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Isolated Paratubal Cyst Torsion during Pregnancy: A Case Report

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ABSTRACT

Background & aim: Among the obstetric and gynecologic emergencies are paratubal or paraovarian cysts, which are generally detected in pregnancy, incidentally. Isolated torsion of a paratubal cyst, especially in late pregnancy, is extremely rare. Here, a case of isolated paratubal cyst torsion during pregnancy is introduced.

Case report: The patient was a 36-years-old woman with gestational age of 35 weeks of second pregnancy referred to the department of obstetrics due to severe crampy abdominal pain as well as nausea and vomiting. Ultrasound assessment revealed a 7×8 cm adnexal cyst. Regarding worsening of the patient's pain, despite the report of normal ovarian vascular flow, laparotomy was performed due to suspicion of ovarian torsion. An isolated paratubal cyst torsion was confirmed during laparotomy.

Conclusion: Nonspecific clinical features and uncommon objective findings are the main causes of misdiagnosis of ovarian torsion in pregnancy. Regarding the large uterus in pregnancy, the diagnosis of torsion is challenging. Therefore, there should be a high index of suspicion for firm diagnosis and appropriate management.

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Introduction

Paratubal or paraovarian cyst is a fluid containing a sac which arises from the broad ligament of the fallopian tube or ovary and accounts for approximately 4.7% up to 20% of adnexal masses (1,2). Paratubal cysts are often unilateral, asymptomatic and are mostly measured 2 to 20 mm in size, which do not cause significant clinical problems. However, in some cases, they exceed the usual size or may become symptomatic due to enlargement or torsion, and become a clinical concern for the practitioners (3,4).

Abdominal pain may have various etiologies in pregnant females depending on different trimesters of gestation (5). Adnexal torsion is an uncommon cause of acute abdomen in pregnancy. Adnexal torsion indicates a complete or incomplete twist of the ovary around its vascular axis, which impairs proper blood flow to the ovary and consequently causes necrosis. Ovarian torsion is mostly attributed to hyper stimulation therapy or adnexal mass. However, early diagnosis is critical, the identical characteristics of adnexal torsion with other differential diagnoses of acute abdomen makes the diagnosis difficult (6,7). Isolated twisting of a fallopian tube is an uncommon event. The incidence from previous reports is 1/1,500,000 women (8).

The incidence of paratubal cyst torsion occurrence is most likely between the 10th and 19th weeks of gestation, adnexal torsion is so rare in the third trimester and term pregnancy (9). Due to the rarity of these cysts in the third

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trimester of pregnancy, we reported a case of isolated paratubal cyst torsion in a 36-years-old woman with gestational age of 35 weeks of second pregnancy.

Case report

A 36-years-old multiparous woman with gestational age of 35 weeks +1 day was referred to the obstetrics department with severe lower abdominal pain that had started abruptly three days ago and gradually became constant and increased in intensity accompanied by nausea and vomiting. Medical and obstetrical history was unremarkable except a history of ovarian cyst.

She underwent an ultrasound two days before admission which showed a mild hydronephrosis of the left kidney without any stone and normal obstetrical findings. No evidence of a cyst was available.

During the physical exam, the vital signs were normal (blood pressure: 110/70 mmHg, pulse rate: 80 per minute) and the patient was afebrile. Abdominal examination revealed severe tenderness in the left lower quadrant, without guarding or rebound. The pain was non-radiating, crampy with no aggravating or relieving factors. Laboratory tests relieved mild leukocytosis (hemoglobin and hematocrit were normal). Urine analysis was also normal.

Initial management with IV therapy and analgesia was started. Based on the findings and the increased pain, color Doppler ultrasonography was performed which showed a 7×8 cm thin-walled cyst next to the left ovary and normal ovarian blood flow which did not convince the clinicians to rule out the diagnosis of ovarian torsion. The laparotomy was done under spinal anesthesia and through a midline incision. In abdominal exploration, a pregnant uterus and normal ovaries were detected. A large hemorrhagic twice twisted left paratubal cyst was demonstrated. The patient underwent resection of the mass without rupture (Figure1).

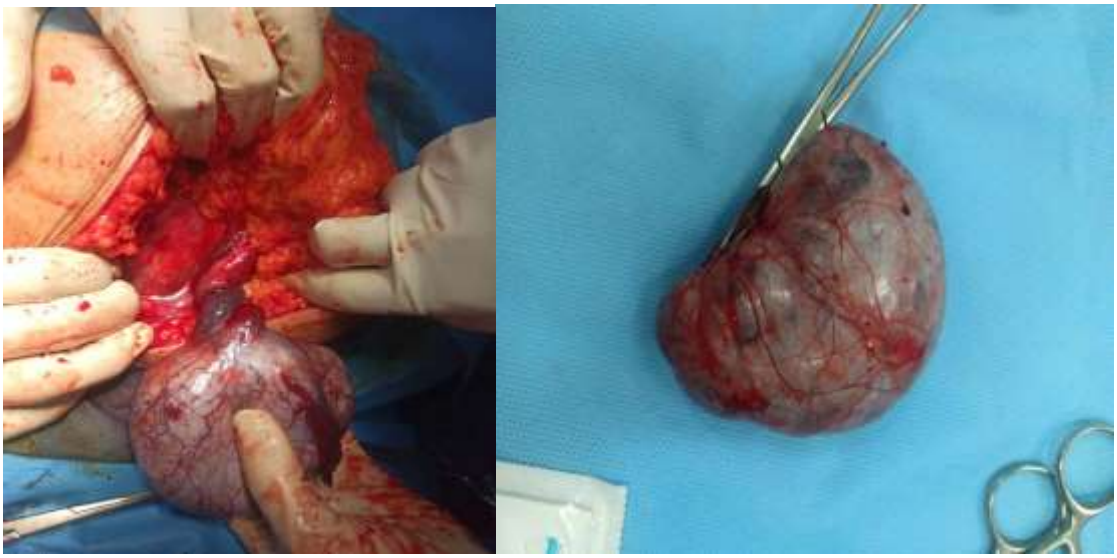

Figure 1. Distorted paratubal cyst which was resected

Histopathology subsequently confirmed a benign serous cyst adenoma. After 3 days, the patient was discharged with general health condition and resolved the symptoms. The patient's condition was good without any problems until three weeks later. After 3 weeks, she was again hospitalized due to the rupture of membranes. The amniotic fluid was stained with meconium and the patient was transferred to the operating room for cesarean section due to lack of response to induction. A male neonate with an Apgar score of 6-8 was born. Post-operative period was uneventful and she was discharged on iron.

An informed consent was obtained from the patient to publish this case and attached figures.

Discussion

Paratubal and paraovarian cysts are mostly diagnosed incidentally during operations for other purposes. Few cause symptoms and they rarely grow and have complications such as hemorrhage, rupture, or torsion (10). Most of them are small, but there are some reports of large paratubal cysts. In the study of Skaff et al., a very large size paratubal cyst with size of 26×38 cm was reported (3); in the present case also the size of the cyst was larger than the usual size. Moreover, in the study of Alpendre et al., a large central abdominal pelvic cyst arose from the right adnexa (10).

Paratubal cyst torsion is very rare in the third trimester of pregnancy and mostly occurs before the 17th week of gestational age (6, 11). In the present case, paratubal cyst torsion occurred at 35th week of pregnancy and was more likely to be mistaken for other diagnoses of acute abdominal pain, such as appendicitis, ureteral or renal colic, cholecystitis and uterine contractions; the first diagnosis of ureteral or renal colic was suggested according to ultrasound.

Bai et al. have reported adnexal torsion in the third trimester of pregnancy and evaluated the diagnostic value of MRI in adnexal torsion. They concluded that MRI is helpful where ultrasound is indeterminate for diagnosis of torsion of adnexa in advanced pregnancy (6). In the present case, ultrasound evaluation was nondiagnostic and just a large cyst next to the left ovary was reported, but exploratory laparotomy was performed based on high diagnostic suspicion and severe abdominal pain.

Laparoscopy is the preferred approach for diagnosis and treatment of adnexal torsion (12), but laparotomy was decided for the present patient due to the technical difficulties associated with trocar insertion in the third trimester and the unavailability of an experienced laparoscopic surgeon in an emergency (12).

Conclusion

Paraovarian/paratubal cysts are frequent, but only in a few cases they were clinically symptomatic. The diagnosis of adnexal torsion in advanced gestational age is difficult due to nonspecific symptoms and signs and the limitations of ultrasound. There should be a high index of suspicion for firm diagnosis and appropriate management.

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Conflicts of interest

Authors declare no conflicts of interest.

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