

TORTED RIGHT-SIDED OVARIAN DERMOID CYST IN PREGNANCY: CASE REPORT

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Summary

The authors present a documented case of torted right-sided ovarian dermoid cyst during pregnancy. The frequency rates, pathogenesis, clinical signs, diagnostic methods as well as the particularities of surgical treatment for torted ovarian mass in pregnancy are also described.

Key words: ovarian mass, torsion, pregnancy

Rezumat. Torsiunea chistului dermoid pe dreapta în sarcină: caz clinic

Autorii prezintă un caz documentat de torsiune a unui chist ovarian dermoid pe dreapta în sarcină. În cadrul revistei literaturii sunt prezentate date contemporane din literatura de specialitate referitor la frecvența, patogeneza, semnele clinice, metodele de diagnostic și particularitățile tratamentului chirurgical în cazul torsiunii anexelor uterine în sarcină.

Cuvinte-cheie: chist ovarian, torsiune, sarcină

Резюме. Перекрут дермоидной кисты ячника справа во время беременности: клиническое наблюдение

Авторами представлен документированный случай перекрута дермоидной кисты правого ячника во время

беременности. В кратком обзоре литературы приведены современные данные литературы по частоте, патогенезу, клинике, диагностике и особенностям хирургического лечения при перекрутах придатков матки во время беременности.

Ключевые слова: кисты яичника, перекрут, беременность

Introduction. Acute abdomen in pregnancy is a significant challenge and can be induced by several conditions, either genital or extra-genital. Adnexal torsion is an uncommon gynecological emergency accounting for about 2.7% of all cases [1]. However, ovarian torsion (OT) during pregnancy is even more uncommon, the reported incidence being 1-10 in every 10.000 pregnancies [2]. Although OT can be diagnosed at any gestational term, the best majority are accounted in the first trimester of pregnancy [3]. The majority of reported ovarian torsions during pregnancy are unilateral, with the right side being the most commonly affected [4]. The presence of a corpus luteum cyst or any other ovarian mass, or increased size due to ovarian stimulation as in assisted reproductive therapy are considered risk factors [5]. Ischemia and necrosis can install rapidly, though early diagnosis is essential for ovarian and gestational salvage. Up to date there are no generally accepted methods of treatment, simple detorsion with oophoropexy either laparoscopic or open, transabdominal ultrasound-guided cyst aspiration or salpingo-oophorectomy (both laparoscopic and by open approach) being described [5-7].

We report an additional case report of OT during pregnancy due to a dermoid cyst, successfully managed by right-sided salpingo-oophorectomy in a limited resource setting.

Case report. A 24 years old G1P0 (25-26 weeks

of gestation) was admitted 72 hours after onset, complaining right-flank pain, nausea and anorexia to the Bangassou Regional University Hospital, Central African Republic. Physical examination showed a sub-febrile patient (37.5°C) with painful and tender abdomen in the right-flank and leukocytosis and stable vital signs. The abdomen was painful upon palpation of the right flank and right lower abdominal quadrant with right lower quadrant tenderness and rebound tenderness in the same site. The uterus was relaxed and the fundal height corresponding to the gestational age. The laboratory signs were unremarkable, except a white blood cell count of $12.3 \times 10^9/L$. The heart rate was 100 beats per minute. Upon ultrasonography (USG), a single life fetus uterine pregnancy of 25-26 weeks was diagnosed. Neither ovaries nor appendix were visualized. Free fluid in the peritoneal cavity was not detected upon USG.

An emergency midline laparotomy was performed and a twice clockwise torsted right-sided ovarian dermoid cyst (13X15 cm) with ischemic necrosis was observed (**Fig. 1**) and right salpingo-oophorectomy was performed (**Fig. 2**). The appendix and the left ovary and fallopian tube were without any obvious signs of pathology. Prophylactic tocolysis was not given since the patient did not experience uterine contraction after surgery [8].

The postoperative evolution was uneventful and the patient was discharged 6 days after surgery



Fig. 1. – torsted right-sided ovarian dermoid cyst with ischemic necrosis – uterus (→)

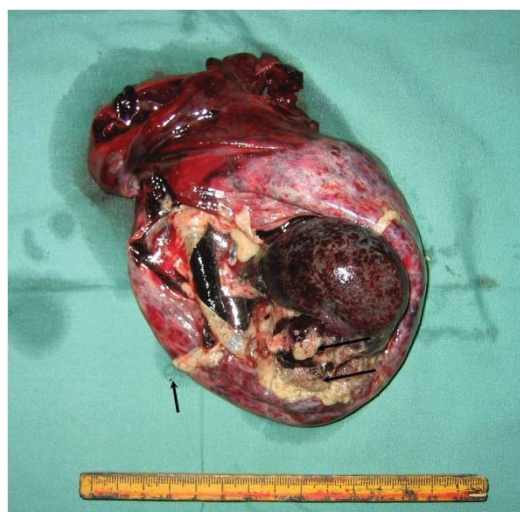


Fig. 2. – removed specimen dermoid cyst containing teeth, debris and hair (→)

with a viable intrauterine pregnancy without any supplement therapy. The gestation evolved without any complications, the patient delivering a healthy infant on term.

Discussion. Ovarian torsion is one of the most common surgical emergencies [6]. The diagnosis is challenging since the signs and symptoms are not specific, especially in pregnancy, the most important clinical signs are: abdominal pain (100%), nausea and vomiting (85%), leukocytosis (56%), for these reasons the OT during pregnancy is frequently misdiagnosed [7, 9]. About 50% of the OT occurs in the first trimester of gestation and only 10% in the second one (as in our case) [8]. Torted ovary must be an essential part of the differential diagnosis for abdominal pain in pregnancy, especially in the context of fertility treatment and the absence of other signs and symptoms [5]. Up to date the preferred diagnostic method for OT in pregnancy is the ultrasound, thus the physicians should be familiar with techniques used to identify ovarian torsion using ultrasound since ultrasound enables not only visualization of the affected ovary, but also confirmation of the presence of a viable pregnancy [5].

Up to date the exact mechanism OT is enigmatic, the mechanism being sequential: 1) mechanical blockage of the adnexal veins and lymphatic vessels by ovarian tumor; 2) pregnancy; 3) hydrosalpinx or pelvic adhesions after tubal infection or 4) pelvic surgery all the above mentioned could induce complete or partial torsion of the fallopian tube [10].

According to the published data, the right side is more frequently affected, a potential explanation of a significantly more frequent affection of the right side could be the presence of the sigmoid colon that could induce venous congestion on the right side [11, 12]. Since the clinical signs are not specific, the diagnosis is challenging and the available laboratory or imaging studies could not confirm fallopian tube torsion [13].

Although controversial, the use of Doppler flow ultrasound could allow assessing the presence of ischemic damage to the ovary and the fallopian tube in case of OT, the whirlpool sign being characteristic to guide the diagnosis [5, 14-16]. Although up to date imaging diagnostic procedures are widely available, the diagnosis of an OT during pregnancy is usually established during surgery performed for acute abdomen and salpingo-oophorectomy is almost always necessary [17]. The same scenario was observed in the present case presentation.

Up to date there are no widely accepted recommendations for the management of OT during pregnancy, laparoscopy, cyst aspiration and laparotomy being accepted [18], thus any of the

above mentioned treatment options are accepted and depend on the gestational age and the anatomic characteristics of the involved ovary [19]. Once the diagnose confirmed, the ovary may be detorsed with or without fixation, or it can be surgically removed as in the present case [20]. Rates of pregnancy survival regardless the treatment option (laparotomy or laparoscopy) are not well defined up to date, but are favorable up to date with a maternal death of zero [5, 21].

Conclusions. Ovarian torsion in pregnancy is rare and should be considered in the differential diagnosis of the lower abdominal pain. Due to non-specific symptoms, the diagnosis is challenging and is commonly established intraoperatively. The treatment is often surgical with laparoscopy or open procedures being used depending on the patient's condition and local expertise.

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