COLON CARCINOMA IN PREGNANCY

Case Report and Review of Literature

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SUMMARY

The Authors report on a case of colon carcinoma occurred in a pregnant woman. As complaints for digestive tract disfunctions are common during pregnancy, the diagnosis of the malignancy was delayed. The Authors suggest the treating physician be alert to avoid under estimation of symptomatology.

The concurrence of pregnancy and space occupying lesion in the disgestive tract is a rare one indeed.

A case report of colon carcinoma which was discovered in the later stages of pregnancy in a young woman is reported here.

The problems connected with the diagnosis and treatment of this rare combination of medical occurrence is reviewed and discussed in the light of related literature.

This case illustrates the need for the gynecologist to be alert when complaints about pains or disorders in the digestive tract are brought to his attention. Such complaints may be indicative of normal pregnancy, but may also reflect on other organic occurrences or disorders. The alertness of the treating physician is essential for appropriate diagnosis in such cases.

CASE REPORT

Patient of 28 years old from Rumania. There is nothing of significance in her medical background. First menstruation occurred at age 12 with normal cycles of 28/4-5. During the tenth week of her sixth pregnancy she started suffering numerous watery diarrhea. She came back twice to the casualty wards of two different hospitals and was treated for these symptoms. She went back to her family physician with the same complaints and received various medications, again without result.

During the 22nd week of pregnancy she was admitted to the Department of Internal Medicine with the following symptoms: general weakness, dizziness, pains in the lower abdomen and fluid diarrhea occuring 10-12 times daily, frequently sanguinous.

Examination at admission reveals a generally poor physical condition, extreme pallor, without cyanosis and jaundice. Blood pressure 100/70. Temperature 36.6 °C, pulse 100 per min. Chest: entry of air equal in both lungs. Bullous respiration without rale or wheezing. Heartbeat: clear and distinct. Systolic murmur at the apex, irradiation 2/6.

Soft abdomen, but sensitive. Increased peristalsis. Liver palpable and about 2 cm below costal arch on the midclavicular line. Unpalpable spleen. Limbs normal without oedema and varicose veins. Peripheral pulse palpable in lower limbs. Lymphnodes not palpable.

LABORATORY TESTS

Hemoglobin 9.7%, Hematokrit 31%, white blood cells count 6300, uric acid, blood protein and fibrinogen were within normal values; blood ferrum 588 Gamma %, total IBC 308, urea, bilirubin, electrolytes, cholesterol. In stool cultures no growth of Shygella, Salmonella or Ameba were found.

Rectoscopy was performed to the depth of 16 cm and the findings were: external haemorrhoids, stool soft, not watery, slight signs of inflammation. Biopsies were taken from the borders of the rectosigma region which showed histologically: a local inflammation of rectum and part of colon. This was treated with antibiotics (Ampicillin, Keflin and symptomatic medications such as Inferon, Probantin and Sedistral).

The complaints of the patient lessened to 3-4 episodes of diarrhea daily. Her gegeneral condition improved and she was discharged with the diagnosis of proctitis, colitis recommending a gynecological follow-up.

It is essential to state that during hospitalization no gynecological examination was done.

Four weeks later, during her 26th week of pregnancy she was re-admitted to the Department of Internal Medicine for the same symptoms. At admission she was found again to be in very poor physical condition, blood pressure 90/60, pulse 112/normal.

Physical health was similar to that at the time of first admission. She underwent a gynecological examination and the uterus was found appropriate to 26 weeks of pregnancy. Fetal heart beat was distinct and normal. Both breasts with galactorrhea. On pelvic examination anterior cervix slightly effaced and closed. In the ultrasound (B scan): biparietal diameter of 55 mm, appropriate to a fetal age of 20 weeks.

The patient received treatment for her symptoms in the form of various medications which reduced the frequency of bowel-movements to 3-4 daily. She was discharged again with a diagnosis similar to the one of her first admission.

In the 38th week of pregnancy she turned to the delivery ward with symptoms of general weakness, dizziness, constant pains in the lower abdomen, diarrhea, vomiting and nausea.

On examination the patient's physical condition very weak indeed. Pulse 100/min regular, blood pressure 105/70, temperature 36.8 °C, extreme pallor and dry coated tongue.

No discharge of milk from the breasts; symmetric chest; normal breathing 20 min. Equal entry of air to both lungs without râle or other wheezing sounds. Heartbeat consistent is without interruption; systolic murmur 2/6 at the apex, without radiation. Heart apex in mid-clavicular line in the 4th rib. Soft abdomen, not sensitive; increased peristaltic sounds; liver palpable 2-3 cm below the costal arch; spleen not palpable. Limbs without oedema and varicose veins; peripheral pulses palpable at all stations; lymphnodes enlarged in armpits and groins.

Uterus appropriate to 31-32 weeks pregnancy; fetal heart beats consistent 155 per min. Cervix effaced 40% and one cm dilated.

In the posterior fornix zone a tumor was found-elastic consistency 8-9 cm diameter, stationary and no part of it presses the cervix forward.

Rectal examination reveals external haemorrhoids; anal sphincter of normal tonus, rectal ampulla empty. 6-7 cm from the anus the edge of a tumor was palpable which presses on the anterior wall of the rectum; hard, not slippery and with minimal mobility. No signs of contraction or increased activity of the uterus. Fetal heart rate normal.

Abdominal X ray of pelvis and spinal cord without findings; fetus in head presentation; intestinal gas distribution not homogenous, with slight expansion of the

loops of small intestine, no evidence of levels.

Laboratory tests: Hemoglobin 10.1 gr %, white blood cells count 11,800, urea, electolytes, uric acid, fibrinogen, liver function and coagulation tests were within normal values.

ECG: Sinus rhythm normal complexes, heart apex horizontal.

Following the finding of the suspicious tumor in the cervix region (tumor previa) and the condition of the patient (the consistent diarrhea and the stage of pregnancy) it was decided to examine the amniotic fluid on the maturity of fetal lungs. The test was made and the results indicated the maturity of fetal lungs (Lecithine-Sphyngomyelin −4/1). The decision was to deliver by cesarean section, general anaesthesia was operated and a baby girl weighing 2090 gr – Apgar 8 was delivered. In the Douglas pouch a tumor of non homogenous elastic consistency (diameter 10 cm) was found which was attached to the colon. On frozen section the histology indicated the presence of cancerous tissue and an excision of the rectum and the sigma was performed. In addition an end-to-end anastomosis and temporary cecostomy were also made. It is essential to point out that the liver was free of metastases; however, there were some metastases in the lymphnodes surrounding the aorta. From one of the lymph glands which was taken by a biopsy there appeared caseous matter TB in appearance, which in the histological test turned out to be a metastase.

Following surgery the patient's condition improved. Blood pressure and pulse steady. Temperature 37 °C, normal urinating. On the second day after the operation the drain was removed and the third day she was released from catheter, sonds and transfusion. She was started on liquid feeding commencing the fourth day after surgery. On the eighth day a sudden deterioration in the patient's condition started. The patient complained of breathing difficulties, temperature rose to 38 °C, pulse 130. Examination showed dullness at the left side of chest.

Chest X ray left hydrothorax. Drainage of left pleural cavity was performed and a large amount of sanguineous fluid was evacuated.

The patient's condition became worse, the amount of urine lessened to 200 cc/24 hrs. in spite of diuretics. The patient developed a slight left heart failure and was treated with digitalis. On the 13th day after the operation the patient fell into a stupor state and her condition worsened. Laboratory tests were normal except BUN which increased. A few hours later she became unconscious and died of renal failure.

DISCUSSION

The concurrence of colon adenocarcinoma and pregnancy is a rare one. The actual frequency of this combination is unknown ([1, 2]).

McLean and associates found in 1955 when they observed 350,000 pregnant women, seven cases of carcinoma of the rectum, e.g. 1 : 50,000 ([2]). Cruveilhier ([3]) in 1835, described for the first time a malignant tumor in the rectum, the fetus was dead at delivery and four days later the mother died. In 1843, Lever ([4]) described a case of a woman who showed signs of blockage of the colon caused by a malignant tumor. The patient died a few weeks later. In 1967, 155 cases occurred in literature. A great fraction of these were found without convincing histological findings ([5, 6]). O'Leary ([5]) observed 17 cases and he stated that there is no difference in the topographical location and the type of the malignant tumor found in pregnant women and the general population. Between 1967 and 1975 Green and his associates ([7]) observed 18 cases, described in literature, of colon carcinoma during pregnancy. These cases were collected among 360,000 deliveries

and they are 0.0002% among 11 different hospitals. They state in the work several interesting facts:

a) Topographical distribution of the tumors are identical to those found in non-pregnant women. 56% in rectum zone, 18% in sigma zone, 28% above sigma zone.

b) Of the 18 cases, 8 of the women were in the age group of 36-40.

c) Of the 8 women only two were in their first pregnancy and under the age of 25 ([8, 9]).

d) The diagnosis was made only twice during the 18th week of pregnancy and none was made before.

e) Only six women lived more than one month after surgery. All infants delivered after the 30th week by cesarean section, survived.

f) The significant symptoms among these women include: nausea 44.4%, abdominal pains 55.5%, constipation 33.3%, feeling of fullness 22.2%, rectal bleeding 16.6%, temperature 11.1%.

In light of these facts it is very clear that the major issue is the diagnosis. As complaints among these patients are not sufficiently specific, the frequency of this disease is low, pregnancy tends to camouflage the basic disease and so the diagnosis tends to be made at a late stage of pregnancy.

At the point of diagnosis, when there is an indication for the evidence of cancer in the intestines during pregnancy, it is essential that pregnancy be interrupted immediately. Obviously, if pregnancy is at a sufficient advanced stage and there is hope for the survival of the infant, the pregnancy must be terminated by cesarean section. Regardless whether surgery is performed or any other therapeutical treatment is used, the prognosis of the women is very poor indeed. Five years survival is low, only 20% ([10]).

The only way to increase a chance of survival and to improve the prognosis is in the identification of the tumor. Early diagnosis at this state is difficult given the unclear indication of this disease, low frequency of this disease and the absence of appropriate diagnostic tools during pregnancy.

For these reasons there appeared to be, from the therapeutic point of view, two important factors:

1) if the tumor is surgically removable;
2) the gestational age.

When the diagnosis is made during first or second trimester of pregnancy and the tumor is surgically removable, surgical intervention must be made without due consideration for stage of pregnancy ([6]).

There are descriptions of vaginal deliveries after surgical removal of the tumor ([11]). There are those who suggest that even after surgical removal of tumor, cesarean section is indicated ([12]). When the tumor is not removable by surgery, a palliative surgery has to be performed to save the infant. During the third trimester of pregnancy a cesarean section is the recommended treatment.

In case the patient arrives during active labor, vaginal delivery is preferred and the definitive surgery needs to be performed several days following the delivery ([2]). In the literature there are no descriptions of cases where metastases affected the fetus and for this reason there is no clear indication about the extent in which pregnancy affects development of this disease. Furthermore, in many of these cases, it was necessary to interrupt pregnancy to make cytotoxic treatment possible. For this reason there is no clear indication of the relationship between pregnancy and the development of the tumor.

O'Leary ([5]) found in 30% of cases of rectal carcinoma in pregnancy, there had been previous diseases considered precancerous, such as: Chronic ulcerative colitis, Polyposis in family, Gardener syndrome ([6, 13]).

The prevailing thought is that it is appropriate to be suspicious of the presence of rectal carcinoma or its possible presence in all pregnant women with earlier history of these diseases.

In our opinion this specific case needs to teach, that though the concurrence of colon carcinoma and pregnancy is rare and difficult to diagnose, we must be alert for symptoms in the digestive tract during pregnancy, such as: changes in intestinal functions, abdominal pain, diarrhea and rectal bleeding, even when they resemble normal pregnancy, in order to make early diagnosis possible. The patient described here should have received barium enema early in her pregnancy, when the symptoms occuring in her tenth week of pregnancy continued in spite of treatment she received – and to be treated then according to the indicated diagnostic findings.

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