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Torsion of paraovarian CYST resulting in secondary torsion of ovary

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Abstract
Paraovarian cysts account for 10 to 20 % of all adnexal masses. Small POC (Paraovarian Cyst) are common but large POC are rare and very rarely they undergo torsion. Fallopian tube and ovary being in close proximity to POC also undergo torsion along with it. (5). It is usually found in child bearing age. High index of suspicion & prompt treatment is required to salvage the fallopian tube and ovary in such cases. We report a rare case of twisted paraovarian cyst with secondary torsion of ovary around infundibulopelvic ligament.

Keywords: Torsion of Ovary, paraovarian cyst, torsion of adnexal mass

Introduction

Paraovarian cysts (POCs) are remnants of Wolffian duct in mesosalpinx that do not arise from the ovary. They account for ~10-20% of adnexal masses. They usually occur around the broad ligament and arise from paramesonephric, mesothelial, or mesonephric remnants. POC is benign, unilocular, thin walled and contains clear fluid. The cyst wall is lined by a single layer of cuboidal epithelium and fibrous tissue. Torsion of POC is very rare [4]. Fallopian tube and ovary being in close proximity to POC can also undergo torsion along with it.

Case Report: A 26 years old married P2 L2 tubectomised woman presented to emergency unit with complaints of severe pain in lower abdomen. Pain was more in right iliac fossa with sudden onset, sharp, non-radiating and with no relieving factor. There was no history of bleeding per vaginum, diarrhoea, constipation, urinary problems, fever or any other medical illness. Her menses were regular with normal flow. She had her last menses one week back.

On general examination the patient was conscious, pulse rate-100/minute, temperature was normal, BP-110/70 mm of Hg, she had mild pallor. Cardiovascular and respiratory system was normal. On abdominal examination tenderness and muscle guarding were present in lower abdomen on per-speculum examination, cervix and vagina were healthy and there was no abnormal discharge. On per-vaginal bimanual examination, uterus was retroverted, bulky, firm, nontender and mobile. A tense, tender, cystic mass about was felt separate from the uterus in anterior and right fornix. Left fornix was free. Cervical excitation pain was present.

Onlabotary investigations, her urine pregnancy test was negative. Her blood count showed raised Total leukocyte count of 13, 000. Her hemoglobin was 11 gm/ dl. The routine urine testwas normal. Abdominal and transvaginal ultrasound scan showed bulky right ovary measuring 4.8 x 3.8 x 5.8 cm with absent venous flow on colour doppler study. A right para ovarian simple cyst was seen measuring 3.5 x 2.3 cms. The cyst was anechoic and shows diffuse wall thickening with septations measuring up to 5 mm.No vascularity was seen in the cyst wall. There was mild pericystic fluid collection with fine mobile internal echoes in keeping with hemoperitoneum extending into the pouch of douglas. The uterus was retroverted. Endometrial thickness measured 8mm.

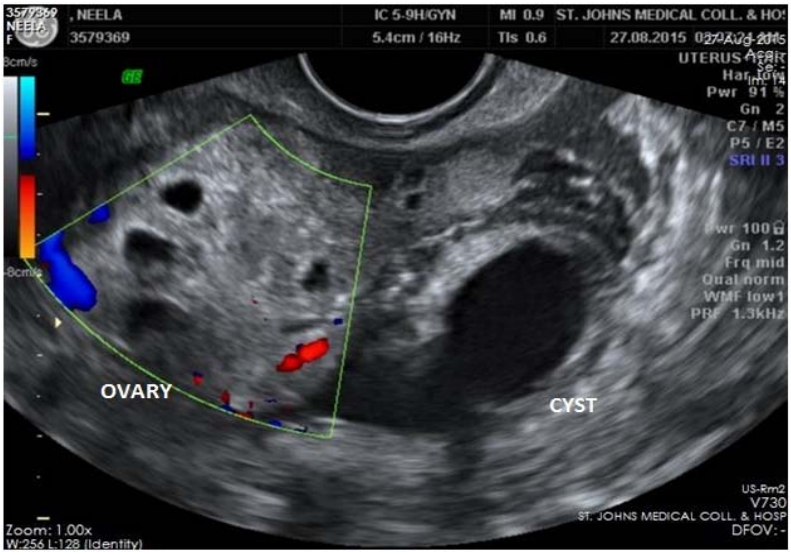

Fig 1: Transvaginal ultrasound showing bulky right ovary & paraovarian cyst

Fig 2: Transvaginal ultrasound showing edematous right paraovarian cyst wall(w)

Fig 3: Transvaginal ultrasound showing fluid with internal echoes in Pouch of Douglas (arrow).

A provisional diagnosis of twisted right paraovarian cyst was made.

Patient was taken up for diagnostic laparoscopy. An emergency diagnosticlaparoscopy followed by mini laparotomy was done. Laparoscopy revealed a normal sized retroverted uterus with a large paraovarian cyst of ~ 5 x 4 cm in size which was twisted around infundibulopelvic ligament on right side. Right fallopian tube was edematous and overstretched at the fimbrial end measuring 3 x 4 cms. Right ovary was bulky and a bluish hue was seen due to torsion around infundibulopelvic ligament (Fig. 1.). Mild hemoperitoneum of 200mlwas seen. The right infundibulopelvic and ovarian ligament was clamped, cut and ligated.

Right salphingo-oophorectomy was done with peritoneal lavage. Post-operative period was uneventful. Histopathology revealed a twisted haemorrhagic para-ovarian cyst (Fig. 2) with an edematous fallopian tube with haemorrhage in its lumen.

Discussion

Torsion of paraovarian cyst is more common in child bearing age and three times more common during pregnancy [5]. As cyst lies in broad ligament and it has no pedicle of its own, when it undergoes torsion, the fallopian tube and ovary being close to it also twist along with it. They should be considered in the differential diagnosis of acute abdomen in females.

In our patient fallopian tube torsion was considered in differential diagnosis as this patient had bilateral tubal ligation by Pomeroy method, which is considered to be an etiological factor in the formation of tubal cysts and if the cyst is in the fimbrial end, it may lead to torsion and present like an acute abdomen [9].

Complications that can occur include paraovarian cyst torsion (2-16 %), 2 haemorrhage, 3 rupture. 4 secondary infection, 5 neoplastic transformation (2.9%)-such as papillary serous cystadenoma, endometriod cyst adenocarcinoma, serous cystadenocarcinoma and mucinous cystadenocarcinoma [8].

Being an uncommon surgical emergency with no definitive diagnostic signs the diagnosis is often delayed, resulting in irreversible damage to the fallopian tube. Awareness of this condition is warranted to suspect and reach at an early diagnosis and enables the surgeon to perform a conservative surgery and salvage the fallopian tube and ovary. Many authors advocate detorsion of the pedicle with preservation of adnexal structures [6, 7] however, that was not possible in this case.

Learning Points

1. Pomeroys method of tubal ligation is susceptible for Paraovarian cyst formation.
2. Paraovarian cyst can undergo torsion which may involve the ovaries and if diagnosed early can be salvaged.
3. Post Pomeroys method of tubal ligation, patients should be followed up for Paraovarian cysts.
4. Possibility of a Paraovarian cyst torsion should be considered in patients who have undergone tubal ligation by Pomeroys method and presenting with acute abdomen.

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