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Gangrenous Paraovarian Cyst with Pregnancy: An Unusual Presentation

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Abstract: In this case, researchers report a 26 years old multigravida with 35 weeks of gestation presenting with torsion of paraovarian cyst. She presented to the antenatal clinic with acute abdominal pain. Ultrasound revealed 15×10 cm adnexal cyst. She was diagnosed to have torsion of adenxal cyst during pregnancy. Laparotomy was done with total excision of the cyst which was paraovarian and delivery of the baby by caesarian section because of preterm labour with history of caesarian sections twice before. She delivered a healthy female baby. The operative time was 90 min. The patient was released from the hospital 3 days after surgery in good general condition. Her histopathology report showed a gangrenous paraovarian cyst. Paraovarian torsion is relatively uncommon pregnancy. Diagnosis can usually be made on the basis of the characteristic clinical presentation in conjunction with ultrasound evidence of a unilaterally enlarged adnexal mass and surgery. Treatment options are limited to surgery either by laparoscopy or laparotomy but the former becomes more difficult after second trimester.

Key words: Adenxal cyst, paraovarian torsion, pregnency, diagnosis, surgery

INTRODUCTION

Paraovarian cysts may arise from the Wolffian ductor paramesonephric duct remnants. They are simple cysts that usually range from 1-8 cm in diameter. These cysts are generally asymptomatic but may present with abdominal pain due to enlargement, torsion or rupture (Perlman *et al*., 2005).

In pregnancy, they are diagnosed because of pain during physical examination or routine ultrasonography. In a recent review of the of ovarian tumors in pregnancy, paraovarian cysts were the third most common type after benign cystic teratomas and serous cystadenomas (Bignardi and Condous, 2009).

Surgical treatment for paraovarian cysts can be carried out by operative laparoscopy or laparotomy. In non-pregnant women, operative laparoscopy has almost replaced laparotomy (Smorgick *et al*., 2009; Gocmen *et al*., 2009; Ron *et al*., 2005).

CASE REPORT

A 26 years old multigravida, G3P2, presented to the antenatal clinic with 35 weeks of gestation, pain in the abdomen and three episodes of vomiting, since 1 day. The patient had delivered twice by caesarian section before. Her menstrual cycles were regular. She described the pain as sharp non-radiating type of pain in the right iliac fossa with sudden onset with no relieving factors. Also, the patient gave history of bloody show through the vagina but no discharge. There was no history of diarrhea, constipation, fever, urinary complaints or any recent illness. She conceived spontaneously. The patient had regular antenatal checkups. First and second trimesters were uneventful. No significant past medical and surgical history noted.

On examination, the patient was conscious, coherent in agony with pulse 82/min, blood pressure 130/80 mm Hg, low grade fever, cardiovascular and respiratory systems normal.

Abdominal examination revealed fundal height corresponding to 35 weeks gestation. Uterus was irritable. There was a single fetus in longitudinal lie with breech presentation. Fetal heart rate was good and regular. There was severe tenderness in right iliac fossa. On vaginal examination, cervix was soft, anterior, 50% effaced, 4 cm dilated, membrane ruptured and breech presentation. Bloody show through vagina was noted indicating preterm labor.

Blood and urine investigations were within normal limits. Ultrasonography revealed a 15×10 cm single an echoic cystic lesion in right iliac fossa and no solid components with no doppler flow. It also showed a single intrauterine live fetus in longitudinal lie with breech presentation of 35 weeks gestational age. Amniotic fluid adequate, placental position posterior upper segment with grade 2 maturity. No evidence of free fluid in the abdomen.

With the provisional diagnosis of twisted adnexa cyst, emergency laparotomy was done under regional anesthesia through lower midline incision. A 15×10 cm right paraovarian cyst was found to be twisted around its pedicle by 3 rotations and gangrenous (Fig. 1).

Fig. 1: Right gangrenous paraovarian cyst

Fig. 2: Right gangrenous paraovarian cyst after resection

Total excision of the cyst (Fig. 2) and delivery of the baby by caesarian section because of preterm labour with history of caesarian sections twice before. The procedure involved detailed visualization of the abdominal cavity. The cyst was sent for histopathological examination. The operative time was 90 min. The patient was discharged from the hospital 3 days after surgery in good general condition. Follow-up in the outpatient clinic was satisfactory. The final histopathology report confirmed the simple gangrenous paraovarian cyst as reported previously.

DISCUSSION

The incidence of diagnosing an adnexal mass by ultrasound in pregnancy ~1%. During pregnancy, right adnexial torsion is more common. Sigmoid colon is somehow protect the left adnexa (Dede *et al*., 2007). Management of adnexal masses in pregnancy is usually expectant because most lesions are discovered incidentally during routine ultrasonography and resolve spontaneously, the incidence of malignancy is rare and unnecessary surgical interventions may lead to adverse maternal and fetal outcomes. However, in certain clinical situations, surgery can be life saving or of paramount importance (such as acute abdomen, large cysts, suspicion of malignancy or obstructed labor) (Dede *et al*., 2007).

In this case, researchers report a 26 years old multigravida with 35 weeks of gestation presenting with torsion of paraovarian cyst. She presented to the antenatal clinic with acute abdominal pain. Ultrasound revealed 15×10 cm adnexal cyst. She was diagnosed to have torsion of adenxal cyst during pregnancy. Laparotomy was done with total excision of the cyst which was paraovarian and delivery of the baby by caesarian section. Her histopathology report showed a gangrenous paraovarian cyst.

There are some issues with surgery during pregnancy: specifically, the gestational age at which the surgery is carried out, the circumstances at the time of surgery (elective or emergency) and the route of surgery (laparotomy or laparoscopy). Ideally, surgery should be carried out electively early in the second trimester (at ~15 weeks of gestation) to minimize the risks of spontaneous abortion if surgery is carried out in the first trimester and the risks of preterm labor and/or intrauterine fetal death if surgery is carried out late in the second trimester or in the third trimester (Dede *et al*., 2007; Batukan *et al*., 2007).

With respect to the surgical route, excision of a cyst by laparotomy was once the standard treatment. Currently, operative laparoscopy is the most effective and preferred way of managing paraovarian cysts in non-pregnant women because of reductions in febrile morbidity, urinary tract infections, postoperative complications, postoperative pain, length of stay in the hospital and cost. The possible risk of operating laparoscopically on malignant cysts can be minimized by proper selection of patients.

Premenopausal women with unilateral, unilocular and simple cysts with negative tumor markers are less likely to have malignant cysts. The importance of tumor markers during pregnancy is controversial. In addition, intraoperative assessment and careful assessment torule out malignancy is of paramount importance. Surgical options include excision, cyst fenestration and marsupialization (Rouzi and McComb, 1994). Laparoscopic management of ovarian cysts during early pregnancy is gaining popularity over laparotomy (Lee *et al*., 2010; Abdulrahim, 2011).

CONCLUSION

Paraovarian torsion is relatively uncommon pregnancy. Diagnosis can usually be made on the basis of the characteristic clinical presentation in conjunction with ultrasound evidence of a unilaterally enlarged adnexal mass and surgery. Treatment options are limited to surgery either by laparoscopy or laparotomy but the former becomes more difficult after second trimester.

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