Left Ovarian Torsion In A 2½-Years Child: A Rare Case Report

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ABSTRACT
Torsion of ovarian cysts and tumour are fairly common and widely known but torsion of the normal ovary in left-side is extremely rare (1). A very high degree of clinical suspicion is required for its prompt diagnosis and management. We are reporting a case of left-sided ovarian torsion in a 2½-year old child who presented with pain abdomen. She was successfully managed with left-sided oophorectomy. During a wide review of literature, we failed to find torsion in a normal ovary in a 2½-year old child.

Keywords: Torsion, Ovary, Oophorectomy

Introduction
Ovarian torsion is one of the rarest causes of acute abdomen in children. It accounts for 2.7% cases of acute abdomen in children (2). Most of the times it is associated with large ovarian cysts, teratomas, and other benign masses, but torsion of the normal ovary in left-side is rarest (3). Till date, very few cases have been reported. Due to its rarity, diagnosis is sometimes missed which may prove fatal.

Case Report
A previously healthy 2½-year girl presented with pain in lower abdomen from the past 5 days. There was no associated fever, although a history of 1 episode of vomiting was present. It was her second visit to paediatrician due to persisting symptoms. On examination, her vitals were stable. She was afebrile, no pallor and no cyanosis was present. On local examination, there was marked tenderness present in the lower abdomen. Appendicitis was suspected as the most probable diagnoses. She was kept NPO and intravenous antibiotics started. Haematological work-up and urine analysis were well within the normal range. An X-ray abdomen showed few dilated loops. A USG abdomen showed an enlarged left ovary with minimal free fluid in the pelvis. On colour doppler study, the arterial flow in left-ovary was absent, thereby diagnosis of left ovarian torsion was made.

Emergency laparotomy was done through the sub-umbilical transverse incision as the diagnosis was still in doubt. Appendix and rest of the gut were normal. Right ovary, uterus and fallopian tubes were normal, but the left ovary was showing gangrenous changes (Fig 1) so oophorectomy was performed.

Post-operative period remained uneventful. The histopathological examination confirmed the diagnosis of ovarian torsion with gangrenous changes (Fig 2a, 2b.).

Discussion
Ovarian torsion is a surgical emergency and must be managed as early as possible to prevent gangrenous complications. It is more commonly seen in right side than in left in a ratio of 3:2. It is probably due to sigmoid colon in left side restricting the left ovary, or it may also be for the caecum in the right side which permits more movements in right ovary (2). The most likely mechanism for a normal ovary to undergo torsion is an abnormally long fallopian tube, mesosalpinx, or mesovarium allowing excessive movements of the ovary. In some cases, it may also be due to constipation, sigmoid colon distension, pre-menarchal hormonal activity, or a significant jarring motion. Instances causing sudden increased abdominal pressure, such as coughing, hiccupping, defecation, and vomiting, may also lead to torsion. Excessive movements of a relatively large ovary in a small child or rarely some associated Mullerian anomalies may be responsible (4, 5, 6, 7). Most patients

Fig. 1: left ovary was showing gangrenous changes.
Fig. 2A& B The entire ovarian stroma is replaced by many dilated congested blood vessels and rest shows coagulative necrosis due to ischaemia.

present as a case of acute abdomen. It is usually associated with nausea, vomiting and in some cases a low-grade fever. The differentials are acute appendicitis, gastro-enteritis, renal colic, urinary tract infection and all other causes of acute abdomen. The ovarian torsion of a previously normal ovary has been reported in literature in the age group from 6 to 13 years (8, 9). However, in the index case the child was 2½-years year old.

The diagnostic modality of choice is ultrasonography (USG). USG will show an enlarged ovary with or without a cystic mass. Doppler study is not much sensitive in this case as the ovary is supplied by 2 main sources; uterine as well as well as the ovarian artery. A CT scan may be useful but it is not specific. MRI may prove to be useful if USG fails to show any changes. The treatment of choice is diagnostic laparoscopy with detorsion if diagnosed early. In cases of gangrenous ovary, oophorectomy is recommended by laparoscopy or laparotomy. The role of oophoropexy in the treatment of ovarian torsion is still controversial as no study till now has proven its efficacy in the long run. Although as per literature oophoropexy can be considered an option in cases of recurrent torsions, loss of contralateral ovary or anatomically vulnerable ovary (10, 11, 12). There is no evidence till date warranting oophoropexy of the contralateral ovary as in testicular torsion. Over the years laparoscopic detorsion is preferred over laparotomy due to comparative safety, lesser hospital stay and fewer post-op complications.

Conclusion
Ovarian torsion although rare should be managed early. The condition is particularly dangerous in children as due to its rarity, it is diagnosed very less often. Clinicians today need to keep this diagnosis in mind in every case of acute abdomen in young girls as it is a treatable condition. Prompt diagnosis and early intervention can treat the illness and save the ovary thus preserving fertility in the long run.

Declaration of Interest
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