

## Case Report

### **A case of ovarian torsion: To pex or not to pex?**

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## **Abstract**

Torsion of the ovary is a common gynaecological surgery emergency. It is important to distinguish torsion of ovary from torsion of ovarian cyst as their sequelae and management are different as seen in the lower salvage rate of the former. A history of previous episodes may suggest spontaneously resolving torsion.

**Keywords:** ovary, torsion

**Key Clinical Message:** Delay in diagnosis of an ovarian torsion may lead to the loss of the ovary akin to testicular torsion. An immediate exploration is thus required but the difficulty is to get the pre-operative diagnosis right.

## **Background**

Torsion of an ovarian cyst is common but rarely torsion of an ovary may occur [1]. It is important to distinguish the two pathologies although an ovarian cyst may predispose torsion of the ovary. Their sequelae and management are different as seen in the lower salvage rate of the latter [2]. The non-specific clinical presentation of an ovarian torsion may result in delay in diagnosis and surgical management. This may lead to the loss of the ovary akin to testicular torsion. An immediate exploration is thus required. Whereas, in torsion of an ovarian cyst an urgent exploration and ovarian cystectomy may suffice with no effect on fertility. Laparoscopy is most ideal diagnostic and therapeutic tool in young women with recurrent lower abdominal pain as imaging techniques may be operator-dependent and not fully accurate [2,3].

## **Case presentation**

A 25- year old nulliparous woman presented as an emergency with a 4 hr history of a sudden-onset left-sided lower abdominal pain. It was as if she had been 'kicked' in the lower abdomen. It was colicky in nature with rapidly increasing frequency and the pain was constant at the time of admission. There were no associated vaginal discharge, altered bowel habit nor urinary symptoms. She had no menstrual disturbances and she was in the 2<sup>nd</sup> phase of her menstrual cycle. A pregnancy test was negative. She had previous mild episodes of lower abdominal pain managed conservatively and a pelvic ultrasound scan had then revealed bilateral ovarian follicular cysts. Following this current episode a pelvic ultrasound scan requested by a physician in the community delayed her presentation to hospital. This revealed a left ovarian mass and

suggested a torted ovarian cyst. On examination, she was a stout young woman in great distress. The pain was relieved by intravenous opiate (*tramadol 100mg*). Apart from a tachycardia her vital signs were normal. On examination there was guarding in the suprapubic area with rebound tenderness in the left iliac fossa. There was no palpable mass on superficial palpation and bowel sounds were normal. The differential diagnosis included a torted ovarian cyst or a ruptured ectopic pregnancy. An emergency low mid-line laparotomy revealed copious haemoperitoneum of about 200-300mls. Lying deep in the pouch of Douglas, the left ovary with multiple small cysts and pedicle were completely torted and infarcted. There was associated intra-ovarian haematoma with the uterine tube stretched out over the surface of the infarcted ovary (figure 1). Apart from small follicular cysts the right ovary appeared normal. The left ovarian pedicle was clamped prior to detorting so as to avoid dissemination of sepsis. This along with the uterine tube was transfixed with 2-0 polygalactin and a left salpingo-oophorectomy completed. Three small right ovarian cysts were incised and marsupialised. She made good recovery and was discharged on the 6<sup>th</sup> postoperative day to be followed -up in 6 weeks.

## **Discussion**

Multiple factors may be responsible for an ovarian torsion and most cases occur in the early reproductive years [1]. Ovarian torsion classically occurs unilaterally in 50-60% of cases involving a pathologically enlarged ovary such as from the benign germ cell dermoid cyst. However torsion is possible with smaller masses (<4cm) as in this case with multiple follicular

cysts or in women who have had ovarian stimulation. The irregularity of the ovary may create a fulcrum around which more commonly the uterine tube and ovarian pedicle revolves (adnexal torsion) [1,4,5]. The cancerous adhesions of malignant tumours fix the ovary to surrounding structures and are therefore less causative. However, a history of pelvic surgery e.g. tubal ligation may predispose to adhesions causing a fulcrum for torsion [6, 7]. Rarely in prepubertal girls and teenagers, torsion of a normal tube and ovary may occur from an excessively long fallopian tube or absent mesosalpinx [2]. This case involved the ovarian pedicle only and did not contain the typical medium-sized or large dermoid cyst. As in testicular torsion delay in diagnosis of greater than 6 hours may lead to irreversible infarction. If explored early the affected tube and ovary may be untwisted and infarcted blood can be removed from the ovary by incising the cortex which is then repaired. If, thereafter, the tube and ovary recover viability, they may safely be left in situ and function may be preserved [1,8]. The sudden onset of the abdominal pain and the later constant nature at admission, being only relieved by opiates suggested strangulation/infarction that required immediate surgery [9]. The urgent exploration was late and could not save the ovary resulting in a salpingo-oophorectomy. It is reported that because of the delayed diagnosis of ovarian torsion the overall salvage rate is below 10% in adults and 27% in paediatric patients [1,2,6]. The loss of a single ovary may not result in significantly reduced fertility but the prognosis is better with early diagnosis and appropriate treatment. It may be suggested that a contralateral oophoropexy should also be performed [8].

## **Conclusion**

Recurrent lower abdominal pain in young women should be investigated thoroughly and promptly if possible by laparoscopy. The presence of constant pain not relieved by narcotic

analgesia suggests strangulation and it is usually a late and ominous sign. An urgent exploration for torsion of an ovarian cyst may suffice but, torsion of the ovary requires immediate exploration.

**Consent:** Written informed consent was obtained from the patient for publication of this case report and accompanying pages. A copy of the written consent is available for review by the editor of the journal.

**Competing interests:** The authors declare no competing interests.

**Authors' contribution:** EPW is the main author that designed and drafted the manuscript. AFE contributed in literature search.

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Figure 1. Salpingo-oophorectomy specimen

