

PUB: 145/2012



## Case report

# Torsive gangrenous fallopian tube with torsion of left Para ovarian cyst: A rare case report

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## ARTICLE INFO

### Keywords:

Para ovarian cyst

Torsion of fallopian tube

## ABSTRACT

Torsion of fallopian tube accompanied by torsion of ipsilateral paraovarian cyst although uncommon does occur. Lack of pathognomonic symptoms, clinical findings on physical examination, and specific imaging or laboratory characteristics makes this entity difficult to diagnose preoperatively. Its incidence is estimated at 1 in 1,500,000. Paraovarian cysts (POC) represent approximately 10% of adnexal masses. They are more common in women aged 30-40 years. It is usually located on the ligament between the uterus and the ovary, and often only found unilateral. These cysts are asymptomatic and usually found incidentally during other pelvic examinations and surgeries. We present a case of 18 year old women with torsion and gangrene of the left fallopian tube with torsion and gangrene of left paraovarian cyst, presented as acute abdomen and managed surgically.

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## 1. Introduction

Torsion of the Fallopian tube is a rare cause of acute pelvic pain which is difficult to diagnose pre-operatively. Its incidence is estimated at 1 in 1,500,000 [1]. Paraovarian cysts (POC) represent approximately 10% of adnexal masses [2]. They are more common in women aged 30-40 years Torsion of fallopian tube accompanied by torsion of ipsilateral paraovarian cyst although uncommon does occur in adolescent and postmenopausal women. It always occurs in combination with either ovarian cyst or a paraovarian cyst. Right fallopian tube is most commonly affected. There is a right sided predominance of adnexal torsion, with a 3:2 ratio, possibly due to the decreased space on the left side of the lower abdomen and pelvis, occupied by the sigmoid colon. The torsion of fallopian tube and para-ovarian cyst is usually seen in reproductive age group. The condition is frequently misdiagnosed with acute appendicitis or ovarian torsion. The age range is from 21-40 years. Paraovarian cysts (POC) represent approximately 10% of adnexal masses. It is usually located on the ligament between the uterus and the ovary, and often only found unilateral. It is thought to develop from Wolffian structures, the tubal epithelium or peritoneum.

Paraovarian cysts are usually very small, ranging in size from 2 to 20 cm. These cysts are asymptomatic and usually found incidentally during other pelvic examinations and surgeries. Most of the time they are small and asymptomatic, although are occasionally large, resulting in pelvic pain. POCs usually arise in the broad ligament and are thin walled and unilocular. It may be difficult to reliably differentiate a POC from an ovarian cyst by imaging, therefore they are often removed surgically. It may be difficult to differentiate POC from an ovarian cyst reliably by radiological imaging. Therefore, the definitive diagnosis is made during surgery. The exact cause of fallopian tube torsion is unknown; however several etiologies have been postulated. Accurate and immediate diagnosis can lead to early intervention, avoid complications and may even save the organ.

## 2. Case report

We present a case of 19 year old women referred to our emergency room as ectopic pregnancy with history of acute pain in the lower abdomen on left side and 6 months of amenorrhoea with previous irregular cycles and bleeding per vaginum since one hour before admission, accompanied by nausea and vomiting. She is nulligravidae and is married for 2 years. She does not remember her last menstrual period. On examination her vitals were stable, clinical examination revealed mild distention of lower abdomen with guarding and rigidity on left side, and per speculum examination revealed minimal bleeding from cervical os and up.

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examination revealed minimal bleeding from cervical os and normal uterine size and fullness in the posterior fornix with cervical movement tenderness. Her blood group was AB positive and 9.5% haemoglobin, hematocrit 30% and urine pregnancy test was found to be negative. Ultra sound revealed a well defined heterogenous lesion in POD with few anechoic lesion with no vascularity within. Both ovaries were seen separately from the lesion which suggested the possibility of POD lesion or paraovarian lesion. She underwent an emergency laprotomy. Per operative findings revealed haemorrhagic paraovarian cyst of 8x9cms with three twists with torsion and gangrene of the corresponding fallopian tube as shown in figure 2. She had a minimal peritoneal free fluid collection and the right ovary and fallopian tube appeared healthy. Left salpingectomy with extirpation of the left paratubal cyst were performed. Histologic examination revealed diffuse hemorrhagic infarction of the tube and a cyst. Postoperative stay was uneventful and she remains well on follow up.

### 3. Discussion

Acute abdomen from torsion of fallopian tube has been described more than a century ago. Torsion of the Fallopian tube is a rare cause of acute pelvic pain which has never been diagnosed pre-operatively. Its incidence is estimated at 1 in 1,500,000 [1]. Unfortunately, it is not often considered initially when a patient presents with abdominal pain. (Diagnostic accuracies range from 18% to 64%). Adnexal torsion occurs predominantly in women of reproductive age. Pregnant women have a greater risk of torsion of the adnexa than nonpregnant women (12% - 18% of ovarian torsion occurs during pregnancy). Women treated with fertility drugs who develop ovarian hyperstimulation syndrome have a greater risk of torsion with pregnancy (16%) than those who do not become pregnant. This rare condition is proposed to occur because of varied factors like anatomical abnormalities, like long mesosalpinx, tubal abnormalities, physiological abnormalities like abnormal peristalsis, tubal spasm, interstitial peristalsis and hemodynamic abnormalities. Other explanations are sudden body position changes (theory of Selheim), trauma, tubal neoplasm, extra tubal adhesions, pelvic congestion, previous surgery or diseases and a gravid uterus post tubal sterilization surgery (Pomeroy's method) [3, 4, 5, 6]. The lack of specificity of the clinical signs and symptoms and the numerous pathologic findings in the pelvis and lower abdomen often fail to alert the physician to the condition, making diagnosis difficult.

A medical history of ovarian or fallopian tube disease, along with the symptoms described, is an important consideration. The available laboratory or imaging studies cannot confirm fallopian tube torsion. They can, however, rule out other abdominal conditions with similar clinical characteristics, such as nephrolithiasis, cholelithiasis, appendicitis, extrauterine pregnancy, tubo-ovarian abscess, and pancreatitis. Complete physical and vaginal examination, color Doppler transvaginal

Fig 1, Paraovarian cyst occupying Pouch of Douglas

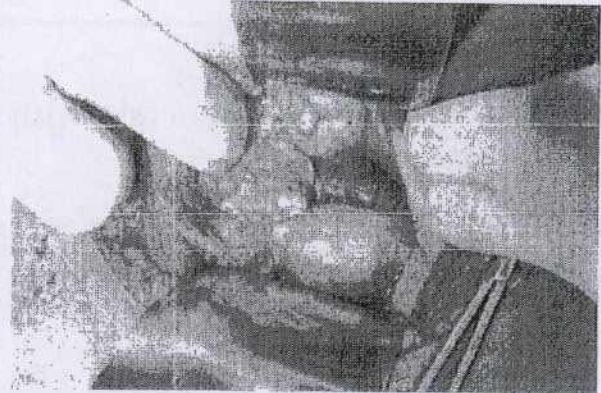
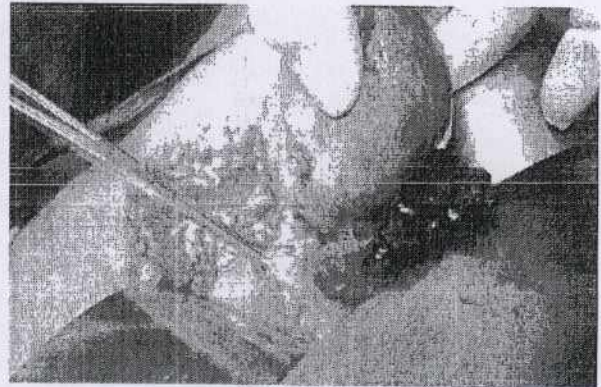


Fig 2, Torsive and gangrenous fallopian tube and Paraovarian cyst



3, Well defined heterogenous lesion noted in the PO region with few anechoic foci and no vascularity within. Right ovary is seen separate from the lesion.

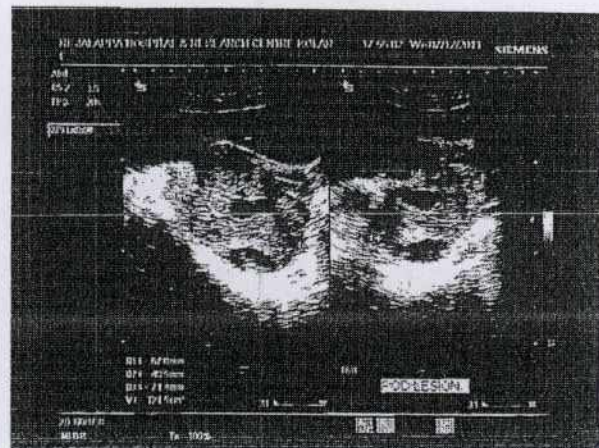
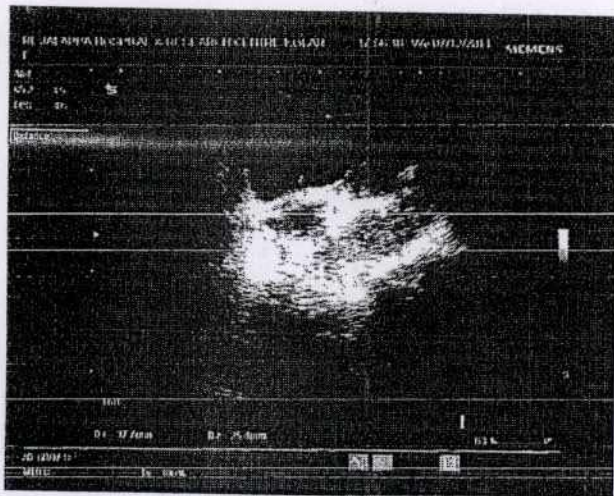


Fig 4, Left ovary is seen separately measuring 3.7x2.5cms and appears normal.



sonography the finding of high impedance or absence of flow in a tubular structure, especially in a patient with a history of tubal ligation, can be indicative of the diagnosis. Most false positive diagnoses are due to hemorrhagic corpus luteum cysts or tubo-ovarian abscesses. This technique has been replaced by laparoscopy, which is currently the most specific diagnostic tool for evaluating torsion. The definitive diagnosis of tubal torsion is still made retrospectively, usually after diagnostic laparoscopy.

#### 4. Conclusion

Torsion of fallopian tube and para ovarian cyst is usually seen in the reproductive age group. Physicians need to maintain a high index of suspicion for this uncommon and often difficult to diagnose cause of abdominal pain. Clinical presentation is non specific and neither imaging nor clinical examination can confirm the diagnosis pre-operatively. Surgery has a diagnostic and therapeutic role.

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