

SEPTIC PELVIC THROMBOPHLEBITIS AS AN ENIGMATIC CAUSE OF PERSISTANT PUERPERAL FEVER COURSE OF DISEASE DIAGNOSIS AND TREATMENT

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Thrombophlebitis and its related disorders are well known since the early description of Virchow Hunter and Welch (¹).

Less well known is the entity of septic pelvic thrombophlebitis (S.P.T.) that has been described as an involvement of the walls of the enlarged pelvic venous channels by an extensive pelvic infection such as puerperal sepsis or septic abortion.

Anaerobic peptococci, peptostreptococci and bocteroides are usually the infecting organisms.

Patients with S.P.T. present it in one of two ways. The first presentation occurs 2-5 days after delivery and is characterized by the sudden onset of severe low abdominal pain and an elevated temperature. In such cases the examination of the pelvis give positive findings such as tenderness induration and perhaps abscess formation. Laparotomy is usually performed because of an acute abdomen signs. The ovarian vein is usually thrombosed. Both ovarian veins should be ligated and the patient treated with heparin and antibiotics. The second presentation occurs more insidiously. The post partum obstetric patient usually has intermittent temperature spikes, tachycardia, and a non-toxic appearance. In contrast with the dramatic temperature excursions noted in the patient's temperature chart it gives no evidence of distress except during the febrile peaks. At this time symptoms are chills and headache. Physical examination often reveals nothing at all (²).

Use of the term S.P.T. seems to be justified in view of the nature of the fever and the high incidence of positive blood culture (³). In most cases high dosage of multiple antibiotics is instituted and after many days of unsuccessful therapy the presence of S.P.T. is suspected. The diagnosis is presumptive, based upon defervescence within 48-72 hours of heparin therapy.

SUMMARY

A rare case of septic puerperal pelvic thrombophlebitis is presented.

This condition is an uncommon but potentially serious complication of pyogenic pelvic infection.

The purpose of this report is to describe a particular form of septic pelvic thrombophlebitis (SPT) that frequently eludes diagnosis because of the absence of positive abdominal or pelvic findings.

Our recent experience with this entity is interesting, because of the striking effect of heparin after many days of unsuccessful high dose multiple antibiotic treatment.

CASE REPORT

A 25 year-old woman gravida I paro 0, was admitted to our Hospital at 31 weeks gestation because of premature contractions and multiple pregnancy (triplets). Despite bed rest and tocolytic treatment the membranes were ruptured spontaneously at 34 weeks. Because of body temperature of 38°C and a foul vaginal discharge an amniotitis was diagnosed, tocolytic treatment was ceased and spontaneous uterine contractions

were present and the temperature rose to 39°C. Placental, infants and blood cultures all were positive to *E. coli* and *bacteroides fragilis* was grown from the placenta.

The antibiotic therapy was changed according to the bacterial sensitivity in vitro. Under such regimen, the patient remained febrile, the physical examination was entirely negative. The white cell count ranged between 12,000-18,000. Blood cultures for mycoplasma, chlamidia and fungi were negative, urine and vaginal cultures were

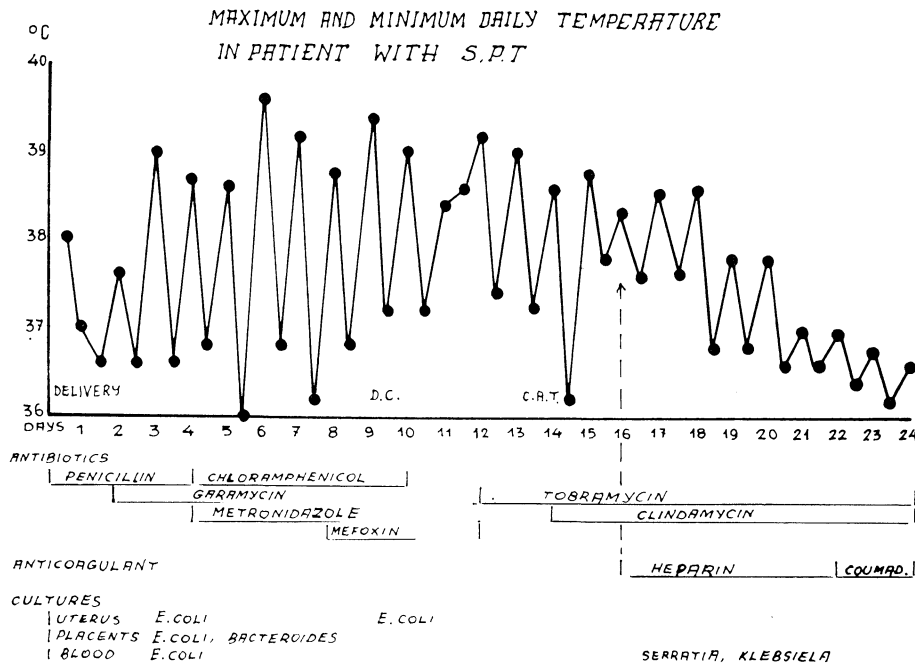


Fig. 1. — Maximum and minimum daily temperature in patient with S.P.T.

brought her into active labor which progressed. The first infant was delivered spontaneously in vertex presentation 6 hours later. The second infant was extracted under general anaesthesia by total breech extraction following artificial rupture of membranes. The third infant was delivered spontaneously in vertex presentation. All infants had an Apgar score 9 at five minutes and remained well thereafter. Penicillin therapy was started intravenously.

Bacterial cultures were taken from the placenta that was removed manually, from the infants and from the uterine cavity.

On the first postpartum day the temperature course was normal. On the second day, chills

also negative. Intravenous pyelography, chest X-ray and CAT scan were all normal.

On the 9th postpartum day a curettage was performed apparently to rule out infected retained products of conception. The curettage and Douglas puncture were negative and no abscess formation was found in the pelvis, the vaginal examination under anaesthesia was negative.

Mefoxin (Cefoxitin) was added to the above antibiotic therapy, but the patient did not improve and the temperature remained high (fig. 1).

According to a consultation by an internist the garamycin was changed to tobramycin and the metronidazole was changed to clindamycin.

On the 16th postpartum day septic pelvic thrombophlebitis was suspected and intravenous heparin therapy was started. On the second day blood culture were positive to serratia and klebsiella both resistant to tobramycin and clindamycin. On the 19th postpartum day, 72 hours following heparin treatment, for the first time, the temperature dropped to 37 °C and from the 21st postpartum day the temperature remained normal.

All therapy was discontinued on the 25th day and the patient was discharged in good condition on the 26th postpartum day.

DISCUSSION

This case illustrates the most important aspect of the entity of enigmatic septic pelvic thrombophlebitis – mainly the absence of indicative physical findings.

This case and those reported by Collins⁽⁴⁾ all were of obstetric origin – therefore, this diagnosis should be strongly considered in a postpartum patient who has continued spiking fever in the absence of physical findings and who does not respond to antibiotic therapy.

The dramatic response to anticoagulants in our case and similar observations made by Wolf⁽⁵⁾, Burns⁽⁶⁾, Schulman and Zatuchni⁽⁷⁾ and Josey⁽⁸⁾ suggests a cause and effect relation.

Schulman and Zatuchni⁽⁷⁾ suggest the heparin as a diagnostic test for pelvic thrombophlebitis.

It is postulated that since the major pharmacologic action of heparin is to prevent further thrombosis, purulent clot fragments are no longer released into the bloodstream and the septicemic process is thereby halted.

It is reasonably sure that a patient who is postpartum who has an enigmatic fever in the absence of any positive physical findings or evidence of localized infection, who fails to respond to adequate antibiotic therapy and who promptly becomes febrile when anticoagulated has septic thrombophlebitis.

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