Research Article

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Abscess, Ovarian Cancer and Pregnancy

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ABSTRACT

The Objective: *To report our experience with complications of the eggs donation pregnancy with endometriosis, abscess and ovarian cancer.*

Design: *Observational study.*

Setting: *University Clinic for Gy and OB Narodni front.*

Patient: *A 33-year old patient was admitted to our clinic when she was 14 weeks pregnant because of grave condition and high fever. The pregnancy was established through IVF procedure using a donor egg. The donor egg IVF procedure was completed regardless the endometriosis cyst of 5cm.*

Intervention: *Adnexectomy during pregnancy, ileus, hysterectomy, omentectomy, resection of the small intestine with T–T anastomosis, resection of the descending colon and sigma according to Hartmann and positioning colostomy bag to the anterior abdominal wall.*

Main Outcome Measure: *Data from the eggs donation IVF pregnancy, surgery during pregnancy, re surgery treatment, chemo therapy and exitus.*

Result: *Within 16 hours of admission, according to the patient's medical condition, rapidly worsening clinical picture, deterioration in lab test results and ultrasound results, a decision was made to perform a surgery due to vital indications. A large left – sided tubo – ovarian abscess was found (around 10 cm); it was crumbling and necrotic, filled with a large amount of purulent collection. When hystopathological test was completed, the result reveled not only inflammatory, but malignant ovarian disease as well. Adenocarcinoma endometroides ovarii, HG3 NG2, Endometriosis ovarii. The patient was urgently hospitalized at week 22 because of serious condition, having abdominal pains and signs of initial stage of ileus. A total classic hysterectomy was performed together with right – sided adnexectomy, omentectomy, resection of the small intestine with T–T anastomosis, resection of the descending colon and sigma according to Hartmann and positioning colostomy bag to the anterior abdominal wall.*

The patient did not present to the consulting body for malignant diseases.We learnt from her family that she continued the chemo treatment abroad. The patient lived for 6 months since she had first been admitted to our hospital.

Conclusion: *Ovarian cancers are rare during pregnancy but should be suspected in patients presenting with a large inflammatory cyst. Complex adnexal mass should be histopatologicaly evaluated before donor IVF cycles.*

Keywords
Pregnancy, Ovarian cancer, Endometriosis, Abscess.

Introduction

Appendicitis, cholecystitis and bowel obstruction are the most common surgical illnesses in pregnancy. In more than 50% of cases, surgical illnesses develop in the second and third trimester due to the growth of a gravid uterus and the consequent compression of abdominal organs. It is most difficult to establish a diagnosis during the first trimester, because the symptoms are attributed to pregnancy itself and it is not possible to use invasive diagnostic techniques. The most common gynecological diseases that need surgical interference during pregnancy are: large benign cystic formations, ovarian, adnexal torsion and torsion of pedunculated myoma and heterotopic pregnancy. Adnexal inflammatory tumors and malignant disease are less common.

Material and Methods

A 33 year old patient was admitted to "Narodni Front" University clinic for gynecology and obstetrics, when she was 14 weeks pregnant because of grave condition and fever (38,5 C°); she denied pains, nausea and vomiting. The pregnancy was established through IVF procedure using a donor egg. The patient had previously undergone three laparoscopic surgeries (in 2005, 2009 and 2010) of stage III/IV bilateral endometriosis, after which it was concluded she was suffering from POF. Her sister underwent an operation of borderline ovarian cancer at the age of 22. The donor egg IVF procedure was done in Prague and the patient was found then to have a 5 cm cyst whose ultrasound characteristics matched those of the left ovary endometriosis; the donor egg IVF procedure was completed regardless the cyst.

All was well during the first 10 weeks of pregnancy. Between week 10 and week 12 there appeared complications concerning unexplainable thrombocytosis and strange feverish episodes. The patient had no pains. As the patient remained feverish, she was hospitalized in the lookal hospital for parenteral antibiotic therapy. After an initial improvement due to combination antibiotic therapy (cephalosporin and metronidazole), there was a new complication and at week 14 the patient was referred to our hospital.

Results

On admission, a complete physical exam was performed and the patient underwent laboratory and ultrasound testing as well. The patient's condition was grave; on examination, she was weak, feverish, conscious, well – oriented, slow, Brady kinetic, indisposed, normotensive, with normal diuresis; there was marked abdominal tenderness around the left epigastrium and left inguinum. Gynecological examination: nothing abnormal was detected in external genitalia, cervix was 1,5 cm long, softened and a fingertip dilated, there was no ex utero bleeding, fundus was positioned 1 finger below the umbilicum, there were no irregularities in the right adnexa, whereas in left adnexa region a 10 – cm retrouterine tumefaction was palpated compressing the uterus; Douglas' cul – de - sac was tender on palpation and protruding, lateral left fornix was tense. Laboratory tests that were done upon admission revealed an increase in all infection parameters (CRP 158, 3; WBC 10,0; ESR 100; Ca 125/ 50,4), as well as an increase in thrombocyte count (PLT 665), moderate anemia (Hgb 101; HCT 29,4) and hypoproteinaemia (tp 58).

Ultrasound examination

Vital pregnancy with normal sonographic characteristics which matches the gestational period. In the region of left adnexa there was a visible 10 x 9 cm tumefaction filled with a thick, echogenic content having pronounced pericystic blood flow and no blood flow in the cyst itself. Doppler indices were normal. There was no free fluid in the pelvis. The right adnexa were not visualized. Within 16 hours of admission, according to the patient's medical condition, rapidly worsening clinical picture, deterioration in lab test results and ultrasound results, a decision was made to perform a surgery due to vital indications. A large left – sided tubo – ovarian abscess was found (around 10 cm); it was crumbling and necrotic, filled with a large amount of purulent collection. The right adnexa were covered in adhesions behind the uterus. It was decided to evacuate the left – sided tubo – ovarian abscess, to perform adnexectomy and explore the appendix while doing lavage and drainage. The removed material was sent to histopathological analysis. The early postoperative course was normal. On the fourth postoperative day, the patient's condition deteriorated. Laboratory test results: WBC 14,3; CRP 159,5; PLT 635; ESR 110. Ultrasound examination indicated a vital eutrophic pregnancy and suspected strangulated ileus. According to the clinical picture, lab tests, ultrasound examination and having consulted a general surgeon, it was decided to perform a relaparatomy with detachment of jejunum. The abdomen was explored and apart from the ileus no other pathological substrate was visualized. There was an intensive postoperative monitoring with fluid and albumin replacement, three – antibiotic therapy, SPP kryoprecipitate transfusion and parenteral iron therapy. Complex postoperative therapy resulted in discharging the patient in good condition with vitally stable pregnancy and normal ultrasound characteristics. On discharge, gynecological test was normal, laboratory test results were within reference ranges, including infection parameters and the coagulation status. When hystopathological test was completed, the result reveled not only inflammatory, but malignant ovarian disease as well.

Histopathological result

Macroscopic description: previously opened adnexal tumor (90 mm in diameter) received; its external surface covered in adhesions and in its cross – section it had cavities covered in yellowish crumbling depositories. Ovaries covered in adhesions and changed due to cysts.

Histopathological diagnosis: Adenocarcinoma endometroides ovarii, HG3 NG2, Endometriosis ovarii, Deciduosis ovarii, Salpingitis chronica in exacerbatione acuta.

Stage T1cNxMxLOVO (FIGO IC)

Upon thepathologist's request, immunohistochemical analysis was also done.

Microscopic description: Ovarian tissue infiltrated by predominantly solid areas of poorly differentiated adenocarcinoma with moderate nuclear atypia. The tumor is partly necrotic. Moderate nuclear atypia present.

Immunohistochemical profile: CEA (+), CK7 (+), CK20 (-), CDX2 (-), Vimentin (+), Er (+), CA 125 (-).

According to morphology and immunohistochemical profile, it is a poorly differentiated endometrioid ovarian adenocarcinoma with moderate nuclear atypia.

In order to prepare the patient to be presented to the consulting body for malignant diseases of Obstetrics and Gynecology Clinic "Narodni Front", MRI of the abdomen and pelvis was done.

MRI of the abdomen and pelvis result

MRI result matches that of a gravid uterus with a fetus in the uterine cavity and the posterior placenta; it revels the condition posterior to left adnexectomy with visualized multifocal changes periuterine on the left, paracolic on both sides, subhepatic on the right, perisplenic along the anterior abdominal wall and presacral pararectal on the right, as well as multifocal changes in the liver whose differential diagnostics matches that of secondary deposits, laminar perisplenic ascites.

The patient was urgently hospitalized at week 22 because of serious condition, having abdominal pains and signs of initial stage of ileus. In accordance with all the necessary findings and the fact that it was poorly differentiated endometrioid ovarian carcinoma which was immunohistochemically proven to be estrogen related and to show a rapid and extensive growth, the patient was informed of being endangered and having got her consent, the consultant body decided to perform a radical surgery and terminate the pregnancy at week 22. A total classic hysterectomy was performed together with right – sided adnexectomy, omentectomy, resection of 15 cm of the small intestine with T–T anastomosis, resection of the descending colon and sigma according to Hartmann and positioning colostomy bag to the anterior abdominal wall. The retrieved material was sent to histopathological analysis. During the surgery, a living male fetus was extracted, weighing 550 g, Ap 1/1. On the fifth postoperative day, the fetus died due to the immature respiratory system.

During the postoperative course, the patient was intensively monitored with fluid and albumin replacement, antibiotic and anticoagulation therapy and parenteral therapy of iron supplements. Complex postoperative therapy resulted in discharging the patient in good medical condition with vitally stable parameters and she was advised to present to the consulting body for malignant diseases in order to continue the treatment.

The patient did not present to the consulting body for malignant diseases. We learnt from her family that she continued the chemo treatment abroad. The patient lived for 6 months since she had first been admitted to our hospital.

Discusion

Analyzing the relevant literature [1-12], we did not come across endometroid ovarian carcinoma with a necrotic tubo – ovarian abscess filled with a large amount of purulent collection.

It is possible that the tumor growth was speeded up by a large amount of hormones, especially estrogen, which is recommended during the first trimester and which eventually resulted in patient's death. Literature [12] describes a case of a spontaneous rupture of endometroid ovarian carcinoma in week 26; it was diagnosed postoperatively and the pregnancy was maintained till week 34. An individual approach to such serious and delicate cases is crucial and if a patient's medical condition allows it, fertility – sparing surgical management should always be made possible in order to maximize maternal and fetal outcomes [11].

In our opinion, during the donor – egg IVF preparation procedure it is necessary to carry out histological confirmation of any adnexal mass larger than 4 cm prior to starting the procedure, as hormone – related tumors can speed up the development of malignancy and worsen the outcome due to the therapy which is used to support such donor cycles.

Treatment of ovarian malignancies during pregnancy depends on histology, grade, stage and gestational weeks. Management of ovarian tumors in pregnancy require a multidisciplinary approach to guarantee an optimal treatment for the mother and the fetus [13].

Conclusion

Ovarian cancers are rare during pregnancy but should be suspected in patients presenting with a large cystic adnexal mass. Complex adnexal mass should be histopatologicaly evaluated before donor IVF cycles.

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