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Adnexal torsion during pregnancy: A rare cause of acute abdomen

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Abstract

Ovarian torsion is caused by rotation of the ovary or adnexa with the vascular pedicle on its axis resulting in arterial and venous obstruction. Here we report a case of a pregnant woman presented to the emergency department in early second trimester with acute abdomen. History revealed the presence of an ovarian mass detected by ultrasonography 6 months before pregnancy. Sonographic examination showed right adnexal mass with abnormal Doppler velocimetry and thus immediate laparotomy was decided. Right salpingo-oophorectomy was performed and post-operative course of the patient was uneventful. According to this case, adnexal torsion should not be eliminated from differential diagnosis when it comes to pregnant women with acute abdomen.

Key words: Adnexal torsion, pregnancy, gynecologic emergency, acute abdomen

Introduction

The incidence of adnexal torsion during pregnancy is about 1-10 in 10000 pregnancies¹. Torsion clinical symptoms during pregnancy are non specific and may be confused with other acute abdomen conditions such as appendicitis, renal colic, ectopic pregnancy². Therefore diagnosis is challenging and may be delayed³. Most of the ovarian torsions are diagnosed during the first trimester of pregnancy⁴. However, in some cases, adnexal torsion may occur at an advanced gestational age. We hereby report a case of

a spontaneous pregnancy complicated by adnexal torsion at early second trimester and how the patient was managed.

Case report

A 25-year-old primigravida woman (G1P0) attended to our emergency department at 13 weeks of gestational age, complaining of nausea and acute lower abdominal pain that started before 6 hours. From the medical history, patient reported the pres-

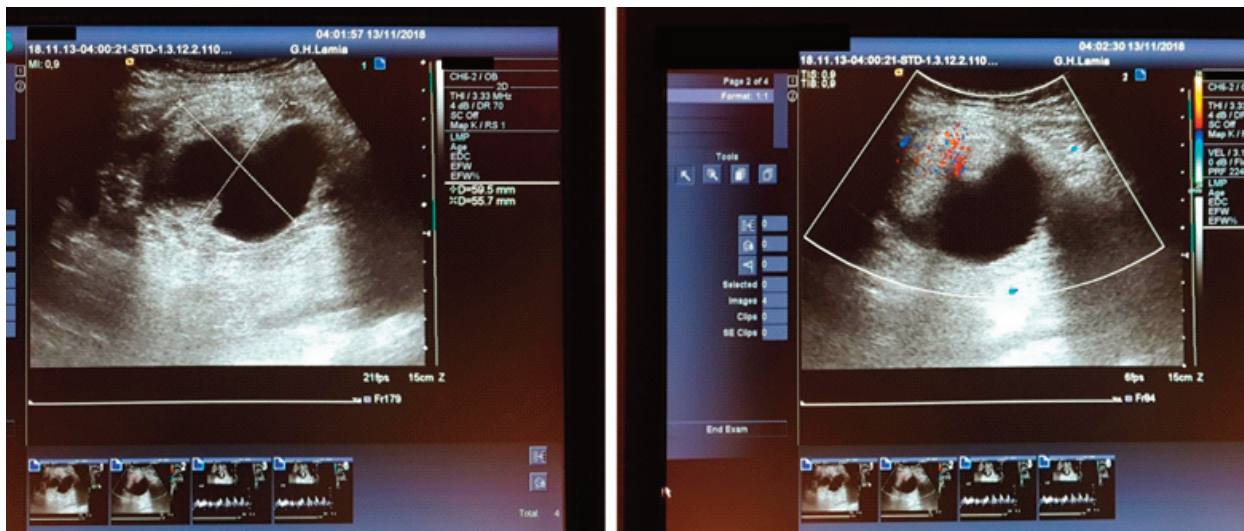


Figure 1. Ultrasound finding of right adnexal mass with abnormal Doppler velocimetry

ence of a cystic mass in right adnexa in a routine transvaginal ultrasound check carried out 6 months earlier.

General examination did not revealed signs of hemodynamic instability; her blood pressure was 110/75 mm Hg, pulse rate was 92 bpm, basal body temperature was 36.7°C, but the patient was irritable. On abdominal examination, right iliac fossa tenderness, rigidity, and rebound tenderness were elicited.

On investigating, patient's white blood cell count was 18.770 K/ μ L (NEU: 83.6%), hematocrit value was 36.3%, CRP was 3.8mg/L, blood group was 0 positive, with normal coagulation profile, liver and kidney function tests.

Accordingly, transabdominal ultrasonography demonstrated one viable in utero fetus compatible with 13 weeks and 4 days-gestation and with normal amniotic fluid index and a normal placenta. Furthermore, a mass of 59 x 55 mm was seen in the right adnexal region and no blood flow was detected on color and power Doppler ultrasound of the right ovary (Figure 1). Thus, the diagnosis of adnexal torsion was confirmed.

Informed consent was obtained and patient was taken up for exploratory laparotomy under spinal anesthesia after 3 hours of admission to hospital. Emergency laparotomy revealed pelvic fluid collection, pregnant uterus, a twisted twice, edematous, necrotic appearing right adnexal mass of 11.5 cm (Figure 2). Detorsion of the right adnexa was carefully performed, but no improvement in color or decrease of edema of the ovary was observed. Right sided salpingo-oophorectomy was done and fetus viability was confirmed post-operatively by transabdominal ultrasonography.

Histopathology of the specimen showed an ovary with hemorrhagic infarct and a mature cystic teratoma composed of tissue derived from all three germ layers (mesoderm, endoderm and ectoderm). Post-operatively, the patient was strictly followed up and she was discharged on postoperative day 5. The pregnancy continued uneventfully.

Discussion

Ovarian torsion is a rare, life threatening condition and may lead to adnexal tissue ischemia, necrosis and ovarian loss⁵. Risk factors for adnexal torsion are

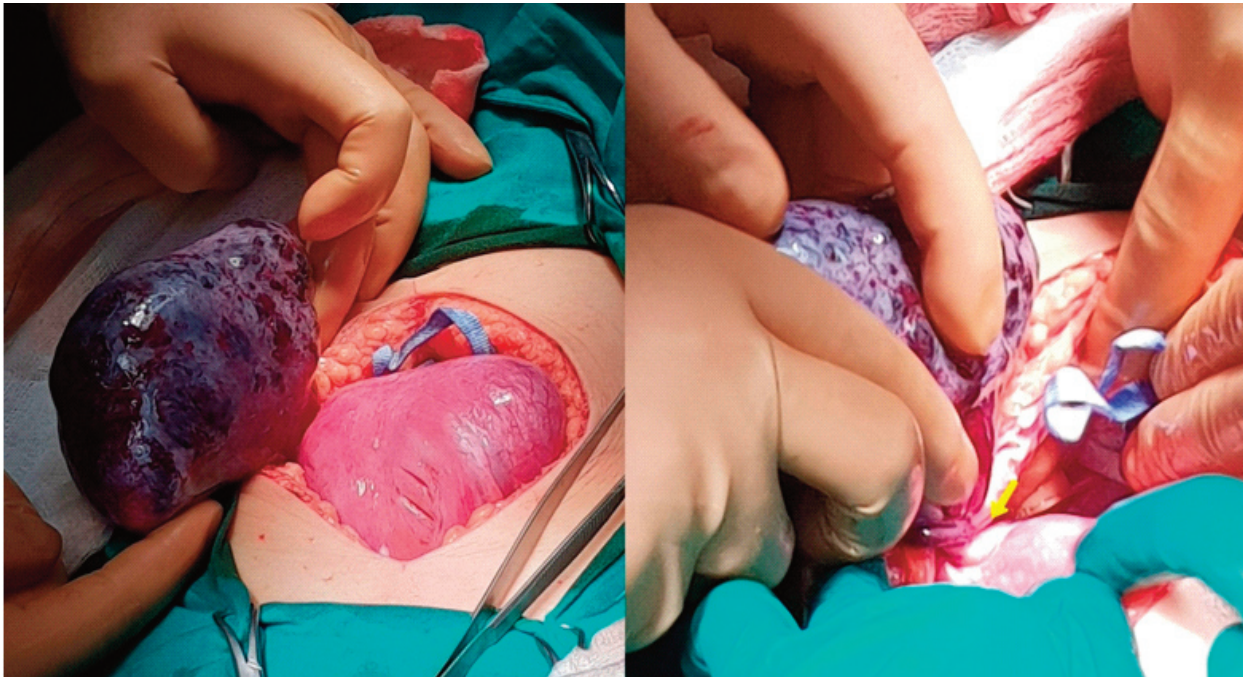


Figure 2. Intraoperative findings show a pregnant uterus and a twisted right adnexa

pregnancy, ovarian tumors and ovarian hyperstimulation syndrome⁶. Torsion of the right adnexa is more common due to hypermobility of the right utero-ovarian ligament which is longer than the left⁷.

The clinical symptoms of ovarian torsion are similar for both pregnant and non pregnant women including abdominal or pelvic pain, nausea and vomiting⁸. Early diagnosis requires thorough medical history, clinical assessment, and a gray-scale ultrasound combined with Doppler⁹.

When possible, laparoscopic detorsion is the preferred surgical intervention for adnexal torsion during pregnancy. Although salpingo-oophorectomy is performed in some cases.^{2, 4, 8}. A retrospective case-control study performed by Daykan Y. and colleagues, indicated that detorsion of the adnexa with or without additional surgical procedures during pregnancy did not impact on gestational age of delivery and did not affect maternal and fetal complication rates¹⁰.

It is important to identify and report cases of adnexal torsions during pregnancy, due to their chal-

lenging diagnostic and therapeutic management.

Consent

Informed consent was obtained.

Conflicts

The authors declare no conflicts of interest.

Authors' contribution

KZ and EC wrote the first draft. SK, TC and AF critically reviewed and amended the draft. All authors approved of the final draft.

References

1. Hasson J, Tsafirir Z, Azem F, Bar-On S, Almog B, Mashiach r, et al., Comparison of adnexal torsion between pregnant and nonpregnant women, *Am J Obstet Gynecol.* 2010 Jun; 202(6):536.e1-6.
2. Bouquet de Joliniere J, Dubuisson JB, Khomsi F, Fadhlaoui A, Grant G, Ali NB, et al., Laparoscopic Adnextectomy for Ovarian torsion during late

- pregnancy: Case report of a non conservative treatment and literature analysis. *Front Surg.* 2017 Oct 11;4: 50.
3. Kim YS, Han HS, Sang JH. Adnexal torsion in early pregnancy after assisted reproduction: can the adnexa be saved? *Clin Exp Obstet Gynecol.* 2017; 44(1):135-137.
 4. Chang SD, Yen CF, Lo LM, Lee CL, Liang CC. Surgical intervention for maternal ovarian torsion in pregnancy. *Taiwan J Obstet Gynecol.* 2011 Dec; 50(4):458-462.
 5. Basaranoglu S, Agacayak E, Tune SY, Icen MS, Turgut A, Peker N, et al., Clinical experience in pregnancies complicated by adnexal torsion. *Clin Exp Obstet Gynecol.* 2016; 43(3):345-9.
 6. Rackow BW, Patrizio P. Successful pregnancy complicated by early and late adnexal torsion after in vitro fertilization. *Fertil Steril.* 2007 Mar; 87(3):697e9-12.
 7. Boyd CA, Riall TS. Unexpected gynecologic findings during abdominal surgery. *Curr Probl Surg.* 2012 Apr; 49(4):195-251.
 8. Tsai HC, Kuo TN, Chung MT, Lin MY, Kang CY, Tsai YC. Acute abdomen in early pregnancy due to ovarian torsion following successful in vitro fertilization treatment. *Taiwan J Obstet Gynecol.* 2015 Aug; 54(4):438-41.
 9. Resapu P, Rao Gundabattula S, Brahati Bayyrapu V, Pochiraju M, Surampudi K, Dasari S. Adnexal torsion in symptomatic women: a single-centre retrospective study of diagnosis and management. *J Obstet Gynaecol.* 2018 Nov 8:1-6.
 10. Daykan Y, Bogin R, Sharvit M, Klein Z, Josephy D, Pomeranz M, et al., Adnexal torsion during pregnancy: Outcomes after surgical intervention- a retrospective case-control study. *J Minim Invasive Gynecol.* 2019 Jan; 26(1):117-121.

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