

A rare case of gangrenous hydrosalpinx

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Abstract

Adnexal torsion constitutes approximately 3% of Gynaecological emergencies and is one of the causes of acute abdominal pain in a woman.¹ Here we present a rare case of a gangrenous hydrosalpinx which presented with acute abdominal pain and was clinically diagnosed as a twisted ovarian cyst.

Keywords: Hydrosalpinx, Adnexal torsion

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Introduction

Adnexal torsion constitutes approximately 3% of Gynaecological emergencies and is one of the causes of acute abdominal pain in a woman.¹ Here we describe a unique case of a gangrenous hydrosalpinx which presented with acute abdominal pain and was clinically diagnosed as a twisted ovarian cyst.

Case Report

A 30 year old woman, married since 5 years, Para-1, Living-1, Abortion-1 presented to a tertiary care centre with history of dull aching abdominal pain since 8 days. There was no history of abdominal distension, altered bowel or bladder movement. There was no history of fever. Her previous menstrual cycles were regular and her last cycle was 1½ months earlier. She had undergone an Emergency Caesarean section 2 years ago, followed by an Emergency Curettage 1 year ago for an incomplete abortion. On examination, she was conscious and oriented, afebrile, Pulse- 92/min, BP- 110/70 mm of Hg, No pallor/ icterus, cardiovascular and respiratory system were normal. Abdominal examination revealed a Pfannenstiel scar which was well healed, no incisional hernia; there was abdominal guarding present and a mass of 8x10cm in the hypogastrium and right iliac fossa, arising from the pelvis, with smooth surface, regular margins and was tender. Cervix and vagina were healthy on per speculum examination. On vaginal examination, the uterus was anteverted, normal size, mass of 8x10cm present in right adnexa felt separate from uterus, cystic consistency, mobile and minimally tender; the left adnexa was free. Urine pregnancy test was negative. Her

investigations showed Hb- 11.3 gm/dL, TLC- 8800/cu mm, Platelet count- 3.1 lakh/cu mm. Ultrasonography revealed a solid cystic lesion in the left adnexa of 8.4x8.1cm which had undergone torsion. Colour Doppler showed no blood flow through the mass. The patient was immediately taken up for emergency exploratory laparotomy in view of torsion of left adnexal mass. Intra-operatively, there was a 10x10cm massive hydrosalpinx of the left fallopian tube which had undergone torsion of 1½ turns and was present on the right side. It had undergone gangrenous changes. Left ovary was normal. Uterus and right fallopian tube and ovary were normal. Left total salpingectomy was done. Post-operative period was uneventful. Histopathological examination revealed necrotic changes in the left fallopian tube.



Fig. 1: Left gangrenous hydrosalpinx which underwent torsion and shifted to the right side



Fig. 2: Left gangrenous massive hydrosalpinx

Discussion

Adnexal torsion is the twisting (partial or complete) of the uterine adnexa around its vascular pedicle, which may include the infundibulopelvic ligament and tubo-ovarian ligament. This can involve the ovary, fallopian tube or both.^{3,4} Vascular and lymphatic obstruction lead to arterial compromise and later ovarian necrosis.⁴ The right adnexa is most commonly involved due to the longer right utero-ovarian ligament and decreased mobility on the left side due to the presence of the sigmoid colon.⁵ It could sometimes mimic appendicitis.^{1,5,4}

The median age of incidence is 32 years;^{5,6} it is characterised by an ovarian mass (cyst or neoplasm) in adults, which provides a fixed point around which the adnexa may twist.⁷ Increased adnexal mobility is responsible for adnexal torsion in children and adolescents.^{4,7} Studies report 32-40% of patients with adnexal torsion had adhesions due to previous surgery (tubal ligation, cystectomy, hysterectomy) as a predisposing factor.^{2,6} Other risk factors include assisted reproductive techniques in which ovarian hyperstimulation leads to an increase in the ovarian volume.⁸

Acute lower quadrant abdominal pain is the most common symptom of adnexal torsion.^{1,2,6,4} A pelvic mass may be palpated in more than half the patients.^{1,5,6} Other symptoms include nausea and vomiting, dysuria, urinary retention, frequency, and urgency.^{1,2,6} Leukocytosis and fever are less common.^{2,6,4}

The differential diagnosis include appendicitis, pelvic inflammatory disease, tubo-ovarian abscess, ectopic pregnancy, adnexal or pelvic cyst and cholecystitis.^{2,6} This results in a delay in diagnosis.

Ultrasound is the investigation of choice, which will reveal echogenic areas of hemorrhage.^{4,7} The “whirlpool sign” is considered to be a direct sonographic finding of adnexal torsion. This is due to the twisting of the vascular pedicle around its longitudinal axis resulting in a Doppler image resembling a spiral or whirlpool.^{5,4,7}

Absence of arterial and venous flow on Doppler ultrasound is highly specific for adnexal torsion, and is associated with ovarian nonviability.^{1,2,6} Free fluid in the pelvis is suggestive of infarction and hemorrhage.⁴

Surgery is the gold-standard in the management of adnexal torsion⁹ and ranges from conservative, adnexa-sparing procedures to complete oophorectomy or salpingectomy. At present, the approach used is detorsion with salvage of the adnexa, typically by laparoscopy.^{2,6} A large literature review reported that ovarian function returned in 88-100% of patients in whom adnexal detorsion was done for adnexa that appeared necrotic.⁵ Oophorectomy or adnexectomy is done when there is severe vascular compromise, necrosis, peritonitis, or an ovarian mass. Total abdominal hysterectomy with bilateral salpingo-oophorectomy is reserved for postmenopausal women.¹ An alternative surgical approach is ovariopexy. Huchon et al. reported that ovariopexy should be performed in cases of malformation or excessive length of the utero-ovarian ligament.³

There is less post-operative morbidity in patients undergoing laparoscopy than laparotomy.^{1,6} Detorsion as a sole surgical approach is more common during laparoscopy, while total abdominal hysterectomy with bilateral salpingo-oophorectomy is done more often via laparotomy.⁶ If left untreated, adnexal torsion can result in ischemia and necrosis of the ovary, resulting in loss of future fertility.³

Conclusion

The differential diagnosis of acute abdominal pain in all age groups of women must include adnexal torsion. It is best managed by a surgical approach. With the advent of the laproscopic era, conservative methods like detorsion are gaining popularity.

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