

A huge ovarian mucinous cystadenoma complicating pregnancy: a case report

Gebeliği komplike eden iri ovaryen müsinöz kistadenoma: olgu sunumu

Gonca İmir Yenicesu, Meral Çetin, Sema Arıcı

Departments of Obstetrics and Gynecology (Assist. Prof. G.I. Yenicesu, MD, Prof. M. Cetin, MD) and Patology (Prof. S. Arıcı, MD), Cumhuriyet University School of Medicine, TR-58140 Sivas

Abstract

Mucinous cystadenomas may reach a large size and may also tend to be hormonally responsive during pregnancy. A 25-year-old woman was presented with the labour pain at 40 weeks of gestation. Sonographic examination demonstrated a multiloculated, 38 cm in diameter, huge cystic mass at the right side of the uterus. After delivery of baby with cesarean section, ovarian cystectomy was performed. Histopathologically, mucinous cystadenoma findings and luteal changes were detected. This is the third reported case of huge ovarian mucinous cystadenoma with stromal luteinization complicated with intrauterine growth restriction. All ovarian cysts during pregnancy should be followed up by ultrasonography due to possibility of adverse effects of the cysts on pregnancy.

Keywords: Mucinous cystadenoma, pregnancy, ovarian mass, intrauterine growth restriction

Özet

Müsinöz kistadenomlar büyük boyutlara ulaşabilir ve gebelik sırasında hormonlara cevap verebilir. Kırk haftalık hamile 25 yaşındaki bir bayan doğum eylemi ile başvurdu. Ultrasonografide uterusun sağ tarafında multiloküle, 38 cm çapında iri kistik kitle saptandı. Sezaryen doğum ile fetus doğurtulduktan sonra ovaryen kistektomi yapıldı. Histopatolojik olarak müsinöz kistadenoma ve luteal bulgular tespit edildi. Bu vaka, literatürde intrauterine gelişme kısıtlılığı ile komplike olan, gebelikte stromal luteinizasyon bulgulu üçüncü iri müsinöz kistadenoma olgusudur. Kistlerin yan etkileri nedeniyle gebelikte bütün ovaryen kistler ultrasonografi ile takip edilmelidir.

Anahtar sözcükler: Müsinöz kistadenoma, gebelik, ovaryen kitle, intrauterine gelişme kısıtlılığı

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Corresponding author:

Dr. Gonca İmir Yenicesu, Department of Obstetrics and Gynecology, Cumhuriyet University School of Medicine, TR-58140 Sivas. Email: imirgonca@yahoo.com

Introduction

Mucinous cystadenomas are benign epithelial ovarian tumors that are characterized by multilocularity, smooth outer and inner surface, and tend to be large reaching 20 to 30 cm in size, unilateral cysts, containing mucinous fluid [1]. Of all ovarian tumors, mucinous tumors comprise 12% to 15% and 75% of all mucinous tumors are benign, 10% are borderline and 15% are invasive carcinoma. Benign mucinous tumors are most common in the third to fifth decades [2]. Twenty eight percent of adnexal masses diagnosed during pregnancy were serous or mucinous cystadenomas. The most frequent and serious complication of benign ovarian cysts during pregnancy is adnexal torsion. Of all adnexal masses during pregnancy, the incidence of adnexal torsion is 5% [3]. Torsion is most common in the first trimester, and may lead to rupture of cyst into the peritoneal cavity. It

may also occur during labor or surgery.

In this report, we present a case of huge right ovarian mucinous cystadenoma with stromal luteinization rapidly growing during pregnancy which resulted in fetal intrauterine growth restriction (IUGR).

Case report

A 25-year-old woman, gravida 5, para 1, abortus 3 was presented to our antenatal clinic with the labor pain at 40 weeks of gestation. Determination of gestational age was based on last menstrual period and first trimester sonographic findings. The patient was not attending an antenatal clinic except for 12 weeks of gestation when 4 to 5cm cyst in diameter has been detected in the right adnexal region. Clinical examination revealed distended abdomen which made it impossible to perform Leopold maneuvers. Sonographic evaluation demonstrated the intrauterine fetus in longitudinal lie, the placenta with grade 3 lacunae pattern and amniotic fluid index of 4 cm. Gestational age according to biparietal diameter was 30 weeks of gestation and abdominal circumference and femur length was 34 weeks of gestation. All of the percentiles of these measures were below 3% and estimated fetal body weight was 2100 g. Sonographic examination also demonstrated a multiloculated, smooth surfaced cystic mass with no solid component or papillary projections at the right side of the uterus extending to subhepatic area. Obstetric color Doppler sonographic findings were evaluated in normal ranges. Vaginal examination revealed no dilatation of cervix and no effacement. A reassuring fetal status with no uterine contraction was determined by electrocardiotocography. After cesarean section was performed through a midline skin incision and lower uterine segment incision, a healthy female infant weighing 2100 g delivered. A huge, right ovarian multiloculated, smooth surfaced cystic mass was exposed and ovarian cystectomy was performed (Figure 1). Frozen section examination revealed a benign cyst that might be compatible with a mucinous cystadenoma. The surgery has been completed successfully. The patient has been discharged at postoperative day 4 without any problem.



Figure 1. Macroscopic appearance of the cyst during operation.

Macroscopically, the intact cyst was multiloculated weighing 6000 g and 38x30x28 cm in size. It was filled with 5.5 L of mucous fluid content. The external surface of the cyst was smooth and pinkish, however inner surface contained multiple trabeculae, but no solid component or hemorrhagic areas were seen. Microscopically, the cyst was lined by a single layer of columnar epithelia including goblet cells in some areas. Papillary projections containing eosinophilic secretions were observed on the surface. Luteal

changes were also detected in the stroma beneath the epithelium (Figure 2).



Figure 2. Microscopic appearance of the cyst.

Discussion

The average incidence of adnexal masses is 1 in 200 pregnancies [4]. Several cases of ovarian mucinous cystadenomas have been reported in the literature [1, 5-8]. Qublan et al. [1] described a 6300 g multiloculated right ovarian mucinous cystadenoma measuring 33x24x20cm at 38 weeks of pregnancy. The cyst that was very similar to one described in our case report has lead to IUGR and malpresentation [1]. In our case, the cyst measuring 4 to 5 cm was detected incidentally in an outpatient clinic at 12 weeks of gestation which was the only antenatal clinical visit she had. Dimensions of the cyst reached 38x30x28 cm at 40 weeks of pregnancy. The fetus was growth restricted due to either prominent vascularity of tumor originating from ovarian vessels or the compressive effect of the tumor on the uterine blood supply. The cyst also showed stromal luteinization as in previous case reports [1, 5]. In the literature, a follicular cyst has also shown stromal luteinization and reached a huge size [9]. Because of rapid growth of tumor during pregnancy and showing stromal luteinization histopathologically, our case of mucinous cystadenoma is thought to be hormonally responsive. The cyst presented by Qublan et al. [1] was also a rapid growing tumor complicated with IUGR. In addition, their immunohistochemical staining revealed positivity for estrogen and progesterone receptors [1]. These receptors were regulated by luteinizing hormone and human chorionic gonadotropin [10]. These may explain the rapid growth of ovarian cystadenoma during pregnancy in our case.

Mucinous tumors are divided into two types: intestinal type (with goblet cells and, usually, neuroendocrine cells), and endocervical (müllerian) type, characterized by a mucinous lining resembling that of the endocervix [2]. Our histopathological examination revealed goblet cells resembling intestinal type. In addition, there have been several reported huge mucinous cystadenoma associated with pancreas, mesentery, and omentum during pregnancy [11-14]. All of these cysts are discovered incidentally as in our case or due to abdominal symptoms.

Two reviews about adnexal masses during pregnancy emphasized that surgical intervention should be avoided due to adverse fetal outcomes as a result of preterm delivery or premature rupture of membranes [15, 16]. In our case, an emergent surgical

intervention was not needed because of the lack of torsion of the cyst or unbearable abdominal symptoms. Therefore, the cyst was removed during cesarean section. The cyst was sent for histopathologic diagnosis by frozen section which has an overall diagnostic accuracy of 89.8% for ovarian tumors. Frozen section appears to be a reliable diagnostic tool in adnexal masses in pregnancy [17].

In summary, this is the third reported case of huge ovarian mucinous cystadenoma with stromal luteinization complicated with IUGR. This case shows that mucinous cystadenomas may reach a large size that they may cause fetal IUGR and also tend to be hormonally responsive during pregnancy. All ovarian cysts during pregnancy should be followed up by ultrasonography due to possibility of adverse effects of the cysts on pregnancy.

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