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Case Report

A Case Report in the Third Trimester Pregnancy: Ovarian Torsion, A Rare Cause of Acute Abdomen

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Abstract

A 32-year-old, 34 week pregnant woman was admitted to our emergency clinic with right lower quadrant pain. Adnexal regions and the appendix could not be visualized on the ultrasound. Because of the persistent acute abdominal pain, laparotomy was performed. Right adnexal peduncle was observed to have been twisted 3 times and appendix was normal. Salpingo-oophorectomy was performed due to necrosis of the right ovary. The follow up patient was examined regularly. Caesarean section was performed due to detected uterine contractions in the 38 weeks.

Introduction

Ovarian torsion refers to the complete or partial rotation of the ovary on its ligamentous supports, which often leads to an impedance of its blood supply [1]. Adnexal torsion during pregnancy is very rare and the incidence is reported to be in the range of 0,01-0,05 per hundred [2]. It occurs in all three trimesters, but is most common in the first trimester. Risk factors include the presence of an ovarian cyst or mass (Especially Mature Cystic Teratomas) and induction of ovulation [3]. Torsion is the fifth most common surgical emergency but, due to infrequent incidence of adnexal torsion, recognition or suspicion of this pathology can be delayed.

Case Report

A 32 years old woman with 34 weeks 4 days of gestation was admitted to our emergency unit with abdominal pain. Gravida 3, parity 2 woman had two previous caesarean sections. She had a history of Familial Mediterranean Fever (FMF) and was using colchicine twice a day. The patient described a pain only in the right lower part of the abdomen, which was different from her FMF attacks. In physical examination, abdominal tenderness and rebound were present on the right lower quadrant of the abdomen. Obstetric ultrasonography revealed a vertex presenting fetus with normal fetal anatomic measurements and normal amniotic fluid. Placenta was observed on the anterior wall of uterus in a natural appearance. In adnexal regions, no gross pathology could be detected. In digital vaginal examination, there was no cervical dilatation. Cervix length was measured as 35 mm in transvaginal ultrasonography. Toco trace and uterine palpations were unable to detect any uterine contractions. According to these findings, preterm labor was not considered in the patient.

Her laboratory findings were; Hgb: 9.4 g/dl, Htc: 28.7%, Plt: 215.000/mm^3, WBC: 15.500/mm^3. The consultant internal medicine doctor didn't think there was FMF attack in the physical examination and anamneses. The physical examination performed by the consultant general surgeon indicated an acute abdominal pain and his prediagnosis was acute appendicitis. Laparotomy was performed because the patient was thought to have an acute surgical abdomen. Laparotomy revealed that the right adnexal peduncle was rotated three times. Right adnex was observed to be enlarged edematous and congested, which indicated for torsion and infarction of the ovary and fallopian tube (Figure 1).

Figure 1: Edematous right adnexal peduncle was twisted three times.

Appendix was observed as normal. Salpingo-oopherectomy was performed due to the necrotic nature of the adnex.

Pathology report confirmed the diagnosis of dermoid cyst, torsion and necrotic regions in the ovary. Scanning of fetal heart trace was normal and no uterine contractions after the operation. The patient was discharged on the fourth day after the operation. The follow up patient was examined every week. Caserean section was performed because of detected uterine contractions on the 38 weeks. A healthy 2700 g girl baby was born with Apgar scores of 8 and 9.

Discussion

In pregnancy adnexal torsion is a rare case presenting with acute onset of moderate to severe pelvic pain (%90), nausea-vomiting (%47-70), low grade fever (%2-20), leukocytosis (this finding is usually obscured by physiologic mild leukocytosis in pregnant cases), or adnexal mass (%86-95) [4]. Fever could be a symptom of adnexal necrosis, especially in the setting of leukocytosis.

Ovarian mass formation is the primary risk factor for ovarian torsion when the mass is 5 cm in diameter or larger [5,6]. Compared to the larger masses, ovarian masses 6 to 8 cm in diameter may undergo torsion. However, rarely like in this case small ovarian masses can cause ovarian torsion. 60% of the cases are diagnosed between 10^{th} and 17^{th} weeks of gestation and nearly 30% of these cases are related to mature cystic teratomas [7]. The incidence of adnexal torsion in the third trimester may not be detected due to its rareness.

When compared to the left, the right ovary appears to be more likely to torse. It is because the right utero-ovarian ligament is longer than the left and the presence of the sigmoid colon in the left side of the colon may help to prevent torsion [8]. It is also more likely confused with acute appendicitis in pregnancy. Approaching an acute surgical abdomen during pregnancy is a difficult decision for the clinician because abdominal surgery in pregnancy poses risk for both mother and fetus. Gynecologists must evaluate the patient's medical history, ultrasonography and laboratory findings. Although these studies can predict the adnexal torsion, physical examination and suspicion are the key points.

For patients with suspected ovarian torsion, ultrasonography is the preliminary imaging examination choice which reveals increase in ovarian size because of congestion. It could also demonstrate ovarian stromal heterogeneity, abnormal ovarian location, multiple small peripheral follicles (String of Pearls) and decreased or absent Doppler flow within the ovary. Doppler ultrasonography can be utilized to determine torsion although the presence of blood flow does not reduce the possibility of it. Abnormal Doppler flow has a sensitivity and specificity of 43 and 92 percent [9]. Direct visualization of a rotated ovary at the time of surgical evaluation is the exact diagnosis of ovarian torsion.

Management of torsion in pregnancy is similar to that in nonpregnant patients, but may be technically more difficult due to the size of the gravid uterus. In ovarian torsion, the key factor is to perform detorsion as quickly

as possible. We recommend detorsion and ovarian conservation rather than salpingo-oophorectomy in viable cases. But in our case, ovary and tube were not in its normal anatomical structure and had a friable consistency in gross inspection (ovarian and tubal necrosis), so we performed salpingo-oopherectomy. Studies have confirmed the safety and effectiveness of laparoscopic management of torsion in the first and second trimester pregnancy [10,11].

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