

Dermoid Cyst in Pregnancy with Avulsed Ovarian Ligament: A Case Report Study

Uiko Hanaoka, Mohamed Ahmed Mostafa Abo Ellail*, Chiaki Tenkumo and Kenji Kanenishi

Department of Perinatology and Gynecology, Kagawa University Graduate School of Medicine, 1750-1 Ikenobe, Miki, Kagawa 761-0739, Japan

ABSTRACT

We present our experience of an ovarian dermoid cyst during pregnancy. The mass was presented by lower abdominal pain during pregnancy. Ultrasound revealed 62.4 × 31.4 mm left ovarian mass with mild pain that responded to conservative treatment. The course was stationary throughout pregnancy. After delivery, the patient refused any operative intervention because she was lactating. Laparoscopy was done 7 months postpartum revealed twisted ovarian cyst surrounded by adhesions with avulsed ovarian ligament. Adhesolysis followed by ovarian cystectomy was performed. In conclusion, conservative management of ovarian cysts during pregnancy might allow prolongation of pregnancy, however, risks cannot be ruled out in the absence of definite clinical criteria for complications as torsion.

Keywords: Ovarian cyst; Dermoid cyst; Pregnancy; Torsion; Ovarian ligament

INTRODUCTION

Adnexal masses during pregnancy have an estimated incidence of 0.2-2% [1,2]. Most of them are benign. Functional cysts are the most frequent followed by dermoid cysts [3]. Routine antenatal scanning with ultrasound is associated with accidental identification of such masses [4]. Advances in ultrasound modalities enabled better identification of the morphological criteria of the masses and subsequent proper choice of the management strategy. Therefore ultrasound represents the first choice in diagnosis due to its feasibility and safety plus accuracy [5-10]. In the current article, we are describing a case of adnexal mass with pregnancy managed conservatively during pregnancy followed by laparoscopy which highlighting the impact of conservative management on the outcome.

CASE REPORT

A 34-year-old pregnant Japanese woman gravida 2, para 1 came to our hospital because of left lower abdominal pain of 2 days duration during her pregnancy course. She was 25 weeks, 6 days of gestation with a history of unoperated ovarian tumor accidentally diagnosed before the current pregnancy. Pain was intermittent and resembling constipation pain. The pain started 2 weeks before the patient present to our hospital. When she first developed pain attack, she consulted a midwife who checked the fetal cardiac pulsation, and found it was reassuring, and the patient backed to her home. The next day she experienced pain again and she sought medical advice at a private clinic, where she was suspected to have preterm labor pain and

the pain might be due to uterine contractions. Examination at that clinic revealed the cervical length to be 31 mm, and blood tests showed elevated CRP (16.4) and WBC was 13700. Therefore, the day after, she was presented to our hospital. Examination and investigations revealed WBC count to be 12300, CRP 14.68, temperature 37°C, pulse was 85, BP was 100/60 with suspicion of solid ovarian mass 62.4 × 31.4 mm (Figure 1), and cervical length was found to be 35 mm and no uterine contractions were present. The patient was admitted at the hospital and put under observation for ten days during which she was stable and pain was improving, then she was discharged after. At 39 weeks, the patient developed rupture of membrane and delivered a single living female baby weighing 3416 gm, height 50.5 cm, UA pH 7.415. Ultrasound examinations done at one month and 7 months after delivery revealed right ovary to be normal with the presence of ovarian mass in the left side 58.7 × 23.8 mm suspected to be a dermoid cyst, with minimal fluid in Douglas pouch (Figure 2). The patient refused to have any surgical intervention during lactation period. So observation was her choice.

Seven months postpartum, laparoscopy was performed and confirmed the diagnosis a dermoid cyst. It was found to be twisted two complete turns at the infundibulopelvic ligament (720° around its axis). Moreover, the ovarian ligament was found to be avulsed. The ovary was surrounded by filmy adhesions, so adhesolysis was done followed by ovarian cystectomy. The postoperative course was favourable. Histopathological examination confirmed the diagnosis of dermoid cyst (Figure 3).

Correspondence to: Mohamed Ahmed Mostafa Abo Ellail, MD, PhD, Department of Perinatology and Gynecology, Kagawa University Graduate School of Medicine, 1750-1 Ikenobe, Miki, Kagawa 761-0739, Japan, Tel: +81(0) 87-891-2174; E-mail: midolailo@yahoo.com

Received: December 23, 2019; **Accepted:** January 06, 2020; **Published:** January 13, 2020

Citation: Hanaoka U, Mostafa Abo Ellail MA, Tenkumo C, Kanenishi K (2019) Dermoid Cyst in Pregnancy with Avulsed Ovarian Ligament: A Case Report Study. J Women's Health Care 9:481. doi: 10.35248/2167-0420.20.9.481.

Copyright: © 2020 Mostafa Abo Ellail MA, et al. This is an open access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution and reproduction in any medium, provided the original work is properly cited.

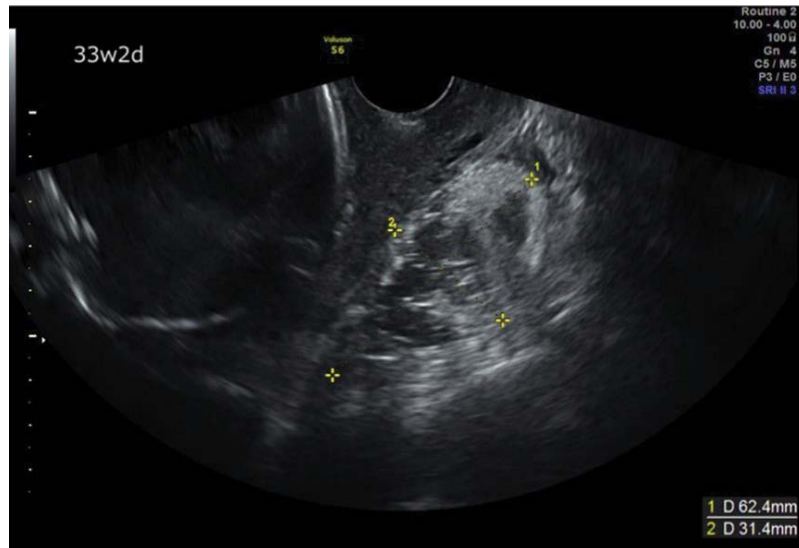


Figure 1: Transvaginal sonography at 33 weeks and 2 days of gestation showing a 62 × 31.4 mm ovarian mass in the Douglas pouch.

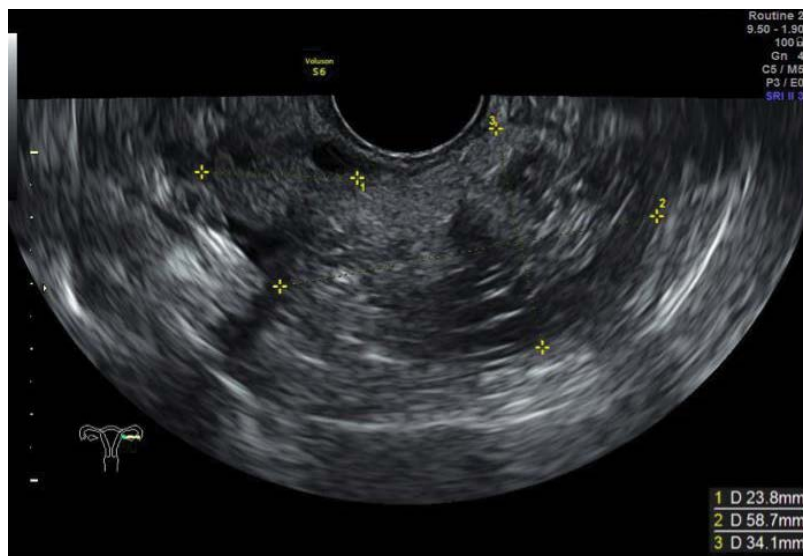


Figure 2: Transvaginal sonography at 7 months postpartum showing a 58.7 × 34.1 mm ovarian mass and 23.8 mm normal part of the left ovary.

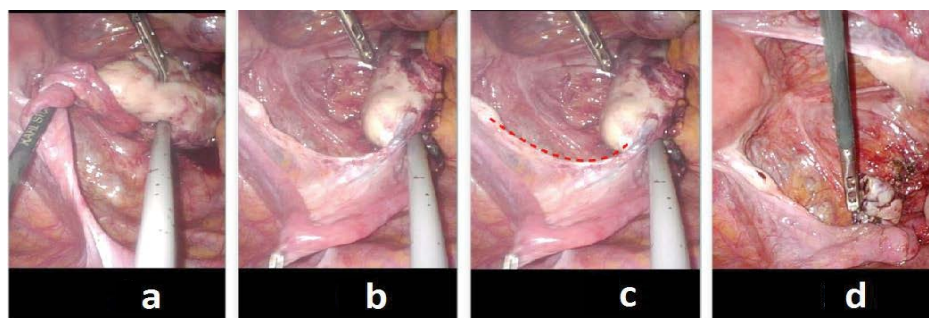


Figure 3: Intraoperative laparoscopic images of the twisted dermoid cyst showing the two complete turns (720°) twist around its axis (a), and the image after detwisting it (b), with the red dotted line representing the presumed course of the avulsed ovarian ligament (c). The left ovary can be seen after adhesiolysis and ovarian cystectomy with the appearance of the right ovary and right ovarian ligament intact (d).

DISCUSSION

Ovarian cyst in pregnancies is not uncommon. Management strategy has a complex algorithm depending mainly on the age, parity as well as the type of the tumor [11]. Management strategy implies weighing the potentials risks associated with conservative management versus operative intervention. Spontaneous abortion and anaesthesia-related complications are associated with operative intervention [12,13], while conservation implies the risk of torsion,

rupture, or bleeding with subsequent maternal and fetal hazards as well as failure of progress during delivery [14]. Therefore, the management should be tailored to every case specifically. Literatures recommended conservation for masses less than 5 cm, and operative interventions for those more than 10 cm. Those 5-10 cm has no clear recommendations [15].

In the current case the mass was border line in diameter and responded to conservative management during pregnancy,

therefore, conservation was the choice. It seems that the twisting was intermittent, therefore the pain was not severe and torsion was not highly suspected clinically. Ideally, the mass should be removed postpartum but the patient refused intervention because she wanted to continue lactation. The mass was operated 7 months after delivery. Intraoperatively, the mass did not show ischemic changes despite the two full twists because probably torsion occurred without severe strangulation at the level of infundibulopelvic ligament, therefore ischemia did not happen and allowed for the detorsion and reperfusion to be effective option. On the other hand, the torsion on the ovarian ligament seemed to be severe enough to cut its blood supply resulting in its ischemic necrosis with subsequent avulsion. This avulsion might cause the traction of infundibulopelvic ligament torsion to be less severe allowing partial maintenance of blood supply to the ovary and preventing its ischemia. This avulsion as well as the torsions might be predisposed by the change in uterine size represented by its enlargement during pregnancy and involution in the postpartum period. However, these slowly gradual changes in size allowed the chronic occurrence of pathological changes preventing sudden cut of bloody supply and subsequent gangrene and also prevented bleeding from avulsed ovarian ligament.

CONCLUSION

To the best of our knowledge, this is the first report of avulsed ovarian ligament associated with apparently healthy ovary in a case with ovarian torsion. As a conclusion, conservative management of ovarian cyst during pregnancy might enable prolongation of pregnancy till safe delivery is achieved as well as the prompt chance for ovarian preservation as long as close observation and monitoring is achieved. Definite sonographic criteria should be elaborated to predict acute cases, which necessitate immediate intervention to prevent subsequent associated morbidities.

CONFLICT OF INTEREST

The authors have no conflict of interest.

REFERENCES

1. Leiserowitz G. Managing ovarian masses during pregnancy. *Obstet Gynecol Surv.* 2006;61:463-470.

2. Whitecar MP, Turner S, Higby MK. Adnexal masses in pregnancy. A review of 130 cases undergoing surgical management. *Am J Obstet Gynecol.* 1999;181:19-24.
3. Hoover K, Jenkins TR. Evaluation and management of adnexal mass in pregnancy. *Am J Obstet Gynecol.* 2011;205:97-102.
4. Nelson MJ, Cavalieri R, Graham D, Sanders RC. Cysts in pregnancy discovered by sonography. *J Clin Ultrasound.* 1986;14:509-512.
5. Thornton JG, Wells M. Ovarian cysts in pregnancy: does ultrasound make traditional management inappropriate? *Obstet Gynecol.* 1987;69:717-720.
6. Telischak NA, Yeh BM, Joe BN, Westphalen AC, Poder L, Coakley FV. MRI of adnexal masses in pregnancy. *AJR AM J Roentgenol.* 2008;191:364-370.
7. Usui R, Minakami H, Kosuge S, Iwasaki R, Ohwada M, Sato I. A retrospective survey of clinical, pathologic, and prognostic features of adnexal masses operated on during pregnancy. *J Obstet Gynaecol Res.* 2000;26:89-93.
8. Bromley B, Benacerraf B. Adnexal masses during pregnancy: Accuracy of sonographic diagnosis and outcome. *J Ultrasound Med.* 1997;16:447-452.
9. Zanetta G, Mariani E, Lissoni A, Ceruti P, Trio D, Strobelt N, et al. A prospective study of the role of ultrasound in the management of adnexal masses in pregnancy. *BJOG.* 2003;110:578-583.
10. Hill LM, Connors-Beatty DJ, Nowak A, Tush B. The role of ultrasonography in the detection and management of adnexal masses during the second and third trimesters of pregnancy. *Am J Obstet Gynecol.* 1998;179:703-707.
11. Schmeler KM, Mayo-Smith WW, Peipert JF, Weitzen S, Manuel MD, Gordinier ME. Adnexal masses in pregnancy: Surgery compared with observation. *Obstet Gynecol.* 2005;105:1098-1103.
12. Duncan PG, Pope WD, Cohen MM, Greer N. Fetal risk of anesthesia and surgery during pregnancy. *Anesthesiology.* 1986;64:790-794.
13. Rizzo A. Laparoscopic surgery in pregnancy: Long-term follow-up. *J Laparosc Adv Surg Techniques.* 2003;1:11-15.
14. Glanc P, Salem S, Farine D. Adnexal masses in the pregnant patient: A diagnostic and management challenge. *Ultrasound Q.* 2008;24:225-240
15. Yakasai IA, Bappa LA. Diagnosis and management of adnexal masses in pregnancy. *J Surg Tech Case Rep.* 2012;4:79-85.