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Case Report

A case report on ovarian torsion after ovarian stimulation

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ABSTRACT

Ovarian torsion is a rare but serious cause of acute abdominal and pelvic pain in women, accounting for 2.7% of gynecologic emergencies. The incidence of ovarian torsion has been reported to be increased due to ovarian hyper stimulation. The incidence increased to 6% under stimulation for assisted reproductive technology (ART) and to 16% with ovarian hyperstimulation syndrome (OHSS). Although the delay in diagnosis from symptom onset is common, rapid diagnosis of ovarian torsion is imperative to prevent morbidity. The gold standard to treat ovary torsion is surgery, and this is also the only way to confirm the torsion. Here is a case report of a 31-year-old lady with a history of infertility underwent two cycles of ovulation induction and intrauterine insemination (IUI), presented with acute pain abdomen as well as a history of a similar episode two months earlier. A preoperative diagnosis of an ovarian cyst with suspicion of torsion was made and laparoscopy was performed. Intraoperative diagnosis of left ovarian torsion due to dermoid cyst was done and ovary untwisted and fixed to the round ligament, cyst was removed, and ovarian tissue was conserved. Patient was followed up until pregnancy and delivery.

Keywords: Torsion, Ovarian, Morbidity, Surgery

INTRODUCTION

Adnexal torsion is when the ovary, with or without the fallopian tube rotates along its vascular pedicle, leading to partial or complete occlusion of the blood supply, and acute abdomen at presentation. Difficulty diagnosing, and similar non-gynecologic presentations, makes the exact prevalence less clear, however, an annual prevalence of approximately 3% to 5% was suggested.[1] Diagnosis is basically clinical, however, pelvic imaging, primarily by transvaginal ultrasound (TVUS) and Doppler evaluation of ovarian blood flow, confirms the diagnosis and excludes similar conditions.[2] Both confirmation of diagnosis and treatment is done by surgery only.

The aim of the current case report is to highlight a conservative surgical treatment approach with the aim of preserving her fertility and follow up is mandatory.

CASE REPORT

A 31-year-old null gravida with unexplained infertility and married life of 5 years having regular cycles presented to the emergency department in the middle of her regular 28-day menstrual cycle. She presented with sudden onset of acute pain abdomen of 2 hours duration with nausea and vomiting, symptoms worsening intermittently and not relieved with analgesics. Patient had similar history 2 months back and recovered spontaneously after medical conservative management with hospital admission. Patient had history of undergone 2 cycles of ovulation induction with intrauterine insemination (IUI) 2 months ago. Patient also had history of laparoscopic removal of dermoid cyst on the right side 4 years ago.

Clinically on examination, patient was in agony due to pain and dehydrated with a heart rate of 110 beats per minute (bpm) and a blood pressure of 100/60 mmHg.

Abdomen examination revealed severe tenderness in the left iliac fossa with guarding and rigidity. There was rebound tenderness in left iliac fossa and laparoscopy scar present. There was no renal angle tenderness and bowel sounds were present.

The speculum examination did not demonstrate any vaginal discharge. The bimanual pelvic examination demonstrated uterus retroverted, normal size, cervical movement's painful, left fornicial tenderness was present.

Urinalysis did not suggest a urinary tract infection and urine pregnancy test was negative. Her blood tests confirmed the absence of pregnancy. There was mild leukocytosis, and the C-reactive protein (CRP) was normal.

Pelvic ultrasound demonstrated solid mass in the left adnexa measuring 6.3×4.3 cms, no neo-angiogenesis, no evidence of flow in it, but with evidence of flow around it.

Figure 1: Solid mass in left adnexa.

The patient was admitted, provisional diagnosis of torsion of left ovary was made and the decision for an emergency laparoscopy done.

Intraoperative findings revealed the right ovary normal. The left ovary had torsion and looked purplish black, almost necrosed. Left ovary untwisted. Cortical tissue showed patchy pinkish sites of recovery of blood supply, difficult decision to conserve the ovary was made. Dermoid which ruptured during dissection was removed.

Figure 2: Left ovarian torsion.

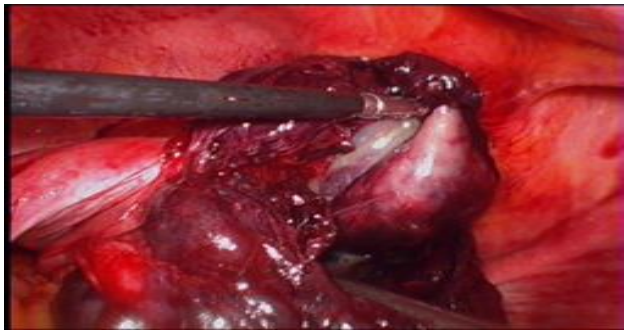

Figure 3: Conserved left ovary.

The postoperative period was uneventful, and she was discharged home on the following day.

Follow up was done with serial Pelvic ultrasound. One month later the left ovary was 3.7×2.0 cms with evidence of flow in the ovary. 2 1/2 months later left ovary was of size 2.5×2.1 with 1 to 2 Graafian follicles with evidence of flow in ovarian stroma. 4 months later left ovary was of size 3.8×1.1 cms with 2 antral follicles of size 0.1×0.4, 0.4×0.7 cm with evidence of blood flow. 6 months after surgery patient was induced with clomiphene and she conceived with 1st cycle of IUI delivered a healthy female child by cesarean section.

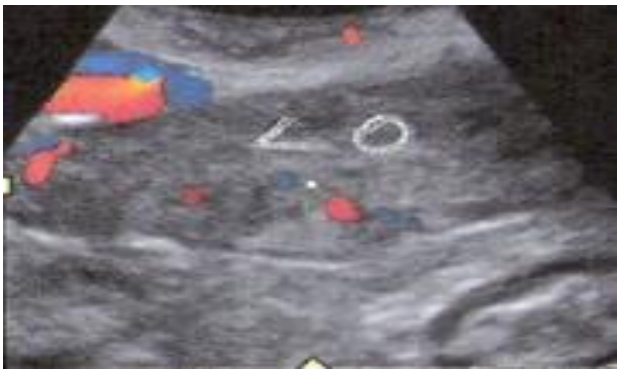

Figure 4: 4 months later USG.

DISCUSSION

Ovarian torsion can occur at any age with the greatest incidence in women 20-30 years of age.[3] The incidence of ovarian torsion among women of all ages is 5.9 per 100,000 women and the incidence among women of reproductive age (15–45 years) is 9.9 per 100,000 women. In 70% of cases, it is diagnosed in women between 20 and 39 years of age.[4]

Risk factors for ovarian torsion include pregnancy, ovarian stimulation, previous abdominal surgery, and tubal ligation. The most frequent encountered pathology is that of an ovarian dermoid. Ovarian torsion is difficult to diagnose accurately, and operation is often performed before certain diagnosis is made. Grey scale ultrasonography (USG) combined with Doppler is the

method of choice for imaging of lower abdominal pain in female.[5]

Laparoscopy is the surgical approach of choice as it has the advantages of shorter hospital stay and reduced postoperative pain requirements.[5] Traditionally, radical treatment by adnexectomy was the standard approach to ovarian torsion in cases of ovarian necrosis. This approach obviously resulted in the loss of the ovary and potential reduction in fertility. More recently conservative treatment that consists of untwisting the adnexa followed by cystectomy has been reported.[6] Multiple studies have suggested that even those black or blue-like ovaries may retain ovarian function following detorsion. Postoperative follow-up with ultrasound showed over 80% of patients had normal follicular development after detorsion.[7]

Ovarian torsion is a potential complication of stimulated cycle, which prompts practitioners to caution patients. Patients who do not conceive are typically not monitored in the subsequent cycle unless they plan back-to-back stimulation. In this case report, we describe a patient who developed ovarian torsion during the natural cycle following a failed cycle. Although the diagnosis of ovarian torsion is difficult and challenging, careful analysis of presenting symptoms (such as sudden onset of lower abdominal pain) is very critical. Pelvic ultrasonography can provide information on ovarian cysts. Once ovarian torsion is suspected, laparoscopic management is the mainstay of diagnosis and treatment. Detorsion was adequate to preserve ovarian structure and function.

CONCLUSION

Diagnosis of ovarian torsion needs a high degree of suspicion. Acute onset abdominal pain in any female undergoing infertility treatment should be evaluated to rule out this diagnosis. Doppler of the adnexa will enable early intervention to save the ovaries of the patient. Immediate laparoscopy and detorsion is the treatment of choice. All torted ovaries need not be removed. Our patient showed a great improvement with good blood flow and a good follicular response on follow up. Main message of this case report is to conserve the ovary.

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