

Case Report

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Ovarian Torsion in a Patient with One Ovary Resulting in Bilateral Salpingo-Oophorectomy during Pregnancy

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Abstract

This case presentation describes a primigravid patient at 24 weeks and 2 days who presented with ovarian torsion in the setting of a prior ovarian loss. She was managed laparoscopically and underwent a salpingo-oophorectomy. This case reiterates the importance of early identification of torsion in pregnancy for greatest chance of ovarian preservation with detorsion.

Keywords: Detorsion; Nausea; Pregnancy; Ovary

Introduction

Ovarian torsion in pregnancy can be difficult to diagnose as discomfort, nausea and vomiting may be common. Additionally, abdominal anatomy is distorted along with physiologically elevated white and red blood cell counts. Bilateral ovarian loss in pregnancy is significant as the ovaries provide the hormones necessary to maintain pregnancy in the first trimester. By the second trimester of pregnancy, the hormonal maintenance is generated from the placenta. This is a case of ovarian torsion in pregnancy in the setting of a prior ovarian loss.

Case Report

A 30 year old G1P0 at 24 weeks 2 days initially presented to an outside hospital with sharp, left lower quadrant pain. She was subsequently discharged without a specific diagnosis after treatment with pain medication and resolution of her symptoms. She presented one day later with continued sharp left lower quadrant pain. Vital signs and laboratory investigations were normal. She had an ultrasound which showed a 6.0×3.7×6.4 cm enlarged, edematous left ovary, peripheral follicles, diminished arterial flow, and no identifiable venous flow; findings which were consistent with a left ovarian torsion. This finding increased in size from a 2 cm complex cyst seen on first trimester ultrasound. A limited OB ultrasound identified a single live intrauterine pregnancy in breech position with an estimated gestational age of 23 weeks and 5 days.

She was transferred to a tertiary care facility with a level III NICU given the perivable nature of her gestation. On presentation, she described chills, nausea and vomiting with the left lower quadrant pain. Review of symptoms was otherwise negative. Her history is significant for a prior ovarian cyst on the right, with torsion requiring right salpingo-oophorectomy. She strongly desired retaining her left ovary and future fertility. On examination, her abdomen was gravid, with moderate tenderness. She was admitted for surgery, consented for diagnostic laparoscopy and possible left salpingo-oophorectomy along with possible laparotomy. A dose of betamethasone 12 mg was administered for fetal lung maturity. She entered the operating room 12 hours after her presentation to the emergency department and 1.5 days after onset of her symptoms. Intra-operative assessment laparoscopically revealed a gravid uterus, with the left fallopian tube and ovary visibly torsed with a purple/black appearance, consistent with necrosis. With attempted traction and manipulation, the tissue easily broke free and was unsalvageable (Figures 1 and 2).

Following surgery, the patient was discharged on post-operative day two after appropriate recovery. Final pathology revealed a benign

ovary with extensive stromal hemorrhage consistent with torsion and a benign unremarkable fallopian tube. She subsequently went onto have an uncomplicated spontaneous vaginal delivery at 39 weeks of a male infant. Postpartum, she was doing well without menopausal symptoms and bottle feeding her infant. Hormone replacement therapy was discussed with the patient, and she was agreeable to initiate treatment at 6 weeks post-partum.

Discussion

Acute abdominal pain in pregnancy should warrant immediate investigation, including evaluation for torsion, especially with the possibility of bilateral ovarian loss [1,2]. Up to 2% of all pregnancies are complicated by ovarian masses [3]. Torsion occurs in 0.2% of all pregnancies [4]. The risk of repeat torsion remains high and has been estimated to be 11% in patients with a history of torsion [5].

The ultimate goal in a case of torsion, especially in a patient who wishes to retain fertility, is detorsion and preservation of ovarian function. Traditionally, the ovary should be removed if it is grossly necrotic or gangrenous. However a grossly necrotic appearance of the affected ovary may be misleading. In a study by Oelsner et al. [6], which involved a retrospective analysis of 102 patients managed with surgical



Figure 1: Pre surgical image of the left adnexa.

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Figure 2: Post left salpingo-oophorectomy.

interventions for adnexal torsion, reported that 91.3% of patients with a bluish-black ovary regained normal function and there was no reported incidence of pelvic or systemic thromboembolism complicating the surgeries [6]. The appearance may be due to venous and lymphatic stasis with preservation of some blood supply from either uterine or ovarian arteries [7]. Oelsner et al. [6] concluded that laparoscopic detorsion with ovarian salvage helps regain normal blood flow and at the same time retain normal ovarian function and reserve. The study reported that restoration of normal ovarian function was achieved at a high rate with laparoscopy (93.3%) which included normal macroscopic appearance, follicular development and fertilization of eggs retrieved from the detorsed ovary.

The key difference between the above study and this case is time from onset of symptoms to surgical intervention. The median time reported by Oelsner [6] was 16 hours with a range of 2 to 144 hours. This once again highlights the importance of early intervention in order to preserve the ovaries.

It is also important to reiterate that hormone replacement is not necessary for the maintenance of pregnancy following bilateral ovarian

loss during the second trimester. Progesterone production shifts from the corpus luteum to the placenta by 7 to 10 weeks gestational age [8]. Case reports have shown term delivery following 2nd and 3rd trimester bilateral ovarian loss [9,10]. This case once again illustrates continuation of pregnancy, delivery and postpartum breastfeeding without complications despite bilateral ovarian loss in pregnancy.

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