

A rare case of giant dermoid cyst with ipsilateral paratubal cystadenoma during pregnancy

Ahmed M. Abbas,¹ Yasser Khamis,² Armia Michael,¹ Abdelrahman M. Abdelkader¹

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Abstract

Dermoid cysts are considered the most common ovarian cysts in adolescents and pregnant women. In rare cases, they can attain a huge size. Paratubal cysts are also common in adolescents. They are usually simple cysts present in the broad ligament. In this case, we report a giant dermoid cyst with ipsilateral paratubal serous cystadenoma discovered during pregnancy of a 20-year-old primigravida. Both cysts were managed conservatively, and then removed successfully at the time of cesarean section by cystectomy.

¹Department of Obstetrics and Gynecology, Faculty of Medicine; Assiut University, Assiut, Egypt

²Department of Obstetrics and Gynecology, Faculty of Medicine; Beni Suef University, Beni Suef, Egypt

Introduction

Ovarian cysts during pregnancy are fairly common, however most of them spontaneously disappear during follow-up.¹ The most common types are dermoid cysts, found in 25% of cases, followed by corpus luteum cysts and

other functional cysts in 17% of cases.² The management of ovarian cysts during pregnancy is challenging for obstetricians because of the great possibility of surgery-related complications in addition to the risk of late diagnosis of malignancy, if present.³ The incidence of ovarian masses in pregnancy is variable from 0.2-2%, depending on the trimester of pregnancy.⁴

Dermoid cysts are the most common ovarian cysts in adolescents.⁵ In most women, they remain asymptomatic and are discovered accidentally on ultrasound scan.⁶ Giant dermoid cysts have been infrequently reported in the literature. They are much more likely to cause complications such as torsion and rupture.⁷

Paratubal cysts (PTCs) or paraovarian cysts are usually small cysts that arise from the mesothelium and present in the broad ligament between the ovary and the fallopian tube.⁸ They account for 10-

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Corresponding author: Ahmed M. Abbas, MD, Department of Obstetrics and Gynecology, Assiut University, Assiut, Egypt; Woman's Health Hospital, 71511, Assiut, Egypt, Cellular: +20 10033851833; Tel: +20882414698; email: bmr90@hotmail.com

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20% of all adnexal masses.⁹ They are usually asymptomatic and benign. The incidence of PTCs is unknown, but it is much higher in adolescents, reaching 7.3%.¹⁰

Dermoid cysts are often misdiagnosed as true ovarian cysts. Since they are difficult to diagnose preoperatively, they

are usually found incidentally during abdominal surgery.

Here, we present a case of unilateral giant dermoid cyst with an ipsilateral paratubal cystadenoma encountered during the third trimester of pregnancy and removed successfully during cesarean section (CS).

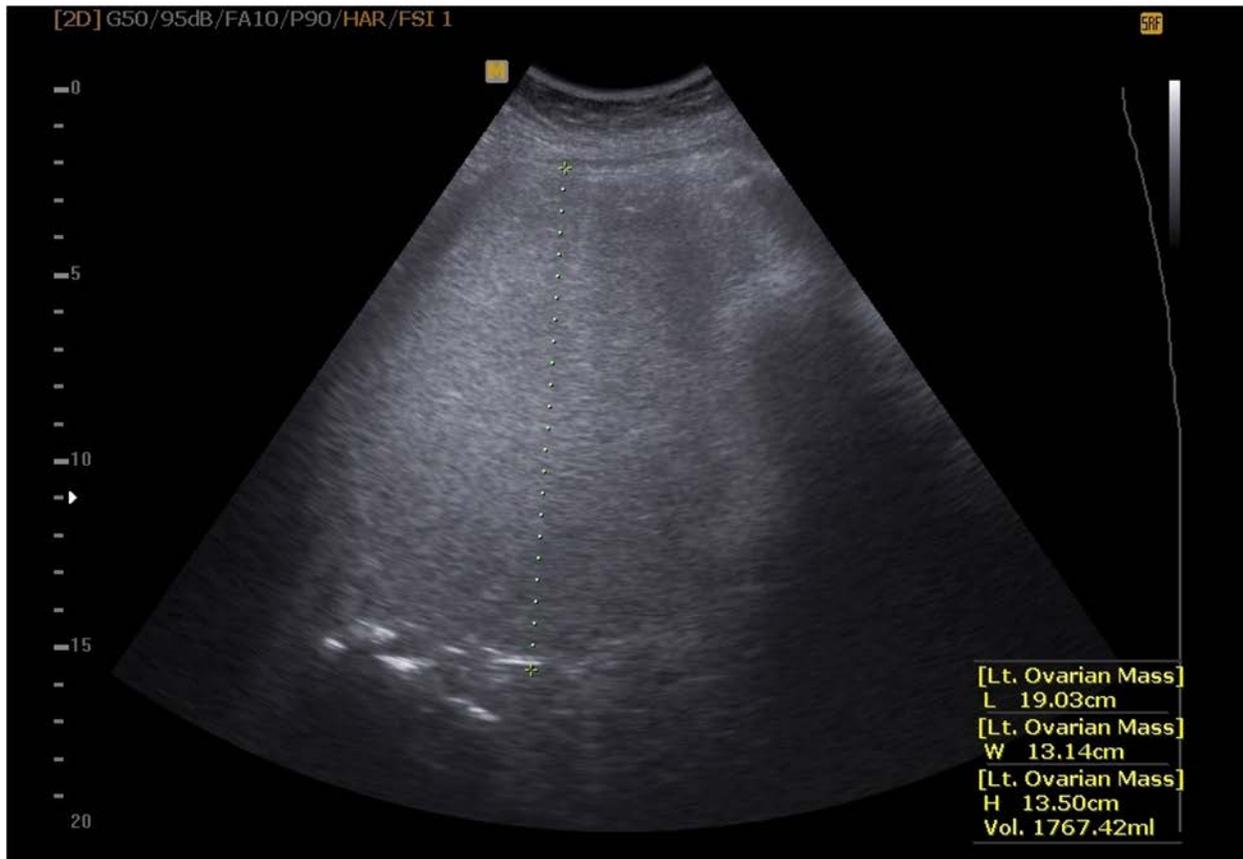


Figure 1: Abdominal ultrasound shows left echogenic mass measured 19 x 13 x13 cm, has well defined edges and no solid growths inside

Case presentation

In March 2017, a 20-year-old woman, primigravida, pregnant 34 weeks (based on her last menstrual period) presented to the Antenatal Care Clinic of a tertiary-care university hospital complaining of abdominal distension and difficulty breathing. The onset of her condition was gradual and became progressive with the advancement of pregnancy. She had irregular antenatal visits; however, the course of pregnancy was uneventful. She had no prior history regarding the presence of ovarian

masses reported on ultrasound.

On general examination, the patient had an average body build. Her weight was 78 Kg and vital signs were normal. Abdominal examination revealed a hugely distended abdomen with stretched skin. A pregnant uterus, symphysial-fundal height 33 cm, with audible fetal heart sounds for a single fetus was found. There was a mass with limited mobility and ill-defined edges occupying the left lumbar and hypochondrial region, which pushed the uterus to the right side.



Figure 2: Abdominal ultrasound shows a simple anechoic unilocular cyst adjacent to the first one, measuring 6 x 5 x 5 cm, with thin incomplete septations

Abdominal ultrasound revealed a single living fetus, breech presentation that measured 33.5 weeks with average biometry, normal amniotic fluid index and fundal-located placenta. There was a large cystic mass beside the uterus, that measured about 19 x 13 x 13 cm, had well-defined edges, was thick walled and echogenic in consistency with no solid growths inside (Figure 1). Another unilocular cyst was present adjacent to the first one. It measured about 6 x 5 x 5 cm, had well-defined edges was thin walled and anechoic with thin, incomplete septations (Figure 2). Doppler evaluation of both masses excluded torsion and revealed normal vascularization. A serum tumor marker test showed alfa-feto protein, CA125, LDH and CA19-9 were in the normal range. We could not perform an extemporaneous histological examination to assess the nature of lesions as the patient was pregnant.

The patient was managed conservatively and advised for bed rest in a semi-sitting position with weekly follow-up by ultrasound until delivery. At 38 weeks of gestation, the patient was counseled for CS with possible oophorectomy and informed consent was obtained. CS was performed under spinal anesthesia by a senior obstetrician. A healthy, female neonate (birth weight 3100 gm and Apgar score 10/10 at 1 minute) was delivered through a transverse lower segment incision. Intravenous oxytocin (10 IU)

was administered. The uterine incision was closed in double layers with absorbable sutures.

After uterine closure, the mass was exteriorized outside the abdomen for surgical intervention. There were two masses; the large one was ovarian in origin and the smaller one was a paratubal cyst with stretched left tube over its wall (Figure 3). The ovarian mass was about 20 x 20 cm in diameter and cystic in consistency with a smooth surface and thick wall. No solid areas were palpable. The abdomen was explored, and no other abnormalities were found. The right ovary was normal in size.

Cystectomy was done starting with the large ovarian cyst without rupture or spillage of its contents. Suturing of the remaining ovarian tissue was done with perfect hemostasis. Next, the paratubal cyst was removed successfully without rupture. Both cysts were sent for histopathological examination, which confirmed the nature of ovarian dermoid cyst and a simple paratubal serous cystadenoma.

The patient had a smooth postoperative course as she passed flatus 12 hours after surgery and defecated next morning. On the third postoperative day, she was discharged from the hospital without any complications.



Figure 3: Gross picture of the two adnexal masses during cesarean section

Discussion

Adnexal masses discovered during pregnancy should be carefully evaluated in order to choose the proper line of management and to prevent the occurrence of complications. Accurate differentiation of benign from malignant masses can be accomplished effectively by two-dimensional ultrasound,¹¹ color Doppler,¹² three-dimensional Power Doppler¹³ and MRI.¹⁴ The levels of tumor markers like CA125 and β hCG play a limited role in diagnosis as they are usually raised in pregnancy.

Conservative management (wait-and-see strategy) with serial ultrasound monitoring of the mass is an optimum solution for cases of adnexal masses detected during pregnancy, as acute complications like torsion or rupture are not very common. Additionally, the incidence of ovarian malignancy in pregnancy is rare (1-6%).¹⁵

Prenatal diagnosis of adnexal masses is essential for surgeons so that additional management options, such as frozen section biopsy, expert obstetrician and cross-matched blood, can be prepared for prior to delivery. Furthermore,

prenatal informed consent for surgical intervention is an important medico-legal consideration in case adnexal masses are incidentally discovered during CS.¹⁶ In our case, both adnexal masses were diagnosed prenatally and the surgeon had prepared himself for dealing with them with written informed consent obtained from the patient preoperatively.

Dermoid cysts should be surgically removed whenever they are diagnosed, even during pregnancy, because of the potential for complications such as of torsion and rupture.¹⁷ Removal of dermoid cysts discovered late in the third trimester of pregnancy may be deferred until term because of the high risk of preterm labor when late-pregnancy interventions are performed.¹⁸ Elective CS with removal of cysts at the same time is the best line of management in such cases. In pregnancy, cystectomy with ovarian tissue preservation may be appropriate since the risk of malignancy is very low, and the patient may desire future fertility.¹⁸ In our case, the patient was managed conservatively until reaching term and elective CS was performed at 38 weeks followed by cystectomy, which was achieved successfully even with the huge size of the cyst

Paratubal cysts (PTCs) are mostly asymptomatic. However, on rare occasions such as with hemorrhage, torsion or malignancy, they may present with clinical problems.^{19,20} As the mass increases in size, the risk of torsion also increases. The biggest cyst reported in the literature reached 36 x 25 cm and was found in a 19-year-old girl.²¹ PTCs are generally not detected on pelvic examination. Most have thin, smooth

walls and anechoic echogenicity. Eccentrically located cysts may look like hydrosalpinx. Differentiation between PTCs and true ovarian cysts is difficult using imaging modalities such as ultrasound and MRI.⁹ Thus, many women may be managed similarly as for the diagnosis of ovarian cyst.

Another condition that should be differentiated by tumor markers or ultrasound from adnexal masses during pregnancy is hyperreactio luteinalis (HL). HL is characterized by bilateral ovarian enlargement due to presence of multiple theca-lutein cysts.²² These cases are usually managed conservatively by follow-up without the need for surgical intervention at time of cesarean section.²³

Giant ovarian masses are extremely rare. Most of them are benign, as malignancies are usually symptomatic before attaining a huge size.^{24,25} However, giant ovarian masses can be life-threatening when preoperative complications such as cardiovascular, pulmonary, and circulatory problems result from diaphragmatic elevation and aortocaval compression.²⁶

The current case discussed two important clinical issues. Firstly, ultrasound scan of the ovaries for adnexal masses is essential during prenatal visits. Early diagnosis can avoid the occurrence of complications and optimize the timing of intervention. Secondly, apart from HL, surgical management of adnexal masses should be performed during CS to avoid additional later surgery especially when there are no additional complications associated with the cesarean section.

Overall, our case report addresses an extremely rare occurrence. We were unable to find any cases in published literature that described a patient that had two different neoplastic cysts on the same side that were removed during cesarean section.

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