

Bilateral giant ovarian luteinized follicular cysts: case report

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Summary

Background: Bilateral ovarian luteinized follicular cysts are rarely described, not to mention full-term natural labour without cystectomy beforehand. One case will be presented in this report. **Case Report:** A 29-year-old woman had pelvic masses detected at 12 weeks of pregnancy. The main concerns were the safety of pregnancy, conservative management, and close review. She was admitted to the hospital again 30 days after childbirth. Ultrasound examination was performed as well as CT, which showed that there was multilocular cystic low density in abdomen without calcification. She accepted bilateral ovarian cystectomy and reconstruction. Postoperative pathological results led to the diagnosis of bilateral ovarian luteinized follicular cysts. **Conclusion:** CT imaging feature combined with medical history, hCG level or other imaging modality can be used for diagnosing it initially. The case we report will provide useful experience for the diagnosis of ovarian luteinized follicular cyst.

Key words: Bilateral ovarian luteinized follicular cysts; Pelvic mass.

Introduction

It is apparently rare to encounter a bilateral giant luteinized follicular cysts with full-term natural labour. In general, previous studies considered that ovarian follicular endometrial cells are stimulated by a large number of hCG or increased sensitivity to hCG, so that the cysts form finally. The size of the cysts range from visible under microscope to tens of centimeters. It can occasionally be seen in normal pregnancy. Due to the application of ovulation stimulants, and the rising rate of cesarean section, more and more luteinized follicular cysts are found. The case that will be introduced below shows bilateral giant luteinized cysts with full-term natural labour. Then the CT imaging performance will also be described briefly.

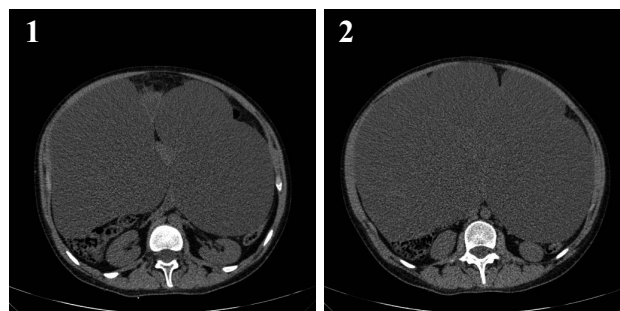
Case Report

A 29-year-old woman, gravida 1, para 1, had pelvic masses detected by ultrasound in prenatal examination at 12 weeks of gestation. At that time, the left pelvic mass was 14 cm in diameter, the right was 25 cm. Considering the safety of pregnancy, pelvic lesions were only reviewed monthly by ultrasound. In the process of review, the masses increased gradually. Because of regular uterine contraction, she was admitted to the hospital and gave birth to a healthy baby boy naturally at 39+1 weeks of gestation. Because of abdominal distension and intermittent abdominal pain, the patient was hospitalized again at 30 days postpartum. The hCG level was twice as high as normal. In addition to ultrasound, CT detection was done to identify the characteristics of the lesion. The CT images showed that there was multilocular cystic low density in abdomen and pelvic cavity. Its size was approximately 26.0×25.6×17.2 cm, and the CT value was between 2 to 8 HU. The trace of calcification could not be seen in the lesion. The cyst wall was thin, but the internal tension was large (Figures 1 and

2). The surrounding structures were mainly pressed. The boundary between the lesion and the bilateral accessories were not clear. Bilateral ovarian cystectomy and reconstruction were performed according to operative exploration. Postoperative pathological results led to the diagnosis of bilateral ovarian luteinized follicular cysts.

Discussion

It is unusual that the luteinized follicular cysts in this report are bilateral. According to the literatures, most of the ovarian luteinized follicular cysts were solitary, only two of them were bilateral [1-8]. Ovarian luteinized follicular cyst is generally considered a benign lesion which may regress spontaneously during several weeks to six months postpartum. Conservative management and follow-up were performed to manage the cysts until term, unless complications occurred. Lesion resection is generally performed



Figures 1 and 2: The CT axial images of the patient at 30th day after delivery. Multilocular cystic low density can be seen in abdomen. The cyst wall is thin and no wall nodule can be seen.

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with cesarean section at the same time. If abdominal discomfort develops, the cyst will be removed before birth [5]. Full-term natural labour without cystectomy beforehand has become a successful case of conservative management.

There is report that describes no calcification or septation observed in CT images [2]. In the present case, calcification was neither observed, but the multilocular cystic change was seen. Most other studies endorse this observation. There was no nodule on the cyst wall and septum. The pity is that the patient did not undergo enhanced CT. Compared with the postoperative pathology, the preoperative CT imaging features also supported the diagnosis. The CT imaging feature combined with medical history, hCG level or other imaging modality can be used for diagnosing it initially. Although The level of hCG may not be the only reason of luteinized follicular cyst [1], the high level of hCG still provides a hint to clinicians. When giant cystic lesion is found during pregnancy or postpartum in abdomen, diagnosis of luteinized follicular cyst should be taken into consideration.

References

- [1] Michele L., Stefan K., Cunxian Z.: "Large solitary luteinized follicle cyst of pregnancy and puerperium: report of two cases". *Diagn. Pathol.*, 2011, 6, 3.
- [2] Wang XY., Vinta MK., Myers S., Fan F.: "Solitary luteinized follicle cyst of pregnancy and puerperium". *Pathol. Res. Pract.*, 2006, 202, 471.
- [3] Zhang SY., Huang HF., Tong XM.: "Solitary luteinized follicle cyst of pregnancy complicated with persistent postpartum vaginal bleeding: case report". *Chin. Med. J. (Engl.)*, 2007, 120, 257.
- [4] Haddad A., Mulvany N., Billson V., Arnstein M.: "Solitary luteinized follicle cyst of pregnancy. Report of a case with cytologic findings". *Acta Cytol.*, 2000, 44, 454.
- [5] Mavromatidis G., Sotiriadis A., Dinas K., Mamopoulos A., Rousso D.: "Large luteinized follicular cyst of pregnancy". *Ultrasound Obstet. Gynecol.*, 2010, 36, 517.
- [6] Fang YM., Gomes J., Lysikiewicz A., Maulik D.: "Massive luteinized follicular cyst of pregnancy". *Obstet. Gynecol.*, 2005, 105, 1218.
- [7] Dejmek A.: "Fine needle aspiration cytology of an ovarian luteinized follicular cyst mimicking a granulosa cell tumor. A case report". *Acta Cytol.*, 2003, 47, 1059.
- [8] Teng LS., Jin KT., He KF., Zhu TM., Zhao F., Jin ZG.: "Bilateral massive ovarian luteinized follicular cysts of a twin pregnancy". *J. Chin. Med. Assoc.*, 2010, 73, 644.

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