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Unusual case of recurrent idiopathic unilateral ovarian torsion

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Abstract
Ovarian torsion occurs following the twisting of the ovary on its ligamentous attachment causing a restriction in blood flow. To save the ovaries and avoid consequences, quick diagnosis with high clinical suspicion is necessary. Here, we are presenting a case report depicting the importance of timely diagnosis and prompt management in a case of recurrent ovarian torsion in a young female.

Keywords: Gynecological emergency, ovarian torsion, adnexal torsion

Introduction
Ovarian torsion is a surgical emergency which most commonly involves reproductive aged women and presents with ovarian masses [1, 2, 3]. It is the fifth most common gynecological emergency with a prevalence of 2.7% [4, 5]. Ovarian torsion is a part of adnexal torsion which may either involve the ovary, tube, or both structures. Prompt and early diagnosis is essential to ovarian salvage.
Here, we present a case of a patient who had recurrence of unilateral ovarian torsion, after two years of treatment with detorsion and oophoropexy.

Case Report
A 15-year-old healthy female presented to emergency department with complaints of sudden onset of severe abdominal pain, associated with nausea and vomiting for past two days. Her first day of last menstrual period was 01/08/2022, and she had regular cycles and her age of menarche was 13 years. On examination she was tall, lean, and thin built with 165cms height and had appropriate weight for age, and had no other risk factors for ovarian torsion except for being a sports person.
On examination, she appeared ill and uncomfortable with a pulse rate of 100 beats per minute and blood pressure of 90/70mmHg. On inspection, abdomen was slightly distended and on palpation there was severe tenderness in the lower abdomen. Tenderness was more on the left suprapubic area and iliac area. She had some rigidity and guarding but no rebound tenderness, and there was no hepatosplenomegaly.
She had similar sudden onset of severe pain abdomen two years back when she was 13 years old. She was taken to a private hospital and she underwent emergency laparotomy followed by detorsion of the left ovary and oophoropexy of the right ovary. Intraoperative notes that time revealed enlarged left ovary 7 X 6 X 5 cm with two and a half turns of torsion with coiling of left fallopian tube.
She was given Intra venous fluids and analgesics at our center. Her emergency ultrasound was done which was suggestive of bulky left ovary measuring approx. 5.4X4.1X3.5 cm with vol 41.6cc, showing echogenic stroma and multiple small follicles suggestive of left ovarian torsion. There was evidence of well- defined cystic area measuring approx. 4.1X3.3 cm in left ovary with multiple internal septations within. On color doppler study, left ovary showed no internal vascularity. Arterial flow was persistent at pedicle but no flow was detected with ovarian parenchyma.
Inspite of conservative management, there was no pain relief and on the basis of ultrasound findings, decision of emergency laparotomy was taken. On opening the abdomen, hemoperitoneum of around 100cc with left tubo-ovarian mass of around 7X5 cm with four loops

of torsion in left ovary and oedematous left fallopian tube was found. Outer surface of left ovary appeared gangrenous and hemorrhagic as shown in figure 1. Decision for left sided salpingoophrectomy was taken and specimen was sent for histopathological examination. Her post-operative period was uneventful and patient was prescribed with combined oral contraceptives and was discharged under satisfactory condition with no complications.

Her histopathological examination report was suggestive of ovarian torsion with no specific pathology in left fallopian tube.

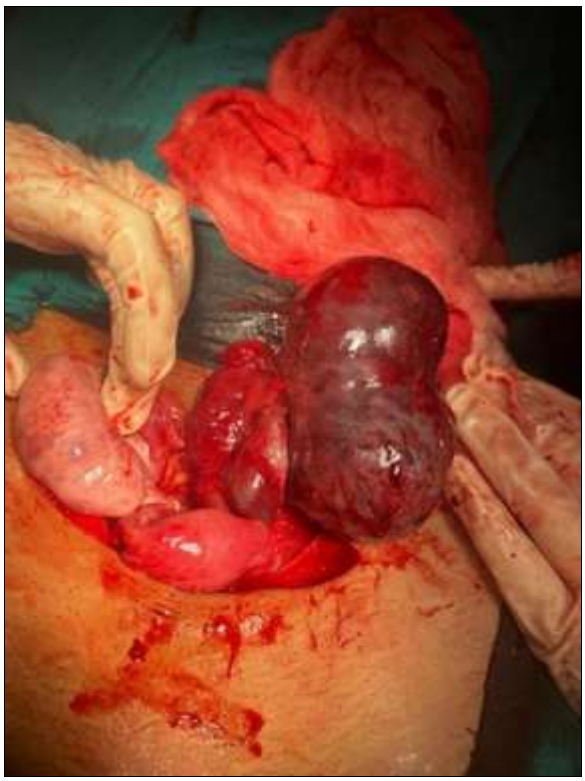

Fig 1: Intra-operative finding of gangrenous left ovary with 4 loops of torsion

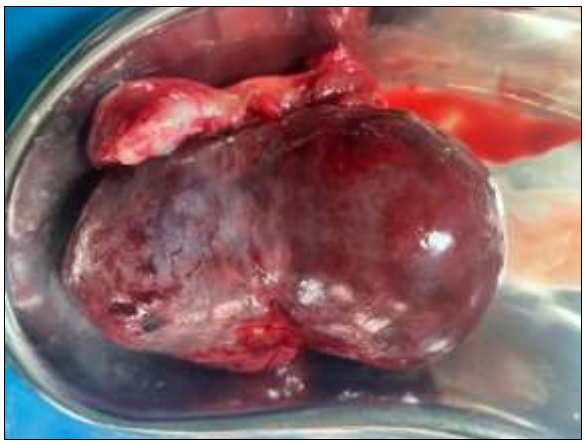

Fig 2: Specimen of left gangrenous ovary with oedematous fallopian tube

Discussion

The term "ovarian torsion" describes the full or partial rotation of the ovary on its ligamentous pedicle that results in a partial or total restriction of the ovary's blood supply. Young women who have ovarian torsion require immediate surgical attention following a clinical suspicion. When fallopian tube twists over its pedicle along with ovary then it is known as adnexal torsion. Isolated twisting of fallopian tube is rare.

Adnexal torsion is often difficult to diagnose due to the presence of nonspecific symptoms and more commonly encountered diagnoses. Ovarian torsion can present with symptoms that mimics conditions like appendicitis, urinary tract infection, renal colic, gastroenteritis, or other causes of acute abdomen [6]. Torsions are common in reproductive age group [7]. Around 1-2 cm3 is the average volume of the prepubertal ovary [8]. The diagnosis of ovarian torsion is supported by ultrasound (approximately 87% accurate for ovarian pathology) [9].

Ultrasound features includes:

1. If the ovaries are symmetrical and of normal size, torsion is uncommon if one of them is larger (>4 cm)
2. Oedematous ovary
3. Peripherally displaced follicles with hyperechoic central stroma also known as follicular ring sign
4. Midline position of ovary
5. Whirlpool sign of twisted ovarian pedicle

The vitality of the ovary determines whether surgery is needed to repair torn structures, or need for oophorectomy when the tissue is necrotic [10]. Young population is specifically more susceptible to recurrence, due to hypermobile structures, longer uteroovarian ligaments, venous congestion, constipation, and jarring movements [11, 12]. For cases where idiopathic ovarian torsion in young girls occurs or in cases of recurrent torsion, oophoropexy by permanent suture or by utero-ovarian ligament plication at time of initial surgery has been suggested [1, 3, 11]. But it is important to remember that history of oophoropexy does not eliminate the possibility of occurrence of future adnexal torsion. Before the ovary becomes necrotic, we need to do surgery to prevent fertility loss to patient. Hence, a strong clinical suspicion is necessary in case of any acute abdomen in a young female.

Conflict of Interest

Not available

Financial Support

Not available

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