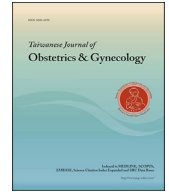




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Case Report

Repeated pregnancy with concomitant presence of ovarian teratoma: A case report and literature review



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ABSTRACT

Objective: Benign mature teratoma during pregnancy is common, mostly discovered incidentally by antenatal sonography. However, repeated pregnancy coincident with ovarian mature teratoma is rarely reported. The cases of teratoma with rapid growing characteristics are even more unique.

Case report: A 17-year-old woman was pregnant at 6 weeks of gestation with a left ovarian teratoma. She underwent artificial abortion followed by surgical removal of the teratoma. However, eleven years after the surgery, a right ovarian teratoma was found incidentally by antepartum sonography at 21 weeks of gestation. The right ovarian teratoma developed uneventfully, with rapid growth during pregnancy. Abdominal delivery at term was accomplished without any complication.

Conclusion: Younger patients and patients with bilateral or large size dermoid cysts should be followed up closely. Further studies are needed for better understanding of its natural clinical course and the mechanism of progression. The treatment options should be made individually, weighing the risks of torsion, rupture, or obstruction of labor versus the potential for unnecessary surgical risk to mother and fetus.

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Introduction

The adnexal masses in pregnant women are not uncommon. With widespread use of early antenatal ultrasound, most of these adnexal masses are found incidentally at the time of a routine first trimester ultrasound. Most other ovarian masses discovered during pregnancy are benign dermoid cysts which account for one fourth of ovarian neoplasms [1]. The benign dermoid cysts, also called mature teratoma, are usually slow-growing and most are unilateral; approximately 10% of cases are bilateral [2]. In the present report, we describe an unusual case, who, as opposed to her prior pregnancy, had a repeated pregnancy coincident with an ovarian mature teratoma on the contralateral side, which rapidly grew from a small tumor to a huge mass toward the end of pregnancy.

Case report

A 28-year-old nulliparous woman presented to our department for prenatal care since 6 weeks of gestation. An uneventful right ovarian tumor was found by regular antepartum ultrasonography examination at 21 weeks of gestation. She had a history of left ovarian dermoid cyst that was managed surgically. At the age of 17, she received an artificial abortion in the first trimester. A complex left ovarian cyst, of approximately $9 \times 9 \times 9$ cm in size was found incidentally through sonography. One week after the abortion, we performed a laparoscopic enucleation of left ovarian tumor, and the subsequent pathologic analysis revealed a mature cystic teratoma. During the laparoscopy, the right ovary was visually examined, and morbid findings were not noted. One month after the surgery, no residual tumor was observed on pelvic sonography. The patient was lost to follow-up. Eleven years later, a right ovarian complex cyst was incidentally discovered on a routine antenatal ultrasound examination. During pregnancy, the right ovarian cystic mass grew rapidly: from about 8.5 cm in diameter at 21 weeks of gestation initially, to 11.8 cm, and to 23.7 cm at 25 weeks and 33 weeks of gestation, respectively (Fig. 1). The color Doppler ultrasound examination showed features that were characteristic of a benign

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abnormalities have been presumed associated with the development of dermoid tumors [11]. In our case, bilateral ovaries were examined by laparoscopy and no residual lesions were found by sonography after the first surgery of left ovary. The right ovarian tumor developed with a clear margin without adhesion to the surrounding pelvic tissue; no tumor was found over previous laparoscopic port sites or peritoneum. Therefore, trauma-related disseminated tumor growth was not favored. Harada et al. [12] suggested that young age (<30 years), large cyst size (diameter, >8 cm), and bilateral occurrence were predictive factors for recurrence, with the risk of recurrence being especially high in the presence of more than one of these factors. Our patient got two of the three predictive factors for recurrence: 17-years-old with left ovarian teratoma of 9 cm in diameter initially. Eleven years later, the reappearance of teratoma developed on the other side of ovary, which constituted the third factor. Nevertheless, aside from our present discovery, very little literature reported repeated pregnancy with co-existent ovarian mature teratoma.

In summary, most references suggest that younger patients and patients with bilateral or large size dermoid cysts should be followed up closely. For the fast-growing teratoma during pregnancy, the hormonal changes and genomic factors may exacerbate the severity of the disease. Further studies are needed for better understanding of its natural clinical course and the pathogenesis of progression. Observation is a viable option for those who are asymptomatic. The treatment options should be made individually, weighing the risks of torsion, rupture, or obstruction of labor versus the potential of posing unnecessary surgical risk to mother and fetus.

Conflicts of interest

The authors have no conflicts of interest relevant to this article.

References

- [1] Hoover K, Jenkins TR. Evaluation and management of adnexal mass in pregnancy. *Am J Obstet Gynecol* 2011;205(2):97–102.
- [2] Kim MJ, Kim NY, Lee DY, Yoon BK, Choi D. Clinical characteristics of ovarian teratoma: age-focused retrospective analysis of 580 cases. *Am J Obstet Gynecol* 2011;205(1):32.e1–4.
- [3] Sherard GB, Hodson CA, Williams HJ, Semer DA, Hadi HA, Tait DL. Adnexal masses and pregnancy: a 12-year experience. *Am J Obstet Gynecol* 2003;189(2):358–62.
- [4] Yen CF, Lin SL, Murk W, Wang CJ, Lee CL, Soong YK, et al. Risk analysis of torsion and malignancy for adnexal masses during pregnancy. *Fertil Steril* 2009;91(5):1895–902.
- [5] Bromley B, Benacerraf B. Adnexal masses in pregnancy: accuracy of sonographic diagnosis and outcome. *J Ultrasound Med* 1997;16(7):447–52.
- [6] Blackwell WJ, Dockerty MB, Masson JC, Mussey RD. Dermoid cysts of the ovary; their clinical and pathologic significance. *Am J Obstet Gynecol* 1946;51:151–72.
- [7] Caspi B, Levi R, Appelman Z, Rabinerson D, Goldman G, Hagay Z. Conservative management of ovarian cystic teratoma during pregnancy and labor. *Am J Obstet Gynecol* 2000;182(3):503–5.
- [8] Cakmak B, Nacar M, Ozsoy Z, Aliyev N, Koseoglu D. Mature cystic teratomas: relationship between histopathological contents and clinical features. *Niger J Clin Pract* 2015;18(2):236–9.
- [9] Donnadieu AC, Deffieux X, Le Ray C, Mordefroid M, Frydman R, Fernandez H. Unusual fast-growing ovarian cystic teratoma during pregnancy presenting with intracystic fat “floating balls” appearance. *Fertil Steril* 2006;86(6):1758–9.
- [10] Pepe F, Panella M, Pepe G, Panella P, Pennisi F, Arikian S. Dermoid cysts of the ovary. *Eur J Gynaecol Oncol* 1986;7(3):186–91.
- [11] Doss Jr N, Forney JP, Vellios F, Nalick RH. Covert bilaterality of mature ovarian teratomas. *Obstet Gynecol* 1977;50(6):651–3.
- [12] Harada M, Osuga Y, Fujimoto A, Fujii T, Yano T, Kozuma S. Predictive factors for recurrence of ovarian mature cystic teratomas after surgical excision. *Eur J Obstet Gynecol Reprod Biol* 2013;171(2):325–8.
- [13] Kanlioglu Kuman N, Cokpinar S, Yaman E, Meteoglu I, Karadag F. Teratoma during pregnancy with positive estrogen and progesterone receptors and elevated Ca19-9 antigen levels. *Case Rep Surg* 2012;2012:970845.
- [14] El Hammoumi M, Benosman A, Kabiri EH. Giant teratoma presenting with pregnancy and causing respiratory failure. *Arch Bronconeumol* 2015;51:250–1.