Giant benign mucinous cystadenoma growing during pregnancy: a case report

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Summary

A 32-year-old woman, gravida 4, para 2, was diagnosed with a benign right ovarian mucinous cystadenoma. It was diagnosed in the tenth week of pregnancy, measured 47 x 69 mm, and reached 190 x 152 mm at 23 weeks of gestation. Laparotomy was performed and the ovarian cystic mass was removed in the second trimester. The patient had postoperative tocolytic therapy and progesterone medication. She is at the 35th gestation week and no other antenatal complication has been reported. A case of giant mucinous cystadenoma is presented with clinical follow-up details.

Key words: Ovarian mucinous cystadenoma; Pregnancy.

Introduction

According to recent epidemiological studies on ovarian cysts during pregnancy one out of 600 are, in most cases, benign neoformations. The most frequent histological type reported is mature cystic teratoma (50% of cases), followed by functional cysts (13%), benign cystadenomas (20%) and ovarian cancer (0.6%) [1]. Most adnexal masses are asymptomatic and spontaneously resolve before the 16th week of amenorrhoea. On the other hand, some cases are persistent forms which can cause complications for the mother and fetus. The case of a patient with a growing ovarian cyst during pregnancy that was successfully treated in the second trimester is presented.

Case Report

A 32-year old, gravida 4, para 2, woman was seen for antenatal counseling the tenth week of gestation. Ultrasound examination revealed a normal fetus at nine weeks/two days of gestation according to crown-rump length. In addition, the presence of a simple cystic mass in the right adnexa measuring 47 x 69 mm was noted. Ascites was absent. Subsequent ultrasound examinations showed no change in the size of the adnexal mass the following two months. At 23 weeks a large, hypoechogenic, well-delineated 190 x 152 mm adnexal mass, settling posterior to the uterine fundus was noted at ultrasound examination. The patient was hospitalized. During the antenatal follow-up the patient was found to be a carrier for HBsAg. The chromosomal screening test in the first trimester reported, 1/390 risk for Down's Syndrome. No fetal anomalies were reported at ultrasound examinations.

After hospitalization a complete blood count and blood biochemistry were within normal limits, cyst hydatic aglutination tests were negative, and occult blood in the stool was negative.

Magnetic resonance imaging of the abdomen showed a mass of 20 cm in diameter, neighboring the right uterine wall and medial liver lobe, settling anteriorly to the pancreas with evident compression, well-delineated, thin walled, homogeneously intense, and also compressing the inferior vena cava. Adjacent intestinal segments were reported to be displaced. The demarcation line between the uterus and cyst was reported to be undetermined (Figure 1).

The patient underwent laparotomy at the 23rd week of gestation. The cystic mass was removed. The specimen was 20 cm (20 cm x 20 cm x 15 cm) in diameter (Figure 2). The left ovary was normal under observation. Peritoneal washing sampling was benign. Frozen pathological examination revealed mucinous cystadenoma and the subsequent pathological examination confirmed it.

Before laparatomy the patient was given intramuscular medroxyprogesterone acetate and she continued to take progestin pills (2 x 1). On the day of surgery tocolytic treatment was initiated with MgSO4 2 g/hour lasting for 24 hours. The patient was in the 35th week of gestation and no complication has been reported in antenatal follow-up.

Discussion

According to recent epidemiological studies on ovarian cysts during pregnancy one out of 600 are, in most cases, benign neoformations. The most frequent histological type reported is mature cystic teratoma (50% of the cases), followed by functional cysts (13%), benign cystadenomas (20%) and ovarian cancer (0.6%) [1, 2]. On the other hand, some cases are persistent forms which can cause complications for the mother and fetus. Average gestational age at diagnosis and surgery is 12 and 20 weeks, respectively. The preterm birth rate is 9% [3].

Most adnexal masses are asymptomatic and spontaneously resolve before the 16th week of amenorrhea [1]. The therapeutic approach to adnexal masses changes according to gestational age, mass size and mass property. Conservative management is preferred for masses < 6 cm [2, 4]. Caspi *et al.* evaluated the adequacy of conservative management during pregnancy and labor in women with an ultrasonographically diagnosed ovarian cystic teratomas and reported that ovarian dermoid cysts < 6 cm are not expected to grow during pregnancy or to

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Figure 1. — Magnetic resonance imaging of the abdomen showing a 20 cm in diameter mass at 23 weeks of pregnancy.

Figure 2. — The cystic mass was 20 x 20 x 15 cm in diameter.

cause complications in pregnancy or labor [5]. Torsion, rupture and hemorrhage usually need urgent surgery. If a cyst is > 6 cm, solid, bilateral and/or persists in the second trimester the traditional approach is laparotomy [6].

At about 18 weeks of gestation placental progesterone production increases to adequate levels. Laparotomy may be delayed until the second trimester to provide safer conditions for the fetus. Any surgical approach to the ovaries before the 18th week of gestation requires progesterone supplementation.

In a condition of malignant potential or maternal risk, a surgical therapeutic approach may be administered as soon as possible. Sherard *et al.* reported a preterm birth rate of 9% among operated cases [3]. Administration of tocolytic therapy and progesterone replacement avoids preterm birth and abortion.

We have described a cystic mass, 6 cm in diameter, diagnosed in the tenth week of pregnancy. The case was managed expectantly for two months. A surgical therapeutic approach was administered after the cyst became as large as 20 cm in diameter in the second trimester.

In conclusion an adnexal mass accompanying pregnancy needs follow-up. In cases of torsion, hemorhage or rupture, a potential surgical theraupeutic approach must be planned. In cases diagnosed in the first trimester expectant management until the second trimester is safer. If the cyst is diagnosed in the third trimester, waiting until fetal pulmonary maturation is suggested.

References

[1] Patacchiola F., Collevecchio N., Di Ferdinando A.: "Management of ovarian cysts in pregnancy: a case report". *Eur. J. Gynaecol. Oncol.*, 2005, *26*, 651.

[2] Whitecar P., Turner S., Higby K.: "Adnexal masses in pregnancy: A rewiev of 130 cases undergoing surgical management". *Am. J. Obstet. Gynecol.,* 1999, *181*, 19.

[3] Sherard G.B., Hodson C.A., Williams H.J.: "Adnexal masses and pregnancy: A 12-year experience". *Am. J. Obstet. Gynecol.,* 2003, *189,* 358.

[4] Agarwall N., Kriplani A., Bhatla N.: "Management and outcome of pregnancies complicated with adnexal masses". *Arch. Gynecol. Obstet.*, 2003, *267*, 148.

[5] Caspi B., Levi R., Appelman Z.: "Conservative management of ovarian cystic teratoma during pregnancy and labor". *Am. J. Obstet. Gynecol.,* 2000, *182,* 503.

[6] Boulay R., Podczaski E.: "Ovarian cancer complicating pregnancy". *Obstet. Gynecol. Clin. North. Am.,* 1998, *25,* 385.

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