2 to 23). There were more males to females (26:15). All patients were cyanosed, and 11 were severely cyanosed. Eleven patients had

previous Blalock-Taussig shunts, with 2 patients had 2 shunts done. The mean Z score of the pulmonary valve annulus was $Z = 4.3 \pm 1.69$ mm. All patients had bicuspid and/or dysplastic pulmonary valve. All except 4 patients had infundibular and pulmonary artery augmentation. Post correction mean RV/LV pressure ratio was 0.83. The mean pulmonary valve gradient was 34.8 mmHg. The mean cardiopulmonary bypass time was 143 min and the mean cross-clamp time was 77 min. The mean extubation time was 27 hours and mean ICU stay was 48 hours. All except 4 patients had either none or mild pulmonary regurgitation. There was only 1 mortality in this series. Serial echocardiography was done on follow up. The longest follow up is 3 years and all patients who survive are currently doing well.

CONCLUSIONS: The preservation of the pulmonary valve in TOF patients with small pulmonary annulus can be done safely with excellent midterm result.

PP-183 SURGICAL CLOSURE OF PATENT DUCTUS ARTERIOSUS IN LOW-WEIGHT PREMATURE TWIN INFANTS

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OBJECTIVE: Patent ductus arteriosus (PDA) with significant left to right shunt in preterm infants increases morbidity and mortality. Surgical treatment of hemodynamically significant patent PDA is necessary in low-weight premature infants who have failed medical management with cyclooxygenase inhibitors to avoid complications such as bronchopulmonary dysplasia, congestive heart failure, necrotizing enterocolitis, intracranial hemorrhage and death.

METHODS: CASE: 4-week-old female infant twins with PDA were referred to our clinic for PDA closure. The children born by C-section to a healthy mother at 24+3 weeks of gestation. The first baby's weight was 765 gr, the second one's was 775 gr. Respiratory distress syndrome evolved in postnatal period and required mechanical ventilation at both infants. Echocardiography revealed hemodynamically significant PDA's were exist at both infants. The surgical treatment was decided when multiple oral indomethacin treatments failed to close PDA. Operations were performed in operation room an interval of one day. Posterior thoracotomy was performed, the PDAs sizes are 4 mm and 3 mm. Both of the ductuses closed with titanium clips.

RESULTS: In postoperative period, the symptoms of respiratory stress rapidly disappeared and infants were weaned off ventilators sooner. On postoperative one month, follow up in neonatal intensive care unit.

CONCLUSIONS: Standard therapy of PDA includes

restricting fluids, diuretics and cyclooxygenase inhibitors like indomethacin or ibuprofen. The surgical closure is offered when farmalogical therapy is ineffective in low-weight infants. The surgical treatment is safe and effective in preterm low birth weight infants. The associated morbidity and mortality is minimal.

PP-184 REPAIR OF PULMONARY ARTERY SLING BY REIMPLANTATION WITH CARDIOPULMONARY BYPASS

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OBJECTIVE: Pulmonary artery sling is a rare congenital condition in which the left pulmonary artery originates extrapericardially from the posterior aspect of the right pulmonary artery and continues toward the left between the lower trachea and esophagus. Pulmonary artery sling is often associated with congenital tracheal stenosis and intracardiac anomalies. Complete tracheal rings are present in 50-65% of patient with pulmonary artery sling. The current treatment of pulmonary artery sling has changed little since that time except that coexisting tracheal and cardiac lesions are also repaired when present.

METHODS: Case; An 8 years old boy who was admitted a few times to the pediatrician due to respiratory infection with severe dyspnea, asthmatic breathing, persistent cough and sometimes cyanosis. On those occasions, he was received treatment bronchodilators, antibiotics and steroids. IgG levels was found normal. The absence of the left pulmonary artery was diagnosed by echocardiography and confirmed by computerized tomography angiography. The patient was operated on cardiopulmonary bypass and median sternotomy. A patent ductus arteriosus was found. That's why we accepted the patient as complete vascular ring. The left PA was identified, which originated from the superior aspect of the right PA and passed leftward behind the trachea and esophagus. The left PA was transected from its origin on the right PA between vascular clamps. The defect in the right PA was closed with a 7-0 polypropylene running suture. The left PA was then pulled out into the left pleural space and brought into the pericardial space through a window made behind the phrenic nerve. The left PA was reanastomosed to main PA.

RESULTS: The patient was free of symptoms. Postoperative period was uneventful and at one months follow up.

CONCLUSIONS: Several techniques for repair of PA sling have been described since the first successful Potts procedure. There has been major controversy regarding the surgical approach, with median sternotomy generally preferred over left thoracotomy. The technique of vascular repair, with

reimplantation of the left PA into the main PA being generally preferred over translocation of the left PA anterior to the trachea, and the indications for a simultaneous reconstruction of the trachea with the use of CPB. Complete PA sling repair via left PA reimplantation through median sternotomy with CPB is feasible with good results in selected cases with or without primary tracheal stenosis or tracheomalacia.

PP-185 A CASE OF INFECTIVE ENDOCARDITIS IN PATIENT WITH VENTRICULAR SEPTAL DEFECT

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OBJECTIVE: Ventricular septal defects (VSDs) are the most common group of congenital cardiac malformations and occur in 2-6 in 1000 live births. Infective Endocarditis (IE) is a systemic disease that normally develops when some type of underlying cardiac disease such as a cardiac valvulopathy and congenital herat disease.. The mechanism of the occurrence of IE is that blood platelets and fibrin attach to a heart structure that has been damaged by a valvular disease, blood clots adhere there.. In addition, if transient bacteremia occurs, bacteria attach to the fibrin blood platelet blood clots and form colonies.

CASE: A 30-year-old male patient was admitted to our clinic complaining with shortness of breath, fever, weakness, weight loss and of left leg pain. On physical examination, blood pressure: 105/60 mm Hg, heart rate: 88 beats / min, were rhythmic. Grade 3 / 6 systolic murmur was presented heard at mezo-cardiac focus. In Transthoracic echocardiography, 3 cm in diameter VSD, and aortic valve vegetation 15x10 mm diameter were seen. Transthoracic echocardiography revealed 3 cm in diameter VSD and a 15x10 mm diameter mass on the aortic valve that is high likely vegetation. Blood cultures grew Staphylococcus aureus. Laboratory **FINDINGS:** sedimentation 76 mm, CRP 127 mg / l, WBC 24,000. Blood cultures grew Staphylococcus aureus. antibiotherapy was started immediately. The patient was treated with IE. Cardiovascular surgery, the patient consulted with the surgical repair was planned.

PP-186 PATENT DUCTUS ARTERIOSUS: SURGICAL TREATMENT

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OBJECTIVE: We aim to present the our experience of surgical treatment for patent ductus arteriosus (PDA) this study.

METHODS: Between January 2005 and December 2010 surgical intervention was performed to 58 patients due to PDA at Department of Cardiovascular Surgery of Ataturk University Medical faculty. The mean age 2.6 (ranging from 7 days to 19 age) and 40 patients (68.9%) were female, 18 patients (31.1%) were male. PDA and aortic coarctation (AC) was 8 patients (13.7%), PDA and Interrupted aorta (IA) were 1 patient (1.7%). PDA was repaired with ligation method in 52 patients (89.6%), with division method in 5 patients (8.6%). Ligation (aortic side) and division (pulmonary arterial side) was performed in 1 patient (1.7%). We repaired PDA and AC with excision of aortic coarcted segment and end to end anastomosis in 8 patients (13.7%). PDA and IA were repaired in the 1 patient. The majority of ligations were performed with titanium clips.

RESULTS: We believe that surgical closure of PDA is good and safe treatment method.

PP-187 CASE REPORT: TOF WITH AORTIC REGURGITATION AND ASCENDING AORTA DILATATION

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OBJECTIVE: Tetralogy of Fallot is one of the most common two congenital cardiac pathologies. Herein, we aimed to present our single procedural experience in a 32 patient with TOF+ascending aortic aneurysm+3-4* aortic regurgitation.

METHODS: The patient was followed for cyanotic heart disease for years. The patient presented with effort dyspnea, orthopnea, fatigue and decrement in diastolic blood pressure. Echocardiographic evaluation revealed 75% aortic dextraposition, right ventricle hypertrophy, perimembranous VSD, pulmonary infundibular and valvular stenosis (90 mmHg gradient), persistent left vena cava superior, ascending aorta aneurysm (65mm), 3-4* aortic regurgitation and 1-2* tricuspid regurgitation. Multislice computed tomography showed ascending aorta diameter as 67mm and also cardiac catheterization revealed RV pressure 135 mmHg, PA pressure 32 mmHg, aortic pressure 130/35 mmHg, TOF, ascending aorta aneurysm and 4* aortic regurgitation.

RESULTS: We planned total correction for TOF and Bethall operation. Total cardiopulmonary bypass was performed after median sternotomy, femoral artery and tricaal cannulation. By opening ascending aorta direct antegrade blood cardioplegia was performed. Due to appropriateness of sinotubular connection, we performed ascending aorta replacement and aortic valve repair was performed. After right ventriculotomy, VSD was closed by infundibular approach with xenograft patch. Right ventricular myectomy, pulmonary valve resection and transannular patch plasty was performed. Ascending aorta was replaced by 30mm Dacron graft under cross clamp. The patient pumped off under inotropic agent support. CPB was 179 min, aortic cross clamp was 152 min and total operation duration was 239 min. The patient was extubated at

second day of the operation and discharged on 10. day of hospitalization.

CONCLUSIONS: Ascending aorta dilatation and aortic regurgitation with delayed TOF patients can be operated in a single session by total correction of TOF and repairment of the aortic pathology.

PP-188 THE SURGICAL CORRECTION OF AN UNUSUAL CASE OF A PULMONARY ARTERY SLING ASSOCIATED WITH AN ABERRANT RIGHT SUBCLAVIAN ARTERY: OFF-PUMP

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OBJECTIVE: Pulmonary artery sling (PAS) is a rare variant of vascular ring, in which the left pulmonary artery (LPA) originates from the posterior aspect of the right pulmonary artery (RPA) and encircles the distal trachea and right main bronchus as it courses between the trachea and esophagus to reach the left pulmonary hilus. We report an unusual combination of PAS and a right aberrant subclavian artery in a 4-year-old child that underwent off-pump surgical correction of PAS, by division and re-implantation via a median sternotomy.

METHODS: Surgical correction was performed through a median sternotomy. We applied a side-biting Castaneda clamp to the side of the main pulmonary artery. The patient tolerated the procedure well. The LPA was re-implanted in to the main pulmonary artery, without using cardiopulmonary bypass (CPB).

RESULTS: The patient was weaned without the need of inotropes and was extubated 2 hours after surgery in the intensive care unit. A postoperative echocardiogram showed a widely opened right ventricular outflow tract and bifurcation of the pulmonary artery. She was discharged from the hospital on the 5th post-operative day following an uneventful postoperative period.

CONCLUSIONS: This case is an unusual combination of PAS and a right aberrant subclavian artery. CPB was not needed because the patient did not have cardiac and tracheal abnormalities and tolerated the main pulmonary artery clamping.

PP-204 PERICARDIAL CYST CAUSING DYSPNEA: CASE REPORT

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OBJECTIVE: A case of symptomatic pericardial cyst is described.

METHODS: Forty-one year old male patient was admitted with complaints of atypical chest pain and worsening dyspnea. Echocardiography, computed tomography and magnetic resonance imaging revealed a 5x4 cm sized low density mass, related to the pericardium on the right side that was compatible with a pericardial cyst. Following median sternotomy, it was visible that the cyst originated from the parietal pericardium and extended into the right pleura. The cyst was totally excised and underwent

histopathological examination that revealed a pericardial cyst presenting mesothelial cell proliferation. The patient was discharged at the third postoperative day.

CONCLUSIONS: Pericardial cysts are uncommon. Symptomatic and complicated pericardial cyst may needed to be excised surgically.

Innovations in Cardiovascular Medicine Poster Presentations

PP-211 THE EFFECT OF SELECTIVE ENDOTHELIN RECEPTOR A ANTAGONISM BY BQ-123 ON MYOCARDIAL ISCHEMIA- REPERFUSION INDUCED APOPTOTIC CELL DEATH

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OBJECTIVE: Recent reports have demonstrated blockage of ET-1 on the extension of MI and favorable effects on antioxidant system and nitric oxide (NO) production. However, the effect of ET-1 receptor blockage on myocyte apoptosis in myocardial ischemia-reperfusion (MI/R) has not been studied yet. The objective of the present study was to investigate the possible impact of specific ETA receptor blockage by BQ-123 on MI/R-induced apoptosis in rats.

METHODS: To produce MI/R, a branch of the descending left coronary artery was occluded for 30 min followed by 2 h reperfusion. ECG changes, blood pressure (BP), and heart rate (HR) were measured before occlusion and continued both occlusion and reperfusion periods. Thirty two rats were randomly assigned to four groups equally: (1) sham-operated rats group, (2) I/R group, (3) I/R+BQ-123-treated group, (4) I/R+ET+BQ-123-treated group. Extensive formation of DNA strand breaks, the typical biochemical feature of apoptosis, was detected with the use of the terminal deoxynucleotidyl transferase (TdT)-mediated d UTP-biotin nick and labeling (TUNEL) method. Also, caspase-3 and caspase-9 activities were determined. Trunk blood was extracted to determine the serum contents related to oxidant-antioxidant status.

RESULTS: BQ-123 administration had no a significant effect on hemodynamic parameters during ischemia or reperfusion. I/R group revealed extensive TUNEL positive cardiomyocytes especially in free wall of left ventricle, interventricular septum and nearly apex zone. Intensity of TUNEL-positive cardiomyocytes reduced as a result of BQ-123 treatment compared to sham group in the same sections. Result of the caspase activities was found

to correlate with TUNEL evaluation. BQ-123 administrations to I/R group with or without ET-1 caused significantly decrease both in lipid peroxidation and NO generation. Increased in superoxide dismutase, catalase and glutathione content are the other important impacts of BQ-123 administration when compared with I/R group alone.

CONCLUSIONS: We propose that selective ETA antagonism by BQ-123 has worthwhile effect on apoptotic cell death following MI/R, and that scavenging of free radicals by selective ETA antagonist is the part of this beneficial effect.

PP-212 MALIGNANT PERICARDIAL MESOTHELIOMA PRESENTING AS PERICARDIAL CONSTRICTION

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OBJECTIVE: Primary tumors of the pericardium are extremely rare. Pericardial mesothelioma is highly aggressive and lethal cardiac tumor. Pericardial mesotheliomas overall prognosis is poor. Clinical symptoms are constrictive pericarditis, hemopericardium cardiac tamponade, and cardiac failure. The tumor is commonly diagnosed at an advanced stage and often results in evidence of constriction caused by tumor expansion or associated with serous or hemorrhagic pericardial effusion. Pericardial mesothelioma is still a therapeutic and diagnostic controversy.

CASE: A 25-year-old male patient who was complaining of fever, night sweats, shortness of breath and palpitations. He had edema in his legs and a venous swelling on his neck. The echocardiography showed pericardial effusion and pericardial thickening which were also found on the CT. Through median sternotomy a pericardectomy and tumors resection were performed. The pericardium was 2-3 cm thick, white, homogeneous, and very strongly adherent to the myocardium. Histological and immunohistochemically findings, the case were diagnosed as malignant pericardial mesothelioma.

RESULTS: The patient was discharged a week after the operation with all his complaints having been treated.

CONCLUSIONS: There still is not a radical therapy for primary pericardial mesothelioma. Surgery is done to prevent cardiac tamponade and relieves constriction. Early diagnosis and surgery may prolong survival in some patients.

PP-214 USE OF TRANEXAMIC ACID TO REDUCE MEDIASTINAL BLEEDING AFTER CARDIAC SURGERY

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OBJECTIVE: The scope of this study is to verify if the protective use of tranexanic acid (TXA) for topical use is in a position to reduce the bleeding in patients after cardiac surgery in cardiopulmonary by-pass.

METHODS: Sixty patients have been recruited and exposed to cardiac surgery in by-pass cardiopulmonary and have been monitored for loss of blood in the first 24 h. Group A: 20 patients have received the TXA intravenously before the first incision of the skin and kept like this until the interruption of cardiopulmonary by-pass. Group B: 20 patients have received TXA diluted in the pericardium cavity before the closing. Group C: Twenty patients, finally, constitute the control group.

RESULTS: In the patients treated with TXA the evidence is a reduction in bleeding in the the first 24 h above all the ones treated with TXA for topical way: Group A: 285 ± 179.5 ; Group B: 185.7 ± 121.4 ; Group C: 595 ± 363.9 .

CONCLUSIONS: The TXA administered topically determines the reduction of the bleeding in the immediate post operative period- in patients exposed to cardiac surgery.

PP-215 BLOOD STOPPER ANKAFERD: AN INVESTIGATION OF CARDIOVASCULAR SURGERY AND HEMOSTATIC EFFECTS

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OBJECTIVE: The aim of this study is to perform and show the effects of Ankaferd Blood Stopper (ABS) on cardiovascular surgery by observing bleedings with damaged major vessels with increased blood pressure on new zealand rabbits.

METHODS: Fourteen rabbits are separated into two groups. The first group was introduced major bleedings under normal blood pressure and the second group is under 50% increased blood pressures. ABS was used in one extremity of the animal and not used in the other for the femoral artery injury. On the other hand for the abdominal aortic injury, half of the experiments in both groups were used without ABS and the other half of the bleedings with pouring liquid ABS extract after bleeding started.

RESULTS: In the first group the mean value of bleeding time of femoral artery without using ABS is 105.0 ± 18.3 seconds and with using ABS is 51.4 ± 9.8 seconds ($p < 0.05$). The mean value of amount of bleeding of femoral artery without using ABS is 5.0 ± 1.5 mg and with using ABS extract is 1.6 ± 0.4 mg ($p < 0.05$). Although the mean value of bleeding

time and amount of bleeding of abdominal aorta with using ABS extract even in high blood pressure are low, they are not statistically significant.

CONCLUSIONS: In this study ankaferd is successful on damaged arteries and reduces both bleeding time and amount of bleeding on both normal and high blood pressures. This new drug increases our hopes of decreasing the bleeding complications during surgery for the future clinical studies.

PP-216 A NOVEL MINIMAL INVASIVE MODEL OF MYOCARDIAL INFARCTION IN RABBIT-COMPARISON WITH SURGICAL MODEL

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OBJECTIVE: Most animal studies on myocardial ischemia have used open-chest models with direct surgical coronary artery ligation which is associated with local and systemic side effects of major surgery. The aim of this study is to develop a novel closed chest model of myocardial infarction in the rabbit

METHODS: In 10 New Zealand white rabbits transauricular intra-arterial access was established with insertion of a small-caliber catheter through the rabbit central auricular artery. Endovascular coronary occlusion was achieved with a microcoil, which was introduced into the left anterior descending coronary artery of the rabbit heart after selective vessel catheterization with a microcatheter. Also in 10 rabbits tracheostomy was performed and ligation of left anterior descending artery through subxiphoid incision. After 4 weeks the animals were euthanized. ECG, cardiac enzyme and assessment of cardiac function by recording left ventricular end-diastolic pressure (LVEDP) were recorded before and after myocardial infarction and also before animal euthanasia. Moreover, the hearts were excised and histopathologic examination was performed

RESULTS: Increase of troponin, existence of Q and increase of LVEDP to a similar extent in both groups 12.1 ± 0.8 vs 13.5 ± 0.1 mmHg before euthanasia, compared with baseline values 6.5 ± 0.9 vs 5.7 ± 0.4 mm Hg ($p > 0.05$) for minimal invasive group vs surgical method were recorded. The ST-segment elevated immediately after ligation of left anterior descending artery in comparison with ST elevation 15-20min after the embolization. Finally, the diameter of infarcted area was 0.86 ± 0.39 in the surgery group and 0.88 ± 0.47 in minimally invasive model, ($p > 0.05$).

CONCLUSIONS: The presented minimal invasive experimental model of myocardial infarction is a reliable platform for the study of myocardial ischemia. It avoids major surgery and thoracotomy

and is also reproducible with a pathophysiology similar to human pathology without statistically significant difference in troponin increase, LVEDP measurement and histopathologic results in comparison with surgical model.

PP-218 THE COMPARISON OF ARTERIAL STIFFNESS AMONG THE PATIENTS TREATED WITH HEMODIALYSIS OR PERITONEAL DIALYSIS

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OBJECTIVE: Arterial stiffness which is an indicator of atherosclerosis is an important risk factor for cardiovascular morbidity and mortality. End stage renal disease (ESRD) increases arterial stiffness. We aimed to compare arterial stiffness by using the aortic strain, distensibility and aortofemoral pulse-wave propagation velocity (PWPV) among ESRD patients treated with hemodialysis (HD) or peritoneal dialysis (PD).

METHODS: The study included 55 patients treated with peritoneal dialysis (n: 30) or hemodialysis (n: 25). The cases were evaluated with clinical examination, 12-leads electrocardiography (ECG) and transthoracic echocardiography (TTE). Blood chemistry and arterial blood gas were analyzed. Systolic and diastolic diameter of aorta were measured with M-mod method from parasternal long-axis. Aortic strain was established by the change percent of difference of diastolic and systolic aortic diameter, and also distensibility was established with dividing into pulse pressure of aortic strain. Aortofemoral pulse-wave propagation velocity recordings were acquired from the descending thoracic artery at the origin of the subclavian artery and the left common femoral artery in supine position. Wave front arrival at each location was defined by extrapolation of the ascending Doppler flow profile to the baseline using the electrocardiographic R wave as a time reference. The descending aorta-femoral PWPV was determined by dividing the distance by the time delay between two points. Parametres of arterial stiffness were compared to between patient groups treated with peritoneal dialysis and hemodialysis.

RESULTS: Baseline characteristics and TTE measurements were not significantly different between peritoneal dialysis and hemodialysis patient groups. Compared to PD patients DM was significantly more frequent (% 32 vs %10; p= 0.042) and HT was tend to be significantly more frequent (%60 vs %36.7; p=0.084) in HD patients. In peritoneal dialysis patients dyslipidemia was more frequent (% 40 vs %16; p=0.047) and cholesterol (203.96±59.33 vs 162.00±43.79; p=0.005), low-density lipoprotein (LDL) (118.36 ± 38.97 vs 95.44 ± 31.11; p=0.021) and triglyceride (258.73 ± 200.80 vs 174.20 ± 76.02; p=0.050) levels were significantly higher.

Aortic strain (8.72 ± 4.17, 9.65 ± 5.54; p=0.478), distensibility (0.45 ± 0.26, 0.39 ± 0.21; p=0.329) and PWPV (13.7 ± 0.41, 12.9 ± 0.47; p=0.512) were not significantly different between HD and PD patients.

CONCLUSIONS: Of the arterial stiffness parameters, aortic strain, distensibility and PWPV were not significantly different between HD and PD patients.

PP-219 CARDIAC EFFECTS OF CHRONIC GRAFT VERSUS HOST DISEASE WHICH DEVELOPS FOLLOWING STEM CELL TRANSPLANTATION

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OBJECTIVE: Graft-versus-host disease (GVHD), which develops as a result of the immunologic response that donor T-lymphocytes generate against host tissue following allogeneic stem cell transplantation, is the leading cause of morbidity and mortality in these patients. Contribution of cardiac functions to the high rates of morbidity and mortality observed following GVHD has not been elucidated. The present study aims to find out whether there are cardiac effects in patients who received allogeneic bone marrow transplantation (BMT) and developed GVHD, and to determine the extent of this effect, if any.

METHODS: The study included 14 patients (4 females and 10 males) with a mean age of 32±9.4 who received BMT and was diagnosed with Graft-versus-host disease and 26 patients (12 females and 14 males) with a mean age of 38±13 who did not develop Graft-versus-host disease following transplantation. All patients underwent baseline echocardiography prior to BMT and were monitored. After the expected period of time has elapsed for GVHD following transplantation, these patients were divided into two groups based on whether they had developed chronic GVHD, and were compared

RESULTS: No significant differences were observed between the two groups before BMT in terms of patients' demographical attributes and laboratory and echocardiographic findings (p>0.05). Hs-CRP level following BMT was 29.3±15.7 mg/L in the GVHD group and 10.6±9.7 mg/L in the non-GVHD group, while erythrocyte sedimentation rate (ESR) was 45.2±18.2 mm/h in the GVHD group and 31.4±11.4 mm/h in the non-GVHD group. Hs-CRP and ESR levels were significantly higher in the group of patients who developed GVHD compared to those who did not (p <0.001 and p=0.01, respectively). Mean left ventricular mass was 227.0±32.3 g in the GVHD group and 149.3±27.4 g in the non-GVHD group (p<0.001). E/A flow rate was significantly higher in the non-GVHD group, while isovolumetric relaxation and deceleration times were significantly higher in the GVHD group (p=0.01, p=0.02, p=0.02, respectively)

CONCLUSIONS: This study has showed that GVHD increases the left ventricular mass and leads to impairment in left ventricular diastolic functions in patients who developed chronic GVHD following BMT.

In addition, it has demonstrated that inflammatory markers increased to higher levels in these patients

PP-223 IN RATS, THE EFFECT OF APPLICATION OF CYCLOSPORIN AND TACROLIMUS (FK506) ON NEWLY FORMED ATHEROSCLEROSIS AND LIPID PROFILE

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OBJECTIVE: The aim of this study is to analyse and compare effects of cyclosporin and tacrolimus (FK506) on de novo atherosclerosis in Apo E-/- rats. **METHODS:** These experimental ApoE-/- rats were separated in to three groups. Group 1 (control group) rats were fed 0.5 cc/day olive oil, Group 2 rats were treated with 10 mg/kg/day cyclosporin in a 0.5 cc olive oil diet and Group 3 rats were treated with 0,05 mg/kg/day tacrolimus in a 0.5 cc olive oil diet for four weeks. After four weeks, morphological analysis was made with light microscope. Blood samples were obtained from the aorta and levels of total cholesterol, HDL cholesterol and triglycerides were measured.

RESULTS: : There was no statistical difference for total cholesterol and HDL cholesterol between the groups. Triglycerit level was considerably lower in control group than in cyclosporin and tacrolimus group, whereas there has not been found any differences in both cyclosporin and tacrolimus groups. In the morphological analysis with light microscope, any of loosening, thickness, atherom plaque morphology, and endothelial desquamation, deposition of sub-endothelial lipid, degeneration in elastic ligaments of media layers were not found, neither any difference or abnormalities in endothelial cell composition. It was only found a partial "intimal" thickness in one of the cyclosporin group sample.

CONCLUSIONS: Intimal thickness in the cyclosporin treated group with no hypercholesterolemia has been suggested that cyclosporin can potentiate atherosclerosis by stimulation of vascular smooth muscle cell proliferation without hyperlipidemic effect.

PP-224 THE EFFECT OF CALCIUM DOBESILATE IN ACUTE DEEP VENOUS THROMBOSIS PATIENTS

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OBJECTIVE: It was thought that to add on therapy with calcium dobesilate has beneficial influence on improving the symptoms in the patients who have medication of acute deep venous thrombosis (DVT).

METHODS: Totally 88 patients with acute deep venous thrombosis (DVT) evaluated between October 2009 - 2010. Patients divided in two groups. In both groups, the patients anticoagulated with one dose enoxaparine daily for ten days and than warfarin during 6 months. Totally 1.5 g/day calcium dobesilate added on therapy which the patients have in group A. The patients who were in group B

followed by only anticoagulant treatment as a control group. All of the patients in both groups evaluated with physical examination and venous duplex ultrasonography (VDU) at second week, 1, 2 and 6 months after diagnosis of disease.

RESULTS: Subacute findings in VDU were seen in the patients which 24 of them at second week, 16 of them in first month, 4 of them in second month in group A, 28 of them at second week, 8 of them in first month, 8 of them in second month control in group B. Leg eudema gone back in normal limits in the patients which 18 of them at second week, 8 of them in first month, 8 of them in second month, 2 of them in sixth month in group A, 14 of them at second week, 8 of them in first month, 6 of them in second month, 10 of them in sixth month in group B. It was seen that leg pain was reduced in the patients which 24 of them at second week, 8 of them in first month in group A, 26 of them in second week, 14 of them in first month group B.

CONCLUSIONS: Add on therapy with calcium dobesilate contribute improving symptoms in patients who have acute DVT.

Challenging Experiences in Coronary Artery Disease - Poster Presentations

PP-243 SURGICAL MANAGEMENT OF A CORONARY ARTERIOVENOUS FISTULA BETWEEN DIAGONAL CORONARY ARTERY TO PULMONARY ARTERY: CASE REPORT

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OBJECTIVE: Coronary arteriovenous fistula (CAVF) is a rare anomaly with incidence of 0.1-0.2%. In this case report, we present a patient who underwent a coronary artery bypass operation simultaneously underwent a CAVF closure procedure with the diagonal artery (DA) - pulmonary artery (PA).

METHODS: 65-year-old male patient, for the diagnosis of two-vessel coronary artery disease and CAVF has been taken to clinic for operation. Fistula was aneurysmal, tortuous structure, moving toward PA anterolaterally, and similar to a plexus. After performing saphenous - right coronary artery, saphenous - optus margine 1 distal anastomoses, pulmonary arteriotomy was performed. To determine the exact location of orifices, antegrade cardioplegia was given and had seen two orifice close to each other which were opened to the PA. Both fistula orifice opened to PA were closed with 3/0 prolene with a full floor routine closure and the PA was repaired with continuous matrix suture technique. A few different ligations was performed to the aneurysmal and curved fistula between D1 - PA similar to a plexus with the 5/0 prolene.

RESULTS: Large part of the young patients which have CAVF lesions are asymptomatic, whereas symptomatic patients usually presents with advanced age. Fistula opening to PA and has a aneurysm structure with a large shunt (more than 1.5:1) can create a cardiac volume load as a result of increased pulmonary perfusion. In addition, bacterial

endocarditis, spontaneous rupture of the aneurysm due to fistula and progress to cardiac tamponade, the steal syndrome and angina pectoris, myocardial infarction, arrhythmia are the potential complications. Surgical treatment is gold standard for CAVF and direct epicardial or endocardial ligations are often performed for treatment. Minimally invasive catheter methods are also alternative options to the surgery. With transcatheter method reporting of mortality and morbidity rates, close to the surgical methods, as well as the development of residual shunt and partial occlusion due to the risk of failed attempts complication rates have also been reported

CONCLUSIONS: As a result, it should be keep in mind, fistulas with the structure of plexus, aneurysm and tortuous can be opened with more than one orifice to PA and after should be considered in exploration and subsequent ligation. For the prevention of residual shunt and possible complications after the operation, surgical closure should be preferred as an application method is thought to be a priority.

PP-244 A CASE OF SUBACUTE FREE WALL RUPTURE FOLLOWING ACUTE MYOCARDIAL INFARCTION

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OBJECTIVE: Left ventricular free wall rupture (LVFWR) is an important complication of acute myocardial infarction (AMI) and is rare with an incidence of 2% to 4%. This complication is accounting for 20-30% of all infarct related deaths. Accurate diagnosis of LVFWR allows successful surgical treatment and may improve survival rates.

CASE: A 63-year-old woman with cardiac risk factors of hypertension and diabetes mellitus was admitted complaining of chest pain and dyspnea starting approximately four hours ago. He had an acute lateral myocardial infarction and thrombolytic therapy with streptokinase was started. After thrombolytic therapy her chest pain was reduced however dyspnea had been increased. Transthoracic echocardiography demonstrated a moderate - large pericardial effusion with pericardial thrombus compressing the right ventricle and LVFWR. Since probability of requirement of treatment with coronary artery bypass grafting, the patient underwent coronary angiography (CAG) urgently. CAG showed totally occluded left anterior descending (LAD) and circumflex (Cx) coronary arteries. She was referred to an emergency cardiac operation. Direct closure of rupture was carried out and bypass grafts were placed to the LAD and CX coronary arteries.

CONCLUSIONS: This case demonstrates the early diagnosis of LVFWR by echocardiography helps to treat these patients with emergent surgery. Echocardiography also may help to detect the possible site of rupture.

PP-248 THE SURGERY FOR A VERY RARE CASE OF CORONARY ARTERY ARTERIOVENOUS FISTULA WITH CORONARY ARTERY BYPASS SURGERY: SIX CASE REPORT

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OBJECTIVE: A congenital coronary arteriovenous fistula is a direct communication between a coronary artery and the lumen of any one of the four cardiac chambers, the coronary sinus or tributary veins, or the superior vena cava, pulmonary artery or the pulmonary vein. The right coronary artery or its branches site of the fistula in 50 - 55% of cases.

METHODS: Case I: A 62 years old male patient. Main symptoms were dyspnea, fatigue, angina and till last 6 months he has Class III NYHA functional capacity. His EF was 30%, 65 mmHg pulmonary artery pressure, LVESD was 52mm and the LVEDD was 65mm, 3-4° mitral regurgitation and 2-3° tricuspid regurgitation. There was a fistula tract between the main right coronary artery and the pulmonary artery at the coronary angiogram. We have performed CABG * 2 + mitral repair (triangular resection, sliding plasty and flexible band annuloplasty) + tricuspid band annuloplasty + SIRFA + closure from within the pulmonary artery and the fistula tract was closed by running suture to its right coronary artery end. At the end of the first year his NYHA is class I and his EF is 45%, no MR and TR, PAP is 40 mmHg. Case II: A 56 years old male patient and the same symptoms were present. NYHA was Class III and EF was 40%, 1-2° MR, PAP was 55 mmHg. He has three vessel coronary artery disease and a fistula between right main coronary artery and pulmonary artery. At the end of the first year his NYHA is class I and his EF is 55%, no MR and TR, PAP is 30 mmHg.

RESULTS: Case III: A 48 years old female patient and the same symptoms were present. NYHA was Class III and EF was 35%, 2-3° MR, PAP was 60 mmHg. He has three vessel coronary artery disease and a fistula between right main coronary artery and pulmonary artery. She has no symptom at the sixth month control and the EF is now 50% and no MR and PAP is 35mmHg. Cases IV;V;VI: A 44 years old male; 49 year old male; 52 year old female patients had the same symptoms. They have no symptoms at the end of the sixth month control and their EF's are now 50% and no MR and PAP's are 30 mmHg.

CONCLUSIONS: Giant aneurysm and the complicated with myocardial infarction and valve anomalies and the malignant pulmonary hypertension are the main causes of the hospital mortality.

PP-249 CHRONIC THROMBOEMBOLIC PULMONARY HYPERTENSION IN A PATIENT WITH CORONARY ARTERY DISEASE

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OBJECTIVE: Chronic thromboembolic pulmonary hypertension (CTEPH) is a pathologic condition that develops as a result of obstruction of large branches

of pulmonary artery following one or multiple episodes of pulmonary embolism. Approximately 0.5% of pulmonary emboli cases may progress and end up with the development of CTEPH.

METHODS: We present in this case report a patient who was hospitalized for his coronary disease planning a bypass operation. A thorax tomography taken for investigation of pulmonary complaints revealed a partially obstructing thrombus in his right main pulmonary artery. Transthoracic echocardiography (TTE) demonstrated moderate pulmonary hypertension with pulmonary artery pressure (PAP) of 35 mmHg.

RESULTS: He was accepted borderline for the operation of Pulmonary thromboendarterectomy (PTE) and he was treated by beating heart bypass surgery for his critical coronary disease.

CONCLUSIONS: As the awareness of the disease increased, the number of the diagnoses of CTEPH is also increased. Once diagnoses is firmly established best treatment option is pulmonary thromboendarterectomy however diagnoses of the condition is not always easy mainly because many of the symptoms and signs overlaps that of the chronic obstructive pulmonary disease. Selection of surgical candidates for PTE is very important for the success of the procedure.

Minimal Invasive Surgery - Poster Presentations

PP-252 CASE REPORT: A CASE OF SURGICAL INTERVENTION TWICE BECAUSE OF RECURRENCE OF THE POSTINFARCTUS VSD

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OBJECTIVE: Postinfarctus ventricular septal rupture (post-MI VSD), occurs in 1-2% of the post acute myocardial infarction (MI) patients, and it is complication which has high risk of mortality. The majority of patients are the elderly who undergoes first infarction. 60% of them are associated with single-vessel disease, 40% of them are with 2 or 3 vessel disease. The most frequent sites for post-MI VSD are antero-apical septum due to anterior MI, and posterior septum due to inferior MI. Risk factors affecting operative mortality in patients with Post-MI VSD in the literature are, advanced age, preoperative ejection fraction (EF) impairment, the timing of the operation, underwent additional surgery and cardiopulmonary bypass duration, male gender and expressed in patients undergoing first myocardial infarction. The major factor affecting surgical mortality is the recurrence of the VSD in the postoperative period.

CASE: At our clinic, a 56-year old male patient who is active surgeon at our hospital underwent an angiography after acute inferior MI and during

ventriculography a VSD was determined, emergent surgical approach was planned to the patient who was in cardiogenic shock. In the preoperative echocardiogram of three-vessel coronary artery disease patient there was posterior VSD, the EF was 40% and severe mitral regurgitation was detected. EuroSCORE score of the intensive smoker patient with chronic obstructive pulmonary disease was 9. In the operation, LIMA-LAD, Ao-RCA, Ao-OM1 (saphenous vein) anastomosis, a mitral complete rigid ring (28 St. Jude saddle shape mitral ring) annuloplasty and a primary VSD repair with teflon pledget supported sutures was performed. The patient was extubated on postoperative 2nd day and transferred to the service. All findings were stable, until sudden shock development on the 9th postoperative day. Echo was performed with a result of recurrent VSD. The patient underwent emergency operation with the IABP support in second time and in operation, after extensive resection of necrotic septum, repair of VSD was performed using a Dacron patch. After intensive care and service process which lasted longer than usual the result of echocardiography showed an intact septum, EF 45% and slight MR and the patient was discharged without any medical problem. The patient is still performing active surgery in our hospital.

CONCLUSIONS: VSD developed after myocardial infarctus, is one of the most mortal complications of MI. In this case, we think that the most important factor for reducing mortality is performing additional aggressive approach of surgical procedures such as full revascularization of the myocardium and repair of mitral insufficiency if it present, besides of urgent surgical intervention for septal defect closure.

PP-253 MINIMALLY INVASIVE HYBRID TREATMENT OF ACUTE TYPE 1 AORTIC DISSECTION; A SINGLE STAGE TECHNIQUE FOR THE COMPLETE REPAIR OF AORTIC PATHOLOGY WITHOUT CIRCULATORY ARREST

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OBJECTIVE: After traditional treatment of acute type 1 aortic dissection, possible persistence of residual false lumen in the untouched distal aorta may lead to increased mortality.

METHODS: This study presents single stage complete hybrid repair of acute type 1 aortic dissection, with ascending aortic tube graft interposition, reconstruction of supraaortic branches with using inflow from the ascending aortic graft and endovascular stenting of the arcus, descending and thoracic aorta with mini sternotomy and without circulatory arrest.

RESULTS: The patient was discharged from the hospital in the postoperative sixth day without any complication. Control computed tomographic examination revealed patent aortic stent and supraaortic grafts.

CONCLUSIONS: Described single stage complete repair of aortic pathology may help decreasing the mortality of patients with type 1 acute aortic dissections.

PP-254 ASD REPAIR WITH MINI-RIGHT LATERAL THORACOTOMY IN A 17 YEAR OLD FEMALE PATIENT

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OBJECTIVE: Today depends on cosmetic concerns using of ministernotomy, miniright lateral thoracotomy, subxifoid incisions, parasternal incision within context of minimal invasive surgery is becoming widespread. repair of congenital heart defects is one of the most usage of these surgical incisions.

METHODS: 17 yasinda kadin hasta klinimize son 2 aydir olan eforla artan nefes darligi sikayeti ile basvurdu. Yapilan transtorasik ekokardiyografide interatriyal septumda yaklasik 2 santimetrelilik defekt saptandi. Qp/Qs sant orani 2.3 olarak bildirildi, pulmoner arter basinci hafif yuksek, sistolik 30 mmHg, olarak saptandi. Sag atriyumun genisleme oldugu rapor edildi. Hastanin yasi, cinsiyeti ve istegi dogrultusunda hastaya sag lateral torakotomi yontemi ile ASD onarimi planlandi.

RESULTS: Hastaya lateral torakotomi icin gerekli olan sol lateral dekubit pozisyonu verildi. Hasta cift lumenli endotrakeal tup ile entube edildi. Genel anestezi altinda ilk olarak femoral arteriyel kanulasyon yapildi, cilt insizyonu sag meme kivrimi altinda kalacak sekilde, 4-5. interkostal araliktan, anterior aksiler hatttan baslayarak postero-laterale dogru yaklasik 10 - 12 cm'lik sag lateral torakotomi insizyonu yapildi. Toraksa 4. interkostal araliktan girildi. Sag akciğer sonduruldu. Takiben, perikard acildi ve perikardiyal yama hazirlandi. Selektif olarak bi-kaval venoz kanulasyon yapildi. Kardiyopulmoner bypass'a (CPB) girildi ve aortik kros klemp konuldu. Antegrad kan kardiyopleji ve hipotermi ile arrest saglanarak total CPB'a gecildi. Sag atrium acildi, Fossa ovalis tipinde genis yaklasik 2-3 cm capinda ASD saptandi. Daha onceden hazirlanan perikardiyal yama ile ASD kapatildi. Aortik kros- klemp suresi 31 dakika idi. CPB suresi 45 dk surdu. CPB'dan sorunsuz cikildi. Hasta yogun bakimda bir gun kaldi ve postoperatif 4. gununde tam sifa ile taburcu edildi. Torakotomi insizyonu kozmetik olarak oldukca tatmin edici idi.

CONCLUSIONS: ASD genel olarak asemptomatiktir fakat gec donem komplikasyonlarinin morbidite ve mortalitesi yuksektir. Gunumuzde artan kozmetik kaygilar nedeniyle standart tedavi sekli olan median sternotomi ile onarim yerine giderek yayginlasan bir sekilde minitorakotomi, ministernotomi gibi minimal invaziv yaklasimlar giderek yayginlasmaktadir. Sag minitorakotomi yaklasimi ile es zamanli konjenital defektlerin yaninda eslik eden diger kapak patolojilerine de mudahale icin yeterli cerrahi alan saglanabildigi hem calismalarla hem de klinik deneyimlerle ortaya konmustur. Klinimizde bu yaklasim ile ozellikle onceden sternotomi ile acik kalp cerrahisi uygulanmis hastalarda sag torakotomi teknigini kullanarak mitral ve trikuspid kapak cerrahisi, post MI VSD onarim cerrahisini gerceklestirdigimizi bildirmistik. Bu vakamizda ise sag mini torakotomi ile basariyla yaptigimiz bir ASD onarimini sunmaktayiz. Son yayinlarda bu hastaliklarinin basarili bir sekilde tedavisinin yaninda hastanin memnuniyeti ve begenisinin de on planda

tutulmasi gerektiği vurgulanmaktadır. Bu vaka ile mini-torakotomi tekniginin basit, uygulanabilir, klinik ve kozmetik olarak tatmin edici olduğu soylenebilir.

PP-255 LUNG HERNIATION IN MINIMALLY INVASIVE CARDIAC AND TRANSPLANT SURGERY: A 10-YEAR EXPERIENCE

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OBJECTIVE: Lung hernia (LH) is a rare complication of minimally invasive cardiothoracic (MIC) surgical procedures. As MIC becomes more prevalent, the incidence of LH will likely also increase. The objective of this study is to review our experience in order to highlight the contemporary diagnosis and management of postoperative LH.

METHODS: A retrospective analysis of the Heart Center Database identified 25 cases of postoperative LH.

RESULTS: From 01/1999 to 08/2010, 21/6660 MIC patients and 4/114 lung transplant patients developed a postoperative LH and underwent surgical repair at our center. 94.7% of the patients were symptomatic, most commonly with a chest wall bulge (82.4 %) and chest pain (62.5%). Mean time from the index procedure was 17.2 ± 26.3 months (range: 0.0 - 88.6 months). The most common index procedures were MIDCAB operations (12 /1664, 0.7%) and right mini-thoracotomy valve operations (8/4396, 0.2%). Four occurred after lung transplantation (4/114, 3.5%). Diagnosis was made clinically and was verified by CT scan in 93,3%. Operative therapy consisted of simple chest wall layer reapproximation in 7, Vicryl-/Dacron-/GoreTex™ patches were used in 4, 4 and 10 patients, respectively. 30-day-mortality was 0.0%, and 3 patients (12.0%) developed recurrent LH at a mean follow-up time of 5.5 ± 1.1 months.

CONCLUSIONS: Lung hernia occurred in 0.3% of MIC patients at our center, similar to other reported series, and may occur late postoperatively. Once the diagnosis is confirmed, symptomatic patients should undergo prompt surgical repair, with liberal use of patch reconstruction of the chest wall to avoid recurrent herniation.

Current Ideas in Myocardial and Pericardial Diseases - Poster Presentations

PP-257 GIANT RIGHT ATRIAL MYXOMA LEADING TO CARDIAC ARREST IN AN INFANT

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OBJECTIVE: Herein we present 3 months old infant with giant right atrial myxoma obstructing tricuspid valve, who was hemodynamically deteriorated and operated emergently.

METHODS: 3-month-old girl was transferred from another center to our clinic for urgent cardiac operation.. In the echocardiography, there was a mass attached to the tricuspid annulus, neighbouring the septal leaflet with dimensions of 16,6 X 12,5 mm. The mass was prolapsing through the tricuspid valve and obstructing the inflow. The patient was taken to the operating room for urgent operation. While preparing for surgery, cardiac arrest occurred; hence the patient underwent emergent operation under cardiopulmonary resuscitation.

RESULTS: The mass was in close proximity with the septal leaflet and was protruding into the right ventricle via tricuspid leaflet which was subtotally obstructed. The mass was excised with limited perimeter in order to avoid any damage to the tricuspid valve and the conduction system. Histologically, the mass consisted of myxoid matrix where globoid and star shaped myxoma cells were scattered in. The patient stayed 15 days in the intensive care unit and was discharged home on postoperative 20th day.

CONCLUSIONS: Although accepted as a benign tumor, myxoma can display an aggressive clinical course in infants. In centers where cardiac operations cannot be performed, these patients need to be transferred to cardiac centers as soon as possible. Whatever the clinical presentation is, we advocate immediate surgical extirpation of the tumor in order to avoid any unpredictable consequences in its clinical course.

PP-258 EXTRAPERICARDIAL ASYMPTOMATIC THYMIC CYST IN AN ADULT

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OBJECTIVE: Congenital cysts include neuroenteric cysts, thyroglossal duct cysts and branchial cleft cysts(1). Thymic cysts are rare. Most of them are asymptomatic. Only 6% of cases are symptomatic

due to mediastinal invasion causing dysphagia, dyspnea, neck pain, stridor or rhonchus.

METHODS: A 31 years old male has attended to a center with elevated blood pressure and palpitation. Transthoracic echocardiography revealed 65% of ejection fraction, minimal mitral insufficiency, left ventricular hypertrophy and cystic collection between pulmonary artery and left ventricle. A large cystic lesion (8 x 5 cm) has been visualized on thorax CT. The physical examination was normal, without any special data on his medical history. A standart median sternotomy was performed and the cystic lesion with approximately 10 cm diameter has been located in upper mediastinum, attached to the phrenic nerve and anterolateral to the LV. It has been excised without opening the pericardium and the phrenic nerve has been kept intact. The postoperative course was uneventful.

RESULTS: The pathological examination resulted as unilocular thymic cyst. He was discharged on day 7 without any complications.

CONCLUSIONS: Thymic cysts are rare tumors of the neck. Preoperative diagnosis of those masses is incidental and they can be confused with other tumors of the neck(2). Computed tomography or magnetic resonance imaging are useful tools for the diagnosis. Surgical treatment is necessary to make the exact diagnosis and resolve the symptoms. Clinical prognosis is well. Our case was an adult and asymptomatic patient, which is a rarity.

PP-262 SURGICAL TREATMENT OF RIGHT VENTRICULAR HYDATIC CYST

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OBJECTIVE: Hydatid cyst is a serious endemic parasitic disease found in cattle raising areas of the world. Cardiac hydatid cysts are rare and appear 0.5-2 %. The larva of echinococcus granulosus causes the disease in humans. The first description of cardiac hydatid disease was given in 1846 by Griesinger. Artucio and colleagues reported the treatment of the first case of cardiac hydatid cyst with open heart surgery in 1962. Cysts are located commonly in the left ventricle (55-60%), followed by the right ventricle (15%), the interventricular septum (7-9%), the left atrium (8%), the right atrium (3-4%) and the pulmonary artery (7%).

CASE: A 24-year-old male who had chest pain was admitted to the outpatient clinic. During his physical examination a 2/6 systolic murmur was described. Moderate regurgitation of the tricuspid valve and a 4 x 4 x 3 cm cystic mass in the lateral wall of the right ventricular were seen in transthoracic echocardiography. CT and MRI were performed and they confirmed the diagnosis of a 4x4x3 cm multiseptal cystic tissue in the lateral wall of the right ventricular. No other cysts were found in any other organs. Open-heart surgery was performed on cardiopulmonary bypass with bicaval venous cannulation. A cross clamp was performed on the

ascending aorta and main pulmonary artery. A Hypertonic saline solution (20%) was injected into the cyst cavity. After the right ventriculotomy, all the cyst materials, including about 38-41 daughter cysts (4mm to 22mm dimensions), and the membranes were removed, and the cavity was irrigated with 20% hypertonic saline solutions. right ventriculotomy was closed. Histopathology analyses confirmed a hydatid cyst.

RESULTS: The postoperative period was uneventful and at 2 months follow up, the patient takes 15mg/kg of albendazole.

CONCLUSIONS: The incidence of hydatid disease has been reported as 3,4 cases in 100,000 people in Turkey. The diagnosis is difficult because of the long latency between infection and the manifestation of the disease and because symptoms are nonspecific. Early surgery for cardiac hydatid disease is safe and the results are satisfactory.

PP-263 RIGHT VENTRICULAR VEGETATION WITH BEHCET'S SYNDROME

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OBJECTIVE: Behcet's disease is a chronic multisystemic inflammatory disorder presenting with recurrent oral aphthous, genital ulcers and uveitis. Vascular lesions seem frequently but cardiac involvement is rare. Many of cardiac involvements are thrombus and intracardiac vegetation is an extremely rare and serious manifestation.

CASE: A 24-year-old man who was followed with behcet's syndrome for 5 years admitted the hospital with dsypne and fever. Antibiotherapy was begun. Transthoracic and transesophageal echocardiography and magnetic resonance imaging revealed a high mobile mass in right ventricular apex. The patient operated on cardiopulmonary bypass using aortic and main pulmonary artery clamping to avoid pulmonary artery embolism. Right atriotomy performed and right ventricular mass excised through tricuspid valve. Histopathology analyses showed endocarditis. The post operative period was uneventful. The patient had taken warfarin since the histopathological analysis showed vegetation cause of other literatures suggests avoiding recurrence of thrombus. We continued to give large spectrum antibiotics to patient. Fever never watched on postoperative period.

RESULTS: Postoperative period was uneventful and at 3 months follow up.

CONCLUSIONS: Cardivascular involvement in Behcet's Disease is seen as 0,62- 29%. Our patient had a large vegetation in the right ventricle. We suggest that cardiac vegetation is an extremely rare

fatal complication and should be treated by surgery immediately that have Behcet's syndrome.

PP-264 LEFT ATRIAL MYXOMA ASSOCIATED WITH CARNEY SYNDROME – SURGICAL TREATMENT IN A NEWLY ESTABLISHED CARDIOVASCULAR CENTER

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OBJECTIVE: Carney Syndrome (CS) is an autosomal dominant multiple neoplasia syndrome that includes cardiac, endocrine, cutaneous and neural tumors. Although the age at presentation may vary, CS is usually diagnosed at young patients. In this case report, we present a middle aged female patient operated with the diagnosis of large left atrial myxoma associated with CS.

METHODS: Forty six years old female patient was admitted to our clinic with palpitation, cough and exertional dyspnea. Physical examination revealed pigmented lesions especially scattered in the neck, chest and extremities. Thyroid gland was mildly enlarged. A mild-moderate diastolic left sided murmur was notable. She had been followed up with fibroadenomas located at the upper quadrant of right breast. Echocardiography revealed a left atrial mass of 6x4 cm. originating from interatrial septum that was protruding into left ventricle during diastole. Peak pulmonary artery pressure was measured to be 65mmHg that was accompanied with mild to moderate tricuspid regurgitation. Biochemical and hormonal parameters were within normal limits except mildly elevated hepatic enzymes. The patient was operated with the diagnosis of left atrial myxoma. Following aortic and bicaval cannulation, cardiopulmonary bypass was established. Under mild hypothermia, aorta was cross clamped and the heart was arrested with cold blood cardioplegia. Left atriotomy was performed. Large encapsulated and soft lobulated left atrial myxoma with the size of 6x4 cm was attached to interatrial septum with a broad base. The tumor was excised from interatrial septum with its pedicle. The defect in the interatrial septum was primarily sutured. Weaning from cardiopulmonary bypass was uneventful. Pathological examination confirmed the diagnosis of myxoma. Postoperative echocardiography revealed mild tricuspid regurgitation with a peak pulmonary artery pressure of 30mmHg. The patient was discharged at the fifth postoperative day without any complication.

RESULTS: CS is a complex genetical neoplasia syndrome with various components related to different organ systems. Different clinical properties are well known but diagnostic criteria are poorly defined due to large variety of these manifestations. Cardiac myxoma is a corner stone of this disease since cardiac manifestations and related complications account for majority of the mortality seen in the course of CS.

CONCLUSIONS: In this case, we present a middle aged patient with left atrial myxoma associated with concomitant clinical manifestations which are components of CS - pigmented skin lesions and fibroadenomas of the breast. The patient was

successfully treated in our newly established cardiovascular center.

Figure 1



Left atrial myxoma after resection.

PP-267 HUGE PRIMARY RHABDOMYOSARCOMA OF THE LEFT ATRIUM EXTENDING INTO THE LEFT VENTRICLE AND THE LEFT UPPER PULMONARY VEIN

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OBJECTIVE: Primary malignant neoplasms of the heart are rare and the rhabdomyosarcoma accounts for only about %20 of all these lesions. A case of an 82 Y/O female whom presented with the chief complain of progressive dyspnoea, palpitation and atrial fibrillation with the clinical diagnosis of severe mitral stenosis with of which transthoracic echocardiography showed a huge Left atrial mass projected into the left ventricle with severe mitral stenosis.

METHODS: An emergency operation was taken place with of which complete resection of the left atrial mass extending into the left ventricle and the left upper pulmonary vein (huge tumor, 11-8-5 cm) was done with replacement of the mitral valve consequently.

RESULTS: Histopathology has proven that such tumor was a primary cardiac rhabdomyosarcoma. The patient was extubated in 18 hours post-op. and IABP was taken out in 48 hours post-operatively and discharged from hospital in two weeks time. So far after one year the patient is doing well with slight dyspnoea.

CONCLUSIONS: Most of the cardiac tumors are primary and benign. Malignant neoplasm constitutes about %25 of all primary cardiac tumors, nearly all are sarcomas, and of these rhabdomyosarcoma make up almost %20, which are very aggressive and cause acute cardiac failure, that's why needs emergent cardiac operation. Although survival of up to 5 years has been reported, but prognosis is very poor, so far our 82 Y/O female patient is doing well with one year post operation.

PP-270 OUR CLINICAL EXPERIENCE IN INTRACARDIAC MASSES

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OBJECTIVE: We report our clinical experience with 93 patients who underwent open heart surgery for intracardiac masses in 14 years.

METHODS: Between January 1996 and November 2010, 93 patients have undergone excision of intracardiac mass. There were 54 female (58.1%), 39 male (42%) patients with a mean age of 45 (range, 13 to 77 years). The patients involved of atrial thrombosis, myxoma, ventricular thrombosis, vegetation, hydatid cyst were in 42 patients, in 16 patients, in 15 patients, in 12 patients, in 8 patients, respectively. Atrial thrombosis was placed at right atrium in 6 patients, at left atrium in 32 patients and at biatrium in 4 patients. Myxoma's location was placed at left atrium in 12 patients, and at right atrium in 4 patients. Vegetations location was placed at aortic valve in 6 patients, at left atrium in 3 patients, at right atrium in 3 patients. Hydatid cyst was placed at left ventricle in 4 patients, at right ventricle in 2 patients, at interventricular septum in one patient, and at pericardium in one patient.

RESULTS: Only one of the left ventricular cysts was recurrence. Three of the patients who had thrombosis died in the early postoperative period.

CONCLUSIONS: Surgical indication cause for the intracardiac masses has potentially lethal complications. Mass resection is generally safe, simple surgical procedure with excellent long term results.

PP-271 A CASE OF HYDATID CYST LOCALIZED AT THE LEFT VENTRICLE AND RIGHT SUPERIOR PULMONARY VEIN: CASE REPORT

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OBJECTIVE: Cardiac hydatid cyst is uncommon, but life threatening. Cardiac involvement occurs in only 0.5-2% of all hydatid infestations. In this case report, we present a case of hydatid cyst located at the left ventricular apex and in the left atrium adjacent to superior pulmonary vein orifice.

METHODS: A 38-years-old female with the symptoms of dyspnea, hemoptysis and atypical chest pain admitted to our institute. High resolution computed tomography revealed the cystic masses, 61x59 mm and 45x35 mm in diameter located in the left atrium and at the left ventricular apex, respectively. Following median sternotomy, arterial cannulation via ascending aorta and bicaval venous cannulation were done. Cardiopulmonary bypass was started and cardiac arrest was obtained by aortic cross clamp and cardioplegia. Access to the left atrium was obtained via interatrial approach after right atriotomy. The first hydatid cyst was located adjacent to and protruding into the orifice of right superior pulmonary vein. To prevent contamination, the cystic mass was sterilized with hypertonic sodium chloride solution and its content was aspirated through a needle puncture. The incision on the interatrial septum was extended towards to right superior pulmonary vein to be able to remove the cystic mass and germinative membrane en bloc. The incision in the interatrial septum was closed with primary over and over suture. The remaining defect extending from the left atrium into the right superior

pulmonary vein was closed with a dacron patch. The second hydatid cyst was adherent to the left ventricular apex. A left ventriculotomy was done and the cystic mass was removed along with the wall of ventricle apex. The remaining defect at the left ventricular apex was closed with linear patchplasty technique using teflon felt strips. The postoperative course of the patient was uneventfull.

RESULTS: The most common complication of cardiac hydatid cyst is rupture of the cyst which occurs between 24-60%. The risk of rupture may be determined by the localization of involvement. When possible, total enucleating of the cyst is the most ideal technique. However, fibrous capsule or cyst cavity may be interrelated with the adjacent myocardium and other cardiac tissues. Thus, fibrous capsule may not be removed easily and the size of the cyst may preclude cyst removal due to disruption of ventricular function, depending on the location.

CONCLUSIONS: Therefore, it's important to consider the localization, number and size of the cyst while planning surgical treatment.

PP-272 ASYMPTOMATIC, UNCOMMONLY LOCATED MASS IN RIGHT ATRIUM

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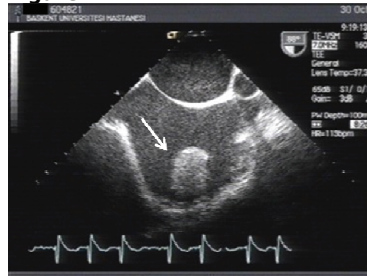
OBJECTIVE: Primary cardiac tumors are rarely seen. Atrial myxoma is the most commonly seen primary cardiac tumor (40-50%) (1). In autopsy series myxoma incidence is found 75 cases per 1000000 person (2). In 75% of cases originate from left atrium and generally from interatrial septum. Rest of them may originate from either right atrium or ventricles. We decided to share a case of asymptomatic, uncommonly located mass in right atrium, possibly myxoma.

RESULTS: 71 years of man was hospitalized by Neurology department with story of hospitalization due acute ischemic cerebrovascular event. He has atrial fibrillation with unknown duration. He was left hemiplegic and aphasic. He had no cardiac complaints. Patient was consulted to Cardiology department for source of ischemic stroke and regulation of medical treatment. He had atrial fibrillation at 110 per minute rate. Transesophageal echocardiography was taken and in left atrium 3+ spontaneous echocontrasting was detected and rolling-up thrombus was seen in left atrial appendix. In right atrium, a mobile mass was seen, 3,3x3,6 cm in diameters, hanging on right atrium free wall with a thin pedicule (Figure 1). According to its smooth surface and thin pedicule, this mass was thought as an asymptomatic possible right atrial myxoma hanging on free wall of right atrium, seen uncommonly in known literature.

CONCLUSIONS: Although myxomas are the most common primary cardiac tumors they are seen rarely in population. Half of patients come with constitutional symptoms such as fever, weight loss, fatigue due to IL-6 activity (3). Most of atrial myxomas are found in left atrium and a great proportion of them taking origin from interatrial septum. Right ventricle involvement for myxomas is 18 % and also most them originating from interatrial

septum again (4, 5). We decided to present our case because of right atrial free wall involvement and asymptomatic clinical presentation.

Figure-1



Bicaval image of transesophageal echocardiography: Echodense, smooth surfaced mass, possible myxoma, hanging on right atrial free wall. Interatrial septum is intact and no right-to-left shunt was detected with contrast echocardiography. Superior and inferior vena cava are clearly seen here and there was no obstruction.

PP-273 SPLENIC HYDATID CYST WHICH WAS DETECTED DURING CORONARY ANGIOGRAPHY

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OBJECTIVE: Hydatid disease is endemic in farming areas but occurs worldwide. The most common site of disease is the liver, followed by the lungs, kidney, bones and brain. Splenic involvement alone is very rare. In this article, a case of an isolated splenic hydatid cyst detected during coronary angiography is reported.

METHODS: A 51-year-old man was admitted to our clinic with atypical chest pain complaint. General physician examination revealed no abnormal findings. His 12-lead electrocardiogram and transthoracic two-dimensional echocardiography were normal. Chest radiography was normal. Exercise stress testing was positive. Selective coronary angiography revealed no significant lesions of coronary arteries. During coronary angiography, a mass of approximately 8x6 cm size, round, straight edge and calcific borders in the left upper quadrant of abdomen was seen by fluoroscopy. Abdominal ultrasonography revealed a mass with round calcification and internal cysts, 7,5x5,9 cm in diameter, in the spleen. Abdominal computed tomography (CT) showed a 7,7x 6,8 cm in size loculated cyst originating from the spleen. A CT scan of his chest did not show any cysts. We did not detect any other visceral localisation. Hemoglobin, a total leukocyte count and differentials were found to be within the normal range. The result of an indirect haemagglutination test for echinococcus was positive (1/5892). The patient was referred to general surgery for operation.

RESULTS: A splenic hydatid cyst should be treated surgically due to the high risk of a rupture, and the ideal procedure is standard splenectomy.

CONCLUSIONS: In conclusion, we emphasize that noncardiac calcific lesions which are detected accidentally during coronary angiography, mustn't be overlooked and must be evaluated in detail. Hydatid disease should be included in the differential

diagnosis of visceral calcific lesions in any tissue or organ.

PP-274 CARDIAC CYST HYDATID LOCATED IN THE INTERVENTRICULAR SEPTUM

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OBJECTIVE: Cardiac echinococcosis is not frequent, accounting for only 0.5% to 2% of all hydatid infestations. Cardiac hydatid cyst is a rare condition, and the location of a hydatid cyst in the interventricular septum is exceptionally rare. Involvement of the interventricular septum is reported in 5% to 9% of cardiac cases.

METHODS: We report the case of a 27-year-old man, who had a giant cardiac hydatid cyst located at the interventricular septum and bulging to the right ventricular outflow tract. The patient was admitted to hospital with the complaints of dyspnea and fatigue. At the operation we reached the cyst via an incision through the right ventricular outflow tract and interventricular septum, then sterilized it by injecting hypertonic saline solution into the cystic cavity. After an incision on myocardium of the interventricular septum we saw the cyst mass within the septum. After removal we closed the empty cystic space with pledgeted sutures by taking bites from the bottom of the cavity. Early postoperative period was totally normal without any cardiac disturbance and late postoperative controls revealed no recurrence at the site.

RESULTS: This rare occurrence may be a reason for preoperative and postoperative cardiac problems like blocks. These patients must be carefully evaluated by echocardiography for unusual sites of occurrence.

CONCLUSIONS: In conclusion, the treatment of hydatid cyst disease is surgical and should not be delayed. Gentle manipulation of the heart minimizes the risk of lethal complications, such as rupture and embolization.

PP-275 PAPILLARY FIBROELASTOMA OF THE SUBVALVULAR STRUCTURE OF THE MITRAL VALVE

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OBJECTIVE: Papillary fibroelastomas are relatively rare benign endocardial masses and generally originate from the cardiac valves. Although they are benign in nature, they can cause fatal conditions by systemic embolization. Most of the tumors originate from the left side of the heart especially from the aortic valve. Mitral valve involvement is less frequently seen.

METHODS: A 56 year old male patient with a history of stroke was admitted to our hospital. Transthoracic and transesophageal echocardiography revealed a mobile mass in the left ventricle beneath the posterior leaflet of the mitral valve near the

posteromedial commissure. The dimension of the tumor was 18 x 18 mm.

RESULTS: Patient was operated under cardiopulmonary bypass. We exposed the mitral valve via left atrium. The mass was found exactly where the echocardiography showed. We removed the entire tumor carefully. The mass was grey in color, semi-transparent and fragile in nature. We carefully inspected the exposed chambers to eliminate the multiple presence of the tumor.

CONCLUSIONS: Early and late postoperative periods were uneventful.

PP-276 THE FIRST CASE REPORT OF A METASTATIC MYXOID LIPOSARCOMA INVADING LEFT ATRIAL CAVITY AND PULMONARY VEIN

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Myxoid liposarcoma (MLS) is the most commonly encountered liposarcoma subgroup accounting for about 50% of all cases. Metastatic myxoid liposarcoma of the heart is extremely rare. Herein, we describe for the first time metastasis of myxoid liposarcoma to the left atrium and left upper pulmonary vein in a 54-year-old woman who was admitted with shortness of breath and cough of 2 weeks. The patient reported that a total surgical excision of MLS of left thigh followed by radiotherapy was performed 4 years ago. An emergency operation was performed due to rapidly progressive worsening of clinical condition and echocardiographic determination of left atrial mass protruding into the left ventricle and obstructing the mitral inflow throughout the diastole. The mass could not be totally excised, as it was tightly adhered to the surrounding tissue. Postoperative MRI showed a 5x3 cm residual tumor deforming the posterior wall of the left atrium entirely and extending into the left upper pulmonary vein. Histopathological examination was consistent with MLS. In conclusion, considering probable cardiac metastasis in patients presenting with respiratory symptoms with medical history of soft tissue sarcomas would be life saving.

Peripheral Arterial Disease: Medical and Surgical Options in Treatment Poster Presentations

PP-287 MANAGEMENT OF A LEFT MAIN CORONARY ARTERY DISEASE WITH BILATERAL TOTAL OCCLUSIONS OF INTERNAL CAROTID ARTERY: A CASE REPORT

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OBJECTIVE: Coexistence of carotid artery and coronary artery disease is one of the important pathologies encountered by cardiovascular surgeons. Bilateral total internal carotid artery (ICA) occlusion with severe left main coronary artery (LMCA) stenosis although rarely seen in these cases bears high morbidity and high mortality risk. In this case report a patient presenting with bilateral total ICA occlusion and severe LMCA stenosis with unstable angina pectoris was operated on an emergency basis.

METHODS: 59 years old male patient was diagnosed with acute coronary syndrome at the emergency. The blood test and ECG revealed coronary ischemia which warranted an emergency coronary angiogram. 90 % stenosis was observed at LMCA. 2 months before the patient had experienced a syncope and subsequent color doppler USG revealed total occlusion of bilateral ICA. Bilateral vertebral arteries were normal. The patient was asymptomatic and without sequelae in the presence of these carotid lesions. The patient was operated on an emergency basis and coronary artery bypass graft was performed under moderate hypothermic cardiopulmonary bypass. During the operation the mean arterial pressure was kept above 70 mmHg in order to protect cerebral perfusion.

RESULTS: Postoperative period was uncomplicated and without any neurological incident. The patient was discharged on postoperative seventh day.

CONCLUSIONS: Bilateral total ICA occlusion with coronary artery disease considered for surgery can be safely operated for coronary artery disease with optimal perioperative management.

PP-292 MANAGEMENT OF PERIPHERAL VASCULAR TRAUMA: OUR EXPERIENCE

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AIM: We aimed to analyse the causes of injury, presentations, surgical approaches, outcomes and complications of peripheral vascular trauma in our five years experience.

MATERIALS-METHODS: Between February 2005 and October 2010, 93 patients who were operated for peripheral vascular injuries at Cardiovascular Surgery Department of Ataturk University were observed retrospectively.

RESULTS: Eighty six (93%) of patients were male, 7 (7%) were female and their age ranged from 4 to 69 years (mean 30 years). The causes of injuries were; penetrating injuries in 43 patients (46%), gunshot

injuries in 35 patients (38%) and blunt trauma in 15 patients (16%). The lower limb vascular extremity trauma with 60 patients (65%) outnumbered the upper extremity trauma with 33 patients (35%). The vascular injury specific localizations in that order of frequency were femoral artery in 32 patients (34,4%), popliteal artery in 17 patients (18,2%), ulnar with radial arteries in 11 patients (12%), brachial artery in 10 patients (10,7%), tibial posterior artery in 5 patients (5,3%), axillary artery in 5 patients (5,3%), tibial posterior with tibial anterior artery in 4 patients (4,3%), radial artery in 4 patients (4,3%), ulnar artery in 2 patients (2,1%), tibial anterior artery in 1 patient (1%). Concomitant vein or nerve injury occurred in 34 patients (36,5%) and in 13 patients (13,9%) respectively. As the surgical procedure, in 18 patients (19,3%) primary suture, in 20 patients (21,5%) end to end anastomosis, in 43 patients (46%) otogenous v.saphena magna interposition, in 5 patients (5,3%) synthetic graft insertion, in 7 patients (7,5%) simple ligation were performed. Patients with fracture or dislocation of the extremity and severe soft tissue and muscle injuries were treated together with orthopedic and plastic surgeons. Therapeutic or prophylactic fasciotomy was performed in 11 patients (11%). Nine patients (9,6%) required revision procedures like embolectomies, revision of the anastomosis. Wound infections were seen in 5 patients (5,5%) who had severe soft tissue loss. Nine (9,6%) patients underwent amputation, 5 (5,5%) above knee and 4 (4,3%) above elbow. Six of them were the patients who had ischemia at the presentation and remained of them were the patients who infected by gas gangrene. Death was seen in the 5 patients (5,5%) who had hemorrhagic shock before operation and acute renal failure after operation. 79 (84%) patients were successfully treated by vascular reconstruction.

CONCLUSION: Peripheral vascular injuries may result from trauma to the extremities. If not recognized and treated rapidly, injuries to major vessels may have disastrous consequences resulting in the loss of life and limb.

PP-293 SPLENIC ARTERY ANEURYSM TREATED WITH SPLEEN PRESERVATIVE SURGICAL TECHNIQUE: CASE REPORT

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OBJECTIVE: Splenic artery aneurysm, although rare, is the most common pathology of visceral artery aneurysms. Diagnosis and treatment strategies of this pathology is important due to its asymptomaticity and tendency of rupture. We present, early results of a patient, presented to our department with splenic artery aneurysm and treated with spleen preservative surgery and discuss treatment modalities.

METHODS: A 55 year old male who had a splenic artery aneurysm by abdominal ultrasonography in another institution was presented to our department

with upper abdominal pain and nausea. Clinical examination was normal, but there was an aneurysm on splenic artery with the diameter of 30x32 mm on abdominal ultrasonography. Magnetic resonance angiography revealed the same aneurysm located on the mid portion of the pancreas with the diameter of 33x36 mm. After the other preoperative evaluation, we elected to undertake open surgery. We approached the aneurysm from transverse mesocolon and lesser omentum with median laparotomy. The aneurysm was saccular, embedded in pancreas with partial adhesion and located in the mid portion of splenic artery. Aneurysm was resected and splenic arterial flow was reconstructed with interposition. The patient was discharged on the 7th post operative day. The graft found occluded on computerized tomography revealed on post operative first month follow up but the spleen found viable and its blood flow was reconstructed via collaterals.

CONCLUSIONS: The management of splenic artery aneurysm continue to be controversial. Surgical procedures are safe and feasible technique as an elective treatment of splenic artery aneurysm especially with symptomatic cases, suspicious of tendency of rupture and the diameter of more than 2 cm whether symptomatic or not. Surgical procedures include aneurysmectomy, aneurysmectomy with reconstruction, or ligation distal and proximal to aneurysm without splenectomy. It is believed that splenic viability can be continued with collateral blood flow and we think that our case has proved this hypothesis. In literature, spleen preserved surgery is suggested and splenectomy is avoided in order to preserve immune function. We suggested to select open surgical repair in complex cases. Splenic blood flow can be maintain with rich collateral circulations but we recommend to try reconstruction or bypass for blood flow, become a chance to patient even it seems unnecessary.

PP-294 ULNAR ARTERY ANEURYSM

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OBJECTIVE: Ulnar artery aneurysms are one of the very rare syndromes among cardiovascular disorders. The cause is usually continuous intermittent trauma. Pathology should be treated immediately when diagnosed otherwise finger loss may ensue due to distal embolisms.

METHODS: A 52-year-old male patient presented to the clinic with a bulging mass in his right palm. The lesion has long been present and did not cause any symptoms; however, enlarged gradually in the recent 6 months. He did not indicate a history of trauma to the region. Physical examination revealed a 2x3 cm in diameter, compressible, pulsatile mass

at the hypothenar eminence. Ulnar artery aneurysm was detected with doppler ultrasonography. Magnetic resonance angiography of the hand showed that the aneurysm was confined to the ulnar artery but the digital arteries were at the vicinity.

RESULTS: A longitudinal incision on the hypothenar eminence over the aneurysm was performed with local anesthesia. The ulnar artery was prepared and controlled proximally and distal to the aneurysm. The aneurysm was freed from the surrounding tissues. An appropriate length cephalic vein segment was harvested. The aneurysm was resected and the cephalic vein was interposed between the proximal and distal segments of the ulnar artery. Postoperative course was uneventful and the patient was discharged after 3 days. He has been symptom free for more than 5 months.

CONCLUSIONS: Ulnar artery aneurysms are rare vascular malformations occurring usually secondary to continuous blunt trauma and may cause digital ischemia; hence, requires rapid intervention by aneurysm exclusion and distal blood supply. This report presents an idiopathic case of giant ulnar artery aneurysms which was treated before the pathology led to hypothenar hammer syndrome by aneurysm resection and vein graft interposition.

PP-295 ILIAC ARTERY INJURY DURING LUMBAR DISC SURGERY: REPORT OF TWO CASES

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OBJECTIVE: Abdominal vascular injury related to lumbar disc operation is a rare but generally fatal condition. Excessive bleeding and hypotension should alert the surgeon about vascular injury. In this study, we present two cases who underwent surgical treatment of iliac artery injuries that had developed during lumbar disc surgery.

METHODS: Case 1: A 37-year-old female patient underwent a lumbar disc surgery. During the discectomy, disc material was removed from the disc space through the disc forceps, followed by pulsatile hemorrhage. The patient was turned from prone position to supine position and abdominal exploration was carried out. Injury was detected in the left common iliac artery. The injury was repaired using Dacron graft with end-to-end anastomosis. Case 2: A 45-year-old female patient was hospitalized in our clinic with the complaint of pain in his waist and left leg. During the lumbar spinal surgery, a pulsatile hemorrhage was observed from the disc space. The patient was turned from prone position to supine position and abdominal exploration was carried out. Perforation was observed in the left common iliac artery. The artery was repaired with primary end-to-end anastomosis.

RESULTS: In postoperative stage, the patients were followed up in the intensive care unit. Vital findings and the haemodynamic parameters were stable in the postoperative follow up and the patients were discharged. The patients were referred to our clinic for control one month later and they had no complications.

CONCLUSIONS: Abdominal vascular injury is one of the most fatal complications that may develop during lumbar disc surgery. Mortality is related to the size of the injured vessel, the size and location of the laceration, and the time required to control the bleeding. The most commonly injured artery reported in the literature is the left common iliac artery, which lies anterior to the L4-L5 vertebral disc. In our cases, left common iliac artery was injured. The hypotension during the operation, tachycardia and pulsatile hemorrhage observed in the disc space are the major findings. In our cases, pulsatile hemorrhage was the first finding. In conclusion that, intraabdominal vascular damage that develops during lumbar disc surgery must be detected as early as possible and the necessary treatment should be administered.

PP-296 WHAT SHOULD BE DONE IF THERE IS CORONARY ARTERY DISORDER IN RUPTURED ABDOMINAL AORTIC ANEURYSM ?

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OBJECTIVE: Abdominal aortic aneurysm (AAA) forms the most common type of aneurismal diseases. Generally, it is asymptomatic and when it is ruptured, it develops with high morbidity and mortality.

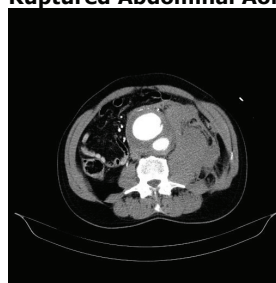
METHODS: A 62-year-old male patient consulted our emergency with a pain at his dorsum and lumbar part. The patient's blood pressure was 55- 30 mmHg. With a suspicion of coronary artery disorder or dissection, coronary angiography was executed. Coronary artery disease were detected. An aneurysm was detected in USG. Contrasty thoracoabdominal tomography (CT) was demanded. In the tomography, a 7-cm-diameter ruptured abdominal aortic aneurysm was diagnosed. Under the support of Levosimendan, abdomen was opened with median laparotomy and it was detected that the aneurysm was ruptured from left back side. A Y graft operation was carried out from aorta to the bilateral iliac arteries by implementing a surgical clamp from the region below the kidney to the aorta.

RESULTS: The patient's overall condition was preshut and his hemodynamic wasn't stable, the operation was ended up with Levosimendan support considering that coronary bypass would increase mortality and morbidity. Because heparin usage was increased operation time. He didn't experience hemodynamic problem during his tracing. 5 days after his operation, a pneumonia infection was added. The patient whose overall condition improved thanks to the suggestions of Thoracic medicine and infection was discharged healthily 18 days after the operation.

CONCLUSIONS: Abdominal aortic aneurysm is a clinical condition which improves silently and develops with high mortality when ruptured. Approximately 50% of the ruptured aneurysms are lost before they reach hospital while the 30-70% operated ones are lost within 30 days after operation. (1) Many studies have indicated a

significant unity between aneurysm and atherosclerosis. (2,3,4). Most patients don't have the opportunity to have additional examinations like coronary angio or etc. What should be done if coronary arteries disorder is detected in the patient ruptured and bypass is necessary? Does subsequent coronary bypass operation increase morbidity and mortality? The existence of coronary artery disorder is an important factor to determine preoperative mortality. In our case, the patient have requiring coronary bypass surgery. So circumvent this problem we prefer to use levosimendan. Levosimendan have cytoprotective vasodilator properties. We avoided to use heparin requiring procedures because of our belief that heparin usage increases the bleeding. As a result of our case we thought that while repairing the abdominal aortic aneurysm the other comorbidities must be treated with medically.

Ruptured Abdominal Aortic Aneurysm



PP-297 MOTOR AND SENSORY NERVE CONDUCTION STUDIES IN RAYNAUD'S PHENOMENON

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INTRODUCTION: Raynaud's phenomenon (RF) is a disorder characterized by vasoconstriction of hand and foot blood vessels. The reason of the attacks in the majority of patients is exposure to cold or emotional stress. Subclinical sensory nerve involvement in RF has been shown in a few studies. In this study we examined electrophysiologically the presence of subclinical nerve involvement, and whether is affected with treatment.

MATERIALS-METHODS: 20 young male with idiopathic RF in both upper limbs were included in the study. patients were diagnosed. All patients received supportive treatment (protection from the cold, reduction of emotional stress) and the calcium channel blocker therapy. Two months after the therapy bilateral upper extremity motor and sensory nerve conduction studies were performed.

RESULTS: A decrease of the median nerve sensory nerve conduction velocity and slightly prolonged distal motor latency in median nerve was found in 3 of 20 RF patients. After the treatment, improvement was observed in the electrophysiological findings.

CONCLUSION: Our findings indicate that carpal tunnel syndrome may be present in RF patients even if a lower rate, and this situation improves after treatment. The presence of electrophysiological

findings without clinical findings may be related with vasomotor fibers affected in the carpal tunnel.

PP-298 ACUTE ARTERIAL OCCLUSION OF LOWER LIMB FOLLOWING EVAR: A CASE REPORT

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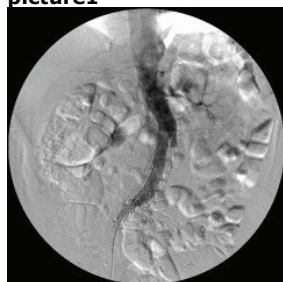
OBJECTIVE: Acute arterial occlusion due to insufficient or loss of blood flow to the limbs. This situation can lead to loss of extremity and life. We present a case of graft limb occlusion after EVAR, unresponsive to endovascular re-intervention requiring surgical extra-anatomic revascularization, due to graft kinking or thrombosis.

METHODS: 70-year-old male patient with sudden onset, involving the left lower extremity presented with severe pain and numbness. The left foot had a cold and pale. Acute arterial occlusion was considered.

RESULTS: Routine laboratory tests were normal except doppler ultrasound. Doppler examination of the distal left iliac artery and common femoral artery showed acute thrombus. Emergency operation was decided and patient was taken to the operating room. After conventional preoperative preparation was performed through a left femoral incision. Common femoral artery opened and the thromboembolectomy was performed. Adequate flow was not satisfied. Operation was terminated to perform angiography examination. Its showed that graft limb kinking and thrombosis. Thenafter. Extra-anatomic revascularization (femorofemoral bypass) was performed. The postoperative course was uneventful. The patient was discharged on the sixth postoperative day without any complication.

CONCLUSIONS: EVAR has become a first choice for many patients with AAA due to proven reduced early morbidity and mortality. However, EVAR has a higher secondary intervention rate than surgery. Acute graft limb occlusion is a relatively common complication and occurs after bifurcated stent grafting in 3.1–3.7% of cases. This case demonstrated the importance of careful preoperative evaluation. At the same time the need for close follow-up after evar.

picture1



PP-299 RAYNAUD PHENOMENON IN EDİRNE

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OBJECTIVE: Raynaud phenomenon is a vasospastic disorder which presents itself with relapses of colour changes, pain and sensory disorders typically when exposed to cold and emotional stress, affecting the capillaries of usually upper extremities and rarely lower extremities symetrically. Episodic digital ischemia is a characteristic clinical manifestation. The main ethiological factor developing Raynaud phenomenon was unknown. We analyzed the patients refer to our clinic as seasonal properties.

METHODS: Between January 2005 – December 2010, 149 cases with raynaud phenomenon were reviewed retrospectively. There were 113 females (75.83%) and 36 males (24.17%).

RESULTS: Medical treatment was held to 72 patients with short-term vasodilator drugs and effective upon to blood viscosity. Infusion of pentoxifylline was given to 12 patients, because of the pain, numbness and severe cyanosis of the hands. Ilioprost infusion was administered to 4 patients because of inefficient treatment with pentoxifylline.

CONCLUSIONS: Raynaud's phenomenon can occur primarily or secondary to an underlying disease. Symptoms are related to the duration, frequency, and severity of vascular spasm. Underlying connective tissue diseases such as scleroderma and such as ergotamine and beta-blocker usage should be investigated when Raynaud's phenomenon was suspected. It is easy to diagnose when the characteristic skin color change (white, blue-purple, red) appear during the vazospastic attack. Cold-hot-water test or the determination of basal skin temperature, (especially initial measurement is low) are valuable tests for the diagnosis of Raynaud's phenomenon. The goal of treatment is to reduce the number and severity of attacks and tissue damage to prevent the loss of fingers. Conservative and supportive therapy is often applied to patients with Raynaud's phenomenon. Preservation of body temperature, use of gloves and socks, smoking cessation, emotional stress reduction and exercise are the basis of supportive treatment. Calcium channel blockers are preferred drugs for patients with persistent and disturbing symptoms. Thoracic or digital sympathectomy can be an alternative treatment method for Raynaud's phenomenon patients with severe symptoms and ulceration. Nowadays, studies of various pharmacologic agents such as nitric oxide, iloprost, losartan, fluoxetine are performed.

PP-300 REPAIR OF RADIAL ARTERY WITH AUTOGENOUS CEPHALIC VEIN GRAFT INTERPOSITION AFTER CLOSURE OF ARTERIOVENOUS FISTULA IN A YOUNG RENAL TRANSPLANTATION PATIENT

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OBJECTIVE: The autogenous arteriovenous fistula (AVF) at the wrist is considered to be the best choice

of vascular access in haemodialysis (HD) patients. Following renal transplantation, there is no consensus about the fate of the AVF. Although the AVF may close spontaneously, the dilemma is whether to preserve the vascular access in case of restarting HD or perform a surgical closure concerning the possible complications. In this case, we present a young renal transplantation patient who underwent closure of radiocephalic side to side AVF and autologous fistula vein interposition for the reconstruction of radial artery continuity.

METHODS: 28 years old patient had been operated for left radiocephalic side to side AVF formation three years before renal transplantation. Six months after transplantation, she was admitted to our clinic with swelling and cyanosis of the left hand. The AVF had not been used after transplantation. There was palpable thrill and aneurysm formation at the site of anastomosis. Left ulnar artery was palpable, but radial artery distal to the AVF was not. The patient was operated under local anesthesia, the aneurysm was resected and the AVF was closed. Radial artery segment incorporated in the anastomosis zone was stenotic without distal run off. A stenotic segment of 3cm size was resected and back flow at the wrist level was detected. Cephalic vein segment that was previously used in AVF formation was interposed between the proximal and distal radial artery. Distal radial artery was palpable after the anastomosis was completed. Postoperative course was uneventful. Distal radial artery was palpable at follow up one month after operation.

RESULTS: In this case of AVF closure after renal transplantation, although ulnar artery was well functioning, stenotic radial artery segment which was incorporated in the anastomosis was resected and arterial continuity was provided with autologous fistula vein interposition.

CONCLUSIONS: Cardiac failure, high flow at the AVF, vascular access complications and aesthetic reasons can be considered to be major indications for AVF closure after renal transplantation with a well functioning kidney. Providing the dual arterial continuity of the hand is important especially in young patients.

Difficult Situations in PCI - Poster Presentations

PP-303 ACUTE SUBARACHNOID HEMORRHAGE TRIGGERED BY CLOPIDOGREL

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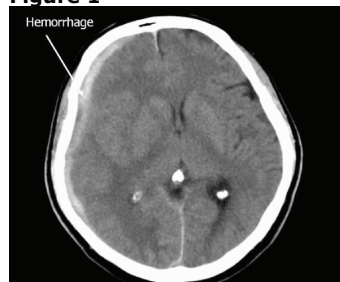
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OBJECTIVE: The clopidogrel is platelet P2Y₁₂ receptor antagonists that irreversibly inhibits adenosine diphosphate (ADP)-induced platelet aggregation. Aspirin and clopidogrel combination therapy has been shown to have synergistic antiplatelet effect and has become standard treatment for the prevention of ischemic events in

patients with ACS and in those undergoing PCI. On the other hand, the incidence of bleeding complications is higher in patients given dual antiplatelet therapy than in those given aspirin monotherapy.

CASE: 60 years old male patient was admitted to our emergency department with complaints of headache. He had infero-posterior myocardial infarction 20 days before and bare metal stents were inserted for left anterior descending and circumflex coronary artery. Aspirin 300 mg/day and clopidogrel 75mg/day were prescribed. There wasn't bleeding diathesis. There was no evidence of any trauma patient's physical examination. Neurological examination of the deficit was not determined. Blood pressure: 145/95 mm Hg, heart rate: 66 beats / min, were rhythmic. Laboratory findings of decreased hemoglobin (10.2 g / dl) was normal except for an additional Laboratory findings was normal except for decreased haemoglobin (10.2 g / dl).. Ejection fraction 55% and inferior wall hypokinesia were detected in transthoracic echocardiography. Brain computed tomography (CT) was detected subdural hemorrhage at right parietal area. The patient was admitted to the neurosurgery service and operated with a diagnosis of acute subarachnoid hemorrhage. The patient was discharged one week after operation. Clopidogrel 75 mg / day, metoprolol 50 mg / day, ramipril 5 mg / day, statins, 20 mg / day were prescribed for treatment.

Figure 1



PP-305 CORONARY STENT EMBOLIZATION INTO RIGHT DEEP FEMORAL ARTERY DURING CORONARY STENTING

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OBJECTIVE: Specifically, with the technical advances in stent implantation, the incidence of complications, such as acute coronary occlusion or re-stenosis has been reduced, which has led to a sharp increase in the frequency of stent use. One of these complications is the dislocation of the stent from carrier system before deployment and cause systemic embolism.

METHODS: In this report we present our experience with such a complication which was successfully treated with surgical intervention.

RESULTS: 59-years old male patient referred to our emergency unit with the complaint of chest pain. The patient whom had a history of diabetes mellitus for 15 years was diagnosed as acute coronary syndrome

and a coronary angiography was planned. %50-60 obstruction in circumflex artery was detected and coronary stenting was performed. During intervention stent was not seen at carrier system. Stent was not in coronary arteries and femoral angiography revealed stent in deep femoral artery. Distal end of the stent was corrupted. It was planned to removed with the use of micro-snare and with the help of micro-snare it was pulled up to left femoral artery. Since its structure was corrupted it was not possible to take it out from the sheath. It was decided to be taken out by surgical intervention for not to harm artery. Under local anaesthesia femoral sheath was taken out and arteriotomy was performed. Tip of the stent was seen to be coming out of arteriotomy and it was pulled out with a clamp. Femoral artery was repaired. Distal pulses were completely palpable postoperatively. Patient was discharged on the second day postoperatively and 1 week follow up examination was normal.

CONCLUSIONS: Stent embolism during interventional procedures can be successfully treated with surgical intervention.

Transcatheter and Surgical Aortic Interventions - Poster Presentations

PP-306 ENDOVASCULAR APPROACH OF RUPTURED DESCENDING AORTIC ANEURYSM WITH BEHCET DISEASE: CASE REPORT

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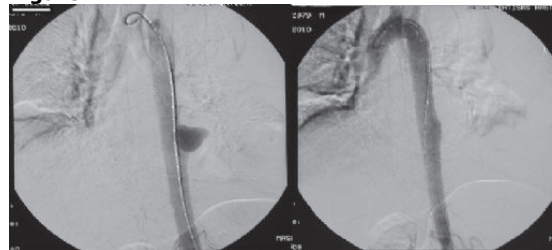
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OBJECTIVE: A case of ruptured descending aortic aneurysm in a patient of Behcet's disease treated by endovascular approach is described.

METHODS: A 32 year-old male patient previously diagnosed of Behcet's disease was admitted to our hospital in a state of hypovolemic shock. Computed tomographic angiography revealed a ruptured descending thoracic saccular aneurysm. The patient was immediately taken to the angiography laboratory and a stent-graft was applied to the ruptured segment via femoral approach (Figure 1). Following this, a left thoracic drainage tube was applied. At the follow-up period in the intensive care unit massive bleeding occured occupying the entire left thoracic cavity. Hence the pulmonary functions deteriorated. The patient was operated on via left thoracotomy and a type 2 endoleak from the ruptured segment was detected. A Dacron patch was sutured to the non-diseased aortic wall and slightly to the graft material covering the aneurysm sac. Also related intercostal arteries lying nearby were clipped. Postoperative period was uneventful. The patient was discharged with immunosuppressive treatment.

CONCLUSIONS: Arterial aneurysms are common and may be complicated in Behcet's disease. Endovascular stent-graft repair of thoracic aorta is an alternative management option in complicated aortic aneurysms and in high-risk patients.

Figure 1



Digital subtraction angiographic images before and after procedure

PP-307 THORACIC ENDOVASCULAR AORTIC ANEURYSM REPAIR UNDER LOCAL ANESTHESIA IN A HIGH RISK PATIENT

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OBJECTIVE: Thoracic endovascular aortic repair has emerged as an alternative for patients at prohibitive risk for open thoracic or thoracoabdominal surgery, decreasing perioperative morbidity and mortality. Decompensated heart failure, chronic renal failure are main high risk factors for the operative treatment of aortic aneurysms. General anesthesia is also significant risk factors for these patient group. Here we present a patient who has high risk for general anesthesia with a giant saccular thoracic aneurysm.

CASE: The patient was 61-year-old woman with previous mitral valve replacement and coronary bypass surgery. She also has an arteriovenous fistula for hemodialysis at her left arm for treatment of chronic renal failure. She admitted to the hospital with severe dispnea and fatigue. Thoracic computed tomography-scan showed a giant saccular aortic aneurysm beginning at the origin of the left subclavian artery. Echocardiographic study revealed low ejection fraction of 35% and severe paravalvular mitral valve leakage with elevated pulmonary artery pressure. The decision for treatment was TEVAR with local anesthesia and sedation due to high risk factors. The procedure took place at the catheter room with continuous arterial pressure monitoring. Endovascular stent graft deployed at the origin of the left subclavian artery through the end of the aneurysm. The origin of the left subclavian artery was closed with the stent, to prevent endoleak, a vascular plug was deployed in the subclavian artery trough brachial artery catheterization. On the follow up no evidence of the ischemia occurred at the left arm.

CONCLUSIONS: Thoracic endovascular aortic repair with stent graft is a safer and effective alternative to open surgical repair for the treatment of anatomically suitable descending thoracic aortic aneurysms. General anesthesia on high risk patients with severe heart failure, and renal failure is important with high mortality. Even the general anesthesia is the best option during the thoracic endovascular procedures, we preferred local anesthesia and sedation because

of the risk factors. Thoracic endovascular aortic repair with local anesthesia and sedation and percutaneous closure of femoral arteries has a low incidence of early and late complications.

PP-309 ENDOVASCULAR TREATMENT OF TRAUMATIC VASCULAR INJURIES; EARLY INTERVENTION IMPROVES OUTCOME

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OBJECTIVE: Life threatening tissue and extremity damage may occur due to blunt and penetrating injuries. Due to multisystem injury, delay in the diagnosis or intervention may complicate with occurrence of complex pathologies which may require more invasive surgical procedures with increased mortality and morbidity. This study reports midterm outcome data of early intervention for endovascular treatment of patients with traumatic vascular injury.

METHODS: Vascular pathologies were investigated in the early admission period in all gunshot injuries and suspected penetrating/ blunt injuries in a cardiovascular surgery department of a military hospital between 2007 and 2010. After angiographic examination vascular injury was detected and endovascular treatment was performed in 10 patients. All cases were male and mean age was 25±4. Vascular injuries were due to penetrating injury in 3 case, gunshot injury in 6 cases and blunt trauma in 1 case. Diagnosis of the patients were pseudoaneurysm in 6 cases (2 of which associated with arteriovenous fistula), rupture in 3 cases and axillary artery-to-bronchial fistula in 1 case.

RESULTS: We performed coil embolisation in for the treatment of rupture and stent graft deployment in the treatment of pseudoaneurysm and arteriovenous or artery-to-bronchial fistula under local anesthesia. There was no need for blood transfusion in perioperative period. Symptoms related to vascular injury disappeared in postoperative 3 days in all patients. Eight of 10 patients discharged from the hospital in postoperative 5th days. Two patients who had tibial fracture and dropped leg were transferred to the orthopedy and neurosurgery services. All cases examined with color-Doppler USG in 3 and 12 months. There wasn't any signs of extravasation, stenosis or ischemia in the follow-up period.

CONCLUSIONS: Missed vascular traumatic or gunshot injuries may lead to more complex vascular pathologies and extremity dysfunction in the long term. Diagnosis and repair with endovascular technique when performed at the early period can be accomplished with less blood transfusions, shorter intensive care and hospital stays and low mortality.

PP-310 ENDOLUMINAL TREATMENT OF CO-EXISTING DISTAL AORTIC ARCH AND JUXTARENAL AORTIC ANEURYSMS WITH TWO SIMULTANEOUS EXTRAANATOMIC BYPASS

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OBJECTIVE: Co-existing thoracic and abdominal aortic aneurysms remain a challenging problem for even well experienced physicians although these multilevel aortic aneurysms present in a very small group of patients. Endoluminal approach that aims to exclude the aneurysmal sac from the high pressure blood flow provides an safe and comfortable alternative treatment modality for high risk patients.

METHODS: We report the case of an 67 years old female patient who admitted to hospital with dyspnea on exertion and abdominal discomfort. Thoracoabdominal computed tomography revealed aneurysmal dilatation of distal aortic arch and juxtarenal aortic aneurysm. After a careful consideration of comorbidities, we decided on endoluminal treatment of the aneurysms, despite the conical shape of abdominal aortic aneurysm with a very short neck (41mm). In order to prevent the ischemia of spinal chord, the patient underwent a succesfull caroticosubclavian bypass followed by implantation of thoracal endograft which overlapped left subclavian artery. After the first part of the operation an aorto uniiliac stent graft with suprarenal fixation feature and anchoring pins was implanted on a very short landing zone. A crossfemorofemoral extranatomic bypass was has been carried out for perfusion of the other limb. After an uneventful postoperative period the patient was discharged on the 7.th day.

RESULTS: The coexistence of thoracal and abdominal aortic aneurysms carries a very high risk with significantly serious comorbidities. The repair of synchronous aneurysms of the thoracic aorta and the abdominal aorta can be carried out simultaneously, or sequentially, with an interval of a few weeks. In concomittant repair, although each operative episode carries different risks, additional extraanatomic bypass may be required to prevent spinal chord ischemia.

CONCLUSIONS: These hybrid procedures may be done with an acceptable risk considering the comorbidities of conventional surgical interventions.

PP-311 PERCUTANEUS CLOSURE OF TRAUMATIC POPLITEAL ARTERY PSEUDOANEURYSM USING AMPLATZER VASCULAR PLUG

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INTRODUCTION: Pseudoaneurysms occur as the late complications of traumatic arterial injury, and are caused by the laceration of the arterial wall and hematoma formation contained by the adjacent tissues. Popliteal artery pseudoaneurysms are rare entities in civilian settings, and trauma is the leading cause. We report a case of PPA, which was caused by a gunshot trauma and treated successfully using Amplatzer Vascular Plug (AVP).

CASE: A 75-year-old male patient with pain and swelling in the right calf was referred to our clinic. The patient had a history of a gunshot injury that had occurred 45 years before. A 15x10 cm pulsatile and painful mass extending from the right popliteal

fossa to the mid-calf was present with associated findings of dilated varicose venous structures and venous insufficiency in the right leg. Computer tomographic angiography (CTA) revealed a PPA extending from the right popliteal fossa to the mid-calf region, which was 8x8.5 cm in size. Right tibialis anterior artery, which had a high origin, was patent and demonstrated antegrade filling pattern. Right tibialis posterior artery and right tibioperoneal artery were also patent but demonstrated retrograde filling patterns. Due to the patient's general condition and possible complications of an open surgical intervention, a percutaneous occlusion with AVP was planned. Angiographic examination revealed a right tortuous popliteal artery ending with the pseudoaneurysm associated with distal occlusion. The right crural vascularization was possible with an aberrant superiorly placed tibialis anterior artery. The tibialis posterior and peroneal arteries which were patent demonstrated retrograde filling from the tibialis anterior artery. The feeding artery of the PPA was the popliteal artery distal to the origin of the anterior tibial artery. To treat the lesion, a guiding sheath was placed close to the pseudoaneurysm. Thereafter, a 12 mm AVP was sent through the sheath to occlude the feeder while preserving the potential collaterals. After waiting for 20 minutes, control angiography demonstrated nonfilling of the pseudoaneurysm, while preserving the whole crural vascularization. No complication was occurred during the interventions.

RESULTS: At the 6th month follow-up, peripheral distal pulses were normal with no remaining complaints. In control CTA, no recanalization of the lesion was observed. A 6x7 cm sized, peripherally calcified, residual soft tissue and the stump of the right popliteal artery were also reported.

CONCLUSIONS: In conclusion, percutaneous closure of traumatic PPAs using AVP might to be a suitable alternative to the open surgical procedure in selected cases.

PP-312 TIMING OF THE HYBRID INTERVENTION WHOM HAD BOTH THORACIC AND ABDOMINAL AORTIC ANEURYSMS

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OBJECTIVE: Endovascular repair for aneurysms of aort is in common use because of reducing morbidity, shorter hospitalization and quicker recovery in high risk patients. Endovascular repair is not useful or achievable because of size and root enlargement of aneurysm. In some cases patient has both abdominal and thoracic aort aneurysms. Both surgical repair and endovascular intervention have their each advantages and disadvantages. We wish to present a case that emphasise the timing for surgical repair after endovascular intervention at high risk patient.

METHODS: 51 year old male patient has DM, chronic renal failure, atherosclerotic cardiovascular disease, had a TEVAR for type 3 aortic dissection six months ago and cerebellar hemangioma. Before

TEVAR CT scans showed us an abdominal aortic aneurysm which is 95mm length and 63 mm width. Because of comorbidities and high surgical risk we decided to do surgery for abdominal aortic aneurysm after TEVAR for type 3 dissection. Surgical repair for abdominal aort aneurysm is necessary because enlargement and shape is not allow EVAR. Six months after TEVAR we assessed the patient for surgery for abdominal aort aneurysm. A 18 mm dacron graft is successfully setted in abdominal aortic aneurysm. There were no surgical complications consisted. **RESULTS:** After seven days of hospitalization patient discharged succesesfully.

CONCLUSIONS: use of endovascular intervention for aneurysms of aort is becoming commonplace in cardiovascular surgery. But these interventions aren't reducing mortality. At high risk patients endovascular interventions are always debatable options. But patients whom had multipl aneurysms of aort needs different strategies that includes surgery and endovascular intervention. Timing for surgery before or after an endovascular intervention is doubtful.

PP-313 UNEXPECTED COMPLICATION OF ENDOVASCULAR THERAPY

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OBJECTIVE: Endovascular stent graft treatment is proving to be a safe, minimally invasive, and effective treatment for thoracic aortic diseases especially for the patients who are poor surgical candidates. Growing technical experience and improving stent-graft devices have resulted in better patient outcome and expanded clinical indications, but mid-term and late results remain unclear. We report that a serious complication we have observed among consecutive patient with acute type B aortic dissection treated with endovascular stent-grafting.

METHODS: 51-year-old man was referred to our clinic with intermittent claudication particularly of the left leg. He had undergone endovascular stent graft repair for acute type B aortic dissection 8 months ago. Pulses of the left leg were nonpalpable with signs of hypoperfusion. Aorto-peripheral angiography showed persistent perfusion of the false lumen at the abdominal level and the no contrast filling into the endostent. Computed tomography showed collapse of the abdominal stent-graft with compression by the patent false lumen. Left branch of the bifurcation stent-graft was also compressed explaining the ischemic symptoms. Right common iliac artery, however, received significant collaterals. His echocardiography revealed serious left ventricular dysfunction with severe mitral regurgitation. He had an ejection fraction of 25%.

RESULTS: A femoral cross-over bypass was planned for the ischemic leg and no further intervention was scheduled due to multiple comorbidity factors and low general status of the patient.

CONCLUSIONS: Endovascular techniques are an alternative approach in the treatment of aortic disease, and this approach offers a less invasive therapeutic option and quicker recovery. However,

regular follow-up is mandatory to identify late complications of the stent-graft and to perform appropriate additional corrections as required.

Non-Invasive and Invasive Diagnosis and Treatment in Rhythm Disorders Poster Presentations

PP-320 IS THERE ANY EFFECTS OF ISOTRETIONIN THERAPY ON ELECTROCARDIOGRAPHY, HEART RATE AND BLOOD PRESSURE?

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OBJECTIVE: Isotretinoin has been used to treat acne vulgaris for a long time. Isotretinoin therapy is associated numerous adverse effects of the various systems. Although some cases have been reported, cardiac side effects have been rarely reported following isotretinoin treatment. We aimed to investigate the effects of isotretinoin on cardiovascular system.

METHODS: Seventy patients with acne vulgaris were enrolled in the study (49 female and 21 male patients). The patients were treated with a dose of 0.5-1 mg/kg/day of isotretinoin. Screening for biochemical and hematologic parameters, heart rate, blood pressure and electrocardiographic parameters (P wave duration, and QTc duration) were done before treatment and after 3 months of isotretinoin treatment

RESULTS: Heart rate, systolic/diastolic tension and electrocardiographic parameters (P wave duration, and QTc duration) didn't statistically different between before and after isotretinoin treatment. Posttreatment total cholesterol, LDL, triglyceride, VLDL levels were also higher compared to initial values.

CONCLUSIONS: As far as we know there's no study searching the effect of isotretinoin on P and QT wave measurements in literature. We found that isotretinoin didn't effect P and QT wave measurement. Further studies with longer periods of follow-up are needed to understand the effect of isotretinoin on cardiovascular system

PP-321 ESOPHAGEAL PACING IN CHILDREN WITH SYNCOPE

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OBJECTIVE: Electrophysiologic testing has been used to identify potential arrhythmic causes of syncope. Intracardiac electrophysiological study is invasive and expensive diagnostic tool for evaluation of unexplained syncope in children. The purpose of this study was to evaluate the interest of sinus and atrioventricular nodes function in patients with vasovagal and unexplained syncope by esophageal

pacing.

METHODS: The study included 28 patients (mean age 15,1 $\pm$ 2,2 years; range 7-18; 18 females) with a history of syncope. The patients had a normal ECG in sinus rhythm, no documented arrhythmia, no patent heart disease and exercise testing was negative. Ten of them (35,7 %) complained of palpitations. All patients underwent standard head-up tilt test (HUTT) and rapid transesophageal atrial pacing for evaluation of corrected sinus node recovery time (CNRT) and Wenckebach point (WP). They were divided between two groups, according to results of HUTT, vasovagal response (Group 1, n: 8) and negative HUTT (Group 2, n: 20).

RESULTS: Patients with vasovagal reaction were more frequently women than men. These patients were older than remaining population. No tachycardia was induced. Corrected sinus node recovery time (mean 267.5 $\pm$ 44.64 versus 273.8 $\pm$ 80.19) and WP (mean 344 $\pm$ 53.31 versus 337 $\pm$ 63.91) were normal and similar in both groups

CONCLUSIONS: Transesophageal electrophysiologic study (TEEPS) was a simple, economic and non-invasive method and therefore TEEPS is more suitable option than intracardiac electrophysiologic study to detect the possible cause of syncope in children.

PP-322 AN INTERESTING ECG SHOWING BOTH ISCHEMIA AND ELECTROLYTE DISTURBANCES

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OBJECTIVE: A 62 years old man presented with transient ischemic attack (TIA). He was diabetic and hypertensive. He had no chest pain. There was T wave negativity in precordial derivations and DI, AVL. QTc interval was 573 ms.

METHODS: He was using losartan+hydrochlorothiazide and a calcium channel blocker and he was on diet for diabetes. His cardiac enzymes were mildly elevated. His blood potassium was 2.4 mEq/L and his blood ionised calcium was 0,86 mEq/L. His cranial MRI showed small sized cerebellar infarction. Potassium and calcium was replaced. Septum was hypokinetic in echocardiography.

RESULTS: Coronary angiography was performed; LAD ostial %80 lesion, Cx mid %70 lesion were determined and RCA was occluded and the distal parts had collaterals from LAD. QTc interval was 422 ms after replacements, the T wave abnormality was normalised after CABG.

CONCLUSIONS: ECG is a very helpful diagnostic tool, but it is not specific, it can show a lot of pathology in combination.

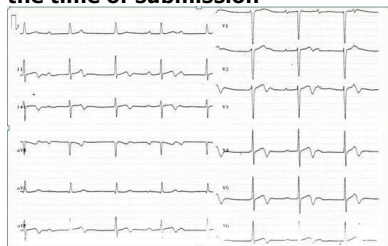
PP-323 AN UNUSUAL PRESENTATION OF HYPERTHYROIDISM: ATRIOVENTRICULAR COMPLETE HEART BLOCK

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OBJECTIVE: Complete heart block associated with

hyperthyroidism is infrequent and the diagnosis of hyperthyroidism is usually not considered in the absence of tachycardia. A 55-year-old woman was admitted to our emergency clinic with a dizziness and syncope attack. Her electrocardiogram showed complete heart block. Hyperthyroidism had been diagnosed and she was treated with anti-thyroid treatment three years ago. But she was not taken this drug last two months. Her thyroid function tests showed hyperthyroidism. Anti-thyroid treatment was started again. Her rhythm returned from complete AV block to normal rhythm seventh day of hospitalization.

Figure 1. Complete AV block on the ECG performed at the time of submission



PP-324 REMOVAL OF INFECTED OLD ICD LEAD

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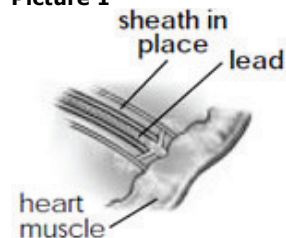
BACKGROUND: ICD lead infection is one of the most important problem after ICD implantation. The presentation, consequences, and treatment of device infections vary according to the location and extent of infection and the clinical characteristics of the patient.

METHODS: A 45-year-old-male with inducible ventricular tachycardia presented with infection of the pocket and lead of his implantable cardiac defibrillator (ICD) lead 4 years postimplantation. ICD was removed 2 months before but the leads couldn't be removed in another hospital. They forced to remove the leads with traction method but the result was unsuccessful. The infection of the pocket and lead was not treated successfully. After controlling the pocket infection he underwent a procedure in which his infected lead was removed with a Locking stylet and its pistol. The tip of coiled part of old lead was broken while removal procedure. It was abandoned and a new lead and ICD generator were implanted from the contralateral of old pocket place.

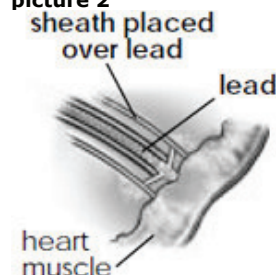
CONCLUSION: No technique is sufficient by itself to address all lead extractions. The necessity to use tools to extract leads largely depends on the time from implant. Within six months from implant it is rare that traction alone will not suffice. However, from that time on extraction tools are necessary in an increasing number of procedures. Locking stylets have been reported as a stand-alone extraction tool. Alt et al. reported their experience with the VascoExtor stylet (VascoMed GmbH, Weil am Rhein, Germany) in 150 leads in 105 patients, (110 ventricular leads, 40 atrial; passive fixation with tines in 109 leads). Complete removal was possible in 81 % of cases, partial removal in 12 %. Manolis et al.

reported success with the same device in 24 out of 25 leads: in 81 % with the sole use of a stylet, in 19 % with additional tools.

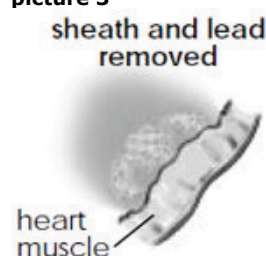
Picture 1



picture 2



picture 3



PP-337 AMIODARONE INDUCED ACUTE HEPATITIS

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OBJECTIVE: Amiodarone chlorhydrate is a diiodated benzofuran derivative, and it is used to treat cardiac rhythm abnormalities. The anti-arrhythmic agent amiodarone is associated with numerous adverse effects, but serious liver disease is rare. Hepatotoxicity is a relatively uncommon side effect of amiodarone, and symptomatic hepatic dysfunction occurs in fewer than 1% of the patients taking amiodarone. The improved safety of administration of daily low doses of amiodarone has already been established and this regimen is used for long-term medication. We present five cases of amiodarone-induced hepatotoxicity in patients who had been treated with a low dose of amiodarone (400 mg/d) after loading dose of intravenous amiodarone.

METHODS: Retrospective chart review of patients who received amiodarone for ≥ 4 days in our hospital. We collected information about clinical

progression and liver chemistries. We are presenting two old man and three old woman (ages are above 70 years old) with normal liver function were given amiodarone for treating their atrial fibrillation and heart failure.

RESULTS: They developed nausea, vomiting, muscle weakness and wasting after therapy with amiodarone (400 mg orally twice per day). The liver function test results were abnormal. Liver biopsy showed the presence of foam cells in the hepatic sinusoids and Mallory bodies in the periportal hepatocytes on light microscopy. These observations show the necessity of monitoring the hepatic function and conducting neurologic examination of the patients treated with amiodarone.

CONCLUSIONS: These observations show the necessity of monitoring the hepatic function and conducting neurologic examination of the patients treated with amiodarone. Administration of amiodarone was associated with a low incidence of hepatotoxicity without relationship to cumulative dose. Amiodarone is lipophilic, and so it accumulates in lipid-laden organs such as the liver. Amiodarone and its major metabolite, N-desethylamiodarone, accumulate in the lysosomes of the hepatocytes, Kupffer cells and bile duct epithelium. We suggest that amiodarone should be withdrawn if a patient shows neurologic symptoms or if the liver function test results are abnormal. By doing so, it is possible to avoid unnecessary, costly diagnostic evaluation and severe toxicity.

PP-338 COPMLET ATRIOVENTRICULAR BLOCK PRESENTING WITH SUDDEN CARDIAC ARREST

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OBJECTIVE: The most common cause of complete atrioventricular (AV) block is drug toxicity, coronary artery disease and degenerative disorders in adults. Here we present a case of complete AV block and sudden cardiac arrest in 29 years old women while waiting to make examination of the child herself.

CASE REPORT: A 29 years old woman had a normal vaginal delivery 2 months ago. She was suffering from complete AV block and sudden cardiac arrest while waiting to make examination of the child herself. About 14 minutes, resuscitated the patient was referred to our hospital. The first evaluation in the emergency department; consciousness closed, pupillary dilation, IR + / +, intubated, bradycardia (35 beats / min), blood pressure: 90/60 mm Hg and GCS was 7. Complete AV block was detected in electrocardiography. Single-chamber temporary cardiac pace maker was inserted and the rhythm of 80 beats / min arranged by cardiology department. Cranial CT was normal. The patient in this state transferred our intensive care unit and connected mechanical ventilation. Phenobarbital, phenytoin, carbamazepine, salicylates, digoxin, acetaminophen, lithium, theophylline, valproic acid levels were normal to eliminate intoxication. Patient was extubated one day after the consciousness and

transferred to cardiology clinic. Slight decrease in left ventricular systolic function (ejection fraction 48%), mild mitral regurgitation, mild right ventricular enlargement and tricuspid insufficiency were found in transthoracic echocardiography. When more than 72 hours to pass the first event we through that patient pacemaker-dependent. Dual chamber pace maker was inserted via left subclavian vein. The patient was discharged three days after pacemaker implantation.

CONCLUSIONS: In conclusion, atrioventricular block may be present with life-threatening clinical manifestations.

Venous Disease Revisited - Poster Presentations

PP-342 MICROSURGICAL LYMPHATICOVENOUS IMPLANTATION FOR THE TREATMENT OF OBSTRUCTIVE LYMPHEDEMA

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OBJECTIVE: There are many classical surgical approaches in the treatment of obstructive lymphedema of the extremities. The application of microsurgical techniques to the drainage of lymph in to the venous system offers new possibilities in this field.

METHODS: Our clinical results with five lower extremities with chronic lymphedema demonstrated the effectiveness of this technique.

RESULTS: Postoperative circumferential measurements showed a decrease in all site of the affected extremities. The average decrease was 3 cm at the knee joint level, 3.5 cm at the 16 cm below the joint level and 2.5 cm at the metatarsal head level. Subjective improvement was noted in all patients.

CONCLUSIONS: This easy and simple method could be used widely and could provide stable improvement of chronic lymphedema.

PP-343 PERMANENT TUNNELED HEMODIALYSIS CATHETERS

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OBJECTIVE: Chronic renal failure is a common disease with high mortality and morbidity. One of the most common method used for the treatment of these patients is hemodialysis. In this study, we present permanent tunneled dialysis catheter experiences for the patients whose have AV fistula did not work for various reasons.

METHODS: Patients admitted to hospital with acute and chronic renal failure between January 2005 and December 2010 were reviewed retrospectively. The decision for permanent hemodialysis catheter was

made by Nephrology and Cardiovascular Surgery clinics. Written informed consent of patients before intervention were included. Usually 28 and 32 mm double-lumen tunneled permanent hemodialysis catheters were used. Catheters inserted under local anesthesia in the operating room. Fluoroscopy or ultrasound was not used. After the procedure the catheter position was confirmed by x-ray radiography.

RESULTS: A total of 68 patients (40 (58.8%) males, 28 (41.2%) female, mean age 55.58 ± 21.17 ; range 7 to 84 years) studied. Right internal jugular vein in 29 patients, left internal jugular vein in 9 patients, right subclavian vein in 9 patients, left subclavian vein in 14 patients, right common iliac vein in 2 patients, inferior vena cava in 2 patients, right femoral vein in 1 patient, left femoral vein in 1 patient and the superior vena cava for 1 patient were the catheter insertion sites. Occlusion, as an early catheter complication was occurred in 8 patients. Catheter infection rate was 6.8% (n:6). Staphylococcus aureus in 3 patients, streptococcus in 2 and E.coli in 3 patients were the isolated agents. There was no mortality during the procedure. The most common complication during the procedure was arrhythmia and hypotension. ALL associated with renal disease in 5 patients, end-stage breast CA in 1 patient and renal cell CA in 1 patient were the additional problems. The mean patency rate was 68.6 days (3-180), respectively.

CONCLUSIONS: Permanent tunneled hemodialysis catheters, is a way of establishing a permanent hemodialysis for the patients with additional problems, hemodynamic instability and short survey expectancy. Day after day, need for this type of permanent dialysis catheters for hemodialysis is increasing. Internal jugular vein is the most suitable place for the insertion of catheters and must be the first choice. We believe that the other choices should be considered when jugular vein can not be used.

PP-344 CLINICAL ATTEMPT AFTER BROKEN OF CENTRAL VENOUS PORT CATHETER

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OBJECTIVE: Venous ports are kind of catheters mostly used in the treatment of patients with malignant disease, providing safe and easy IV access for recurrent medical applications and they are totally implanted subcutaneously. Insertion under local anesthesia, minimal sense of disturbance to patients, low complication rates, continuation of the treatment at home after discharge from hospital at the same day are the advantages of port catheters. The most common complications of port catheters are; thrombosis, infection, obstruction in catheter line and rarely broken of catheter may cause pulmonary tromboembolism. In this case we aimed to present a patient referred to our clinic with a complaint of broken catheter line.

METHODS: A forty seven years old female patient diagnosed breast cancer under chemotherapy via a port catheter inserted to left subclavian venous access about one year ago. After completement of the treatment patient referred to our clinic to remove the catheter.

RESULTS: In the X-ray and thorax CT imaging of the patient; 2/3 distal part of the catheter was seen in localization of right atrium and superior vena cava. The proximal part of the catheter is removed and we recommended monthly follow up. In the control consultations we determined movement of the parts of catheter and suggested operation to the patient. The patient refused the operation.

CONCLUSIONS: Venous port applications are usually safe and the rates of complication are very low. Pulmonary embolism is a very rare complication. (1%) The most common reason for broken of the catheter is being stuck of the catheter between first rib and clavicle or between subclavius muscle and costoclavicular ligament which is so called 'pinch off syndrome'. Most studies suggest removal of the catheter. But there are also cases follow up instead of operation is chosen. In our case we preferred to follow up because the patient is in higher term of breast cancer, did not accept the operation and there is no clinical evidence of pulmonary tromboembolism secondary to broken part of the catheter.

PP-345 AN AVF ANEURYSM DUE TO LONG TERM HEMODIALYSIS

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OBJECTIVE: Autogenous arteriovenous fistulas are the first choice for hemodialysis access In patients with chronic renal failure. In this study we aimed to present the treatment of a patient with giant aneurysm at snuff box arteriovenous fistula.

METHODS: 38 years male patient with chronic renal failure accede to hemodialysis at snuff box AVF at three times a week. He admitted to hospital with a 8x8 cm mass on AV fistula's line. There wasn't thrill on AV fistula. Radial and ulnar pulses were palpable.

RESULTS: Aneurysm was ligated after the proximal and distal control. Cephalic vein was dissected for new AV fistula. Then aneurysmectomy operation was applied and Cimino brescia AV fistula anastomosis was applied. There wasn't any complication after surgery. Patient was discharged.

CONCLUSIONS: Nowadays hemodialysis and transplantation are the treatment modalities for chronic renal failure patients. Despite renal transplantation is the most preferred treatment, difficulties for donor supply make hemodialysis the most common treatment method. Competant AV fistula is the most important topic for long term hemodialysis. AVF is the most reliable and functional access in permanent vascular access. Aneurismatic dilatation is most frequently seen late complication of AVF as seen the present case. Treatment modalities of AVF complications are;manuel compression-ligation accompanied by doppler USG, endovascular graft implantation, embolization, trombin injection accompanied by USG and surgical reconstruction. Surgical repair is the most common and the most traditional method of treatment for these lesions.

PP-347 SPONTANEOUS RUPTURE OF THE ILIAC VEIN: REPORT OF A CASE

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OBJECTIVE: Spontaneous iliac vein rupture is a rare event an international literature since 1961 a little over forty cases have been reported. Most of these cases there is a history of trauma. The majority of cases the left side of the majority of women are still affected. More than half of the external part of the affected patients, while the remainder generally common iliac vendir. Sudden onset, hypotension, abdominal distention seen in almost all cases.

METHODS: Our case is 60 years old female patient. The patient's left lower extremity edema in the last 3 years and mevcutmus increase in diameter. Journey to the left leg after the swelling has increased, the abdominal and low back pain began. Is the change in color on the left leg on 25.09.2010 referred to our emergency department. There was a slight shortness of breath, nausea and abdominal pain as well as The patient was evaluated in the emergency department. The physical examination of the cardiac and respiratory system were of the natural. Followed a mild abdominal tenderness. Alte difference in diameter was seen on the left leg. Deep vein thrombosis has been considered and the lower extremity venous doppler.

RESULTS: After general anesthesia, laparotomy, the patient was found to be intact small intestine and colon. Liver, spleen and stomach pathology was observed. Zone and the left pelvic retroperitoneum hematoma I_II viewed as the infrarenal level. Were asked to comment on this by perioperative. Aortic dissection and rupture was thought by the patient before. When massive retroperitoneal hematoma was encountered. Active bleeding and the bleeding is venous vasihta edilince aspirated hematoma was observed. Is the source of bleeding iliac vein and iliac vein was ruptured in two regions. Venous bleeding was controlled primer was restored. The patient's abdomen anatomy cardiovascular surgery intensive care unit after the operation was closed down and proper.

CONCLUSIONS: Anticoagulant therapy was given to lower-limb elevation and compression therapy. Complete recovery of the patient was discharged 9 days after.

PP-348 SURGICAL TREATMENT OF VENOUS ANEURYSMS IN PATIENTS WITH ARTERIOVENOUS FISTULAE FOR HEMODIALYSIS

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OBJECTIVE: Venous aneurysms in patients with arteriovenous fistulae is not a rare pathology among hemodialysis patients. We investigated the results of the patients who underwent surgical treatment.

METHODS: Twelve patients (8 males, 4 females) in whom aneurysms of 4 cm or over developed and who were operated in our institute between 2002 and 2010. The data were collected retrospectively from the

hospital records. All cases were diagnosed by inspection and verified by Doppler and BT or MR angiography. All aneurysms were resected totally under local anesthesia. Arterial repair including trimming of the arterial wall was done within the aneurysmal sac.

RESULTS: Our cases did not need any hemodialysis necessity in order to they had undergone a kidney transplantation. Complications such as infection, hematoma were not observed after the operation. All patients were discharged within the first 24 hours after surgery. The mean follow-up period was 6 months (3-9 months). They had symptoms such as dispnea, fatigue and nausea, suggestive of heart failure before the procedure. These symptoms disappeared immediately after surgery.

CONCLUSIONS: Surgical resection of venous aneurysm stil remains the gold standard. The patients with venous aneurysms are prone to develop the heart failure.

PP-349 POPLITEAL ARTERY ENTRAPMENT SYNDROME AND DEEP VENOUS THROMBOSIS

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INTRODUCTION: The popliteal artery entrapment syndrome (PAES) is a rare but life-threatening extremity peripheral vascular disease and is often seen in young adults. It occurs due to abnormal relationship between the popliteal artery and the surrounding musculotendinous structures. There are four major anatomical variants of PAES. Type V is any form of entrapment also affecting the popliteal vein.

CASE: A 23-year-old male patient was admitted to our out-patient clinic with complaining of right lower extremity claudication for 3 months, and right lower extremity pain, swelling and numbness for 1 week. Popliteal artery and distal pedal pulses were palpated weakly in the right lower limb according to the left one. His neurological examination, nerve conduction studies and needle electromyographic evaluation of lower extremity were normal. Since a decrease in the blood flow of the popliteal artery and popliteal vein thrombosis was detected in the Doppler ultrasonography, he was hospitalized, and thrombolytic therapy was initiated. MRI Angio revealed the the pressure of the medial head of the gastrocnemius muscle to the popliteal artery and popliteal vein as a result of its lateral insertion. After regression of the clinical signs of deep venous thrombosis, he was operated with Plastic Surgery service. In the operation, the medial head of the medial gastrocnemius muscle was transferred to medial part. In postoperative follow-up period, no early surgical complication developed, and the popliteal artery and vein flow was observed in normal speed and calibration by Doppler ultrasound and MR Angio.

DISCUSSION: Popliteal artery entrapment syndrome is usually a result of an abnormal relationship between the popliteal artery and the surrounding musculotendinous structures in popliteal fossa, an abnormal hypertrophy of the muscles and the repeated

arterial compression upon exercise. It is a rare cause of sudden claudication in the lower extremities in healthy young adults such as professional athletes and soldiers who have less risk factors such as especially atherosclerosis. It should be considered in suspected cases that PAES may affect both veins and arteries, and Doppler ultrasound and MR Angio can reveal the cause of compression, and after that recanalization can be achieved by surgical interventions.

PP-350 VARICOSE VEN SURGERY: OUR FIFTEEN YEARS' EXPERIENCE

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OBJECTIVE: In this article it's emphasized on varicosis which is a current and crucial health problem and its surgical treatment results.

METHODS: It's been studied the early and late period results of 653 patients who have applied as elective because of primary varicosis and on whom we implemented surgical treatment during the fifteen years' period including the period between January 1995 and November 2010 in our cardiovascular surgery clinic.

RESULTS: Of the patients 303 were men (46%) and 350 were women (54%). Age range was between 13 and 70 years (average age is 43.8). As a result of Venous Doppler Duplex Ultrasonography (USG) of the total 517 patients (79%) on who have been detected grade 3 and more reflü in V. Saphena Manga and whose saphena caliber expanded, saphenectomy and pake excision have been implemented to 373 (72%), saphenectomy to 1382 (26%) and saphenectomy by endoscopic method to 6 (2%). The patients were released after 1 postoperative day at the latest. Only in 74 patients (11.3%) were seen relapse pakes and those were studied under the local anesthesia.

CONCLUSIONS: In the surgical treatment of varicosities high ligation of saphena which is appropriate for sapheno-femoral junction and which can be implemented with adequate interference and the method of saphena stripping and pake excision are considered as a good method.

PP-351 GIANT OVARIAN CYST THAT CAUSES DEEP VENOUS THROMBOSIS

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OBJECTIVE: Malignancy can be seen in many patients who have deep venous thrombosis. Patients who have no etiological risk factors of DVT, must be searched about gynecological and lung malignancies. The treatment modality can change and also chemotherapy can start earlier if tumor is observed by abdominopelvic ultrasound after the diagnosis of DVT. We aimed to present a case with deep venous thrombosis with giant ovarian cyst.

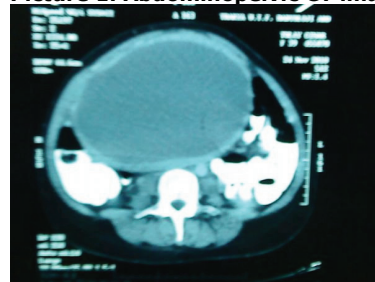
METHODS: A 39-year-old female patient with DVT symptoms has the diagnosis of acute thrombosis in right

lower extremity veins. Abdominopelvic ultrasonography and CT showed a 14x20x21 cm tumor in her right lower part of the abdomen (Picture 1).

RESULTS: Low-molecular-weight-heparine treatment was started. Coumadin was not started because of the surgical operation planning by gynecological clinic. The patient was followed by heparine in acute stage. After the regression of DVT symptoms, patient referred to gynecology for surgical operation. The pathological diagnosis was myoma of uterus. Postoperatively, patient was followed by heparine. Afterwards, coumadine was started, and she was discharged from hospital without any complication.

CONCLUSIONS: Treatment modalities can change in patients with the diagnosis of DVT, if any tumors of pelvic or abdominal organs detected by ultrasound. Thus, the excess of medication, time loss, work force, cost can be prevented. We consider that, especially in young females who have the diagnosis of DVT, and at the same time do not have the risk factors about DVT, must be searched about abdominopelvic tumors.

Picture 1. Abdominopelvic CT imaging



PP-352 SURGICAL TREATMENT OF CHRONIC VENOUS INSUFFICIENCY AND VARICOSE VEINS IN PATIENTS 60 YEARS AND OLDER

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OBJECTIVE: The objective of this study was to assess the efficacy and the acceptance of varicose veins surgery in patients 60 years and older.

METHODS: 36 consecutive patients (27 men, 9 women) aged 60 to 75 years (mean of 64.9±5.4 years) with primary varicose veins; 13 left leg, 15 right leg and 8 both legs; CEAP classes C2-3 28 patients, CEAP classes C4-5 8 patients were included in this study. In our patient population; 10 of the patients had obesity, 6 had hypertension, 3 had diabetes and 3 with had prior coronary artery surgery. Deep venous insufficiency was detected in 13 patients.

RESULTS: We preferred spinal anaesthesia in most of all patients except for two. 2 cases were treated with endovenous laser treatment, 14 cases with partial stripping of saphenous vein, 13 total saphenous vein stripping and 7 were treated with phlebectomy. There was no operative mortality and the incidence of complications (bleeding, hematoma, infection and edema). Mean hospital stay was 1 day in all patients.

CONCLUSIONS: Satisfactory surgical results were obtained in all cases. All methods proved to be successful, thereby offering a more acceptable solution to one of the chronic problems of the elderly.

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