

**CASE STUDY****A CASE OF GANGRENOUS APPENDICITIS ASSOCIATED WITH OVARIAN TORSION  
IN A 35 -YEAR -OLD LADY****\*Dr. Sriram Christopher**

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**ABSTRACT**

Acute appendicitis is most common diagnosis in patients with abdominal pain for which most patients land up in open or laproscopic appendectomy. Ovarian torsion is uncommon diagnosis in patients of abdominal pain and it is difficult to rule out from other causes of abdominal pain. Any abdominal emergencies presenting together is rare alike acute adnexal pathology with appendicitis, with only few cases reported in the literature. Reported is a case of gangrenous appendicitis associated with ovarian torsion in a 35-year-old-lady.

**Key words:**

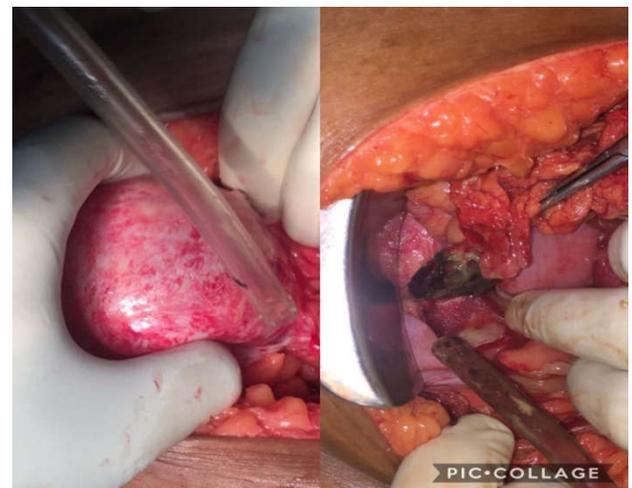
Ovarian torsion, Gangrenous appendicitis.

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**INTRODUCTION**

Abdominal emergencies are most common emergency surgery performed in tertiary care centre. Though ovarian torsion and appendicitis diagnosed alone in emergencies is common. Ovarian torsion associated with appendicitis is exceedingly rare. Ovarian torsion includes torsion of the ovarian tissue on its pedicle leading to reduced venous return, stromal edema, internal hemorrhage, and infarction. Ovarian torsion classically occurs unilaterally in a pathologically enlarged ovary. Torsion of a normal ovary is seen commonly among young children. Ovarian torsion classically occurs in presence of ovarian tumors or cyst. Classically, patients present with the sudden onset of severe, unilateral lower abdominal pain that worsens intermittently over many hours. Diagnosis of ovarian torsion is confirmed with CT. When OT and acute appendicitis occur concomitantly, it is often not evident which is the primary event. In our case, it is presumed. The inflammatory response set off by an acute appendicitis might have affected the hemodynamics of the ovarian blood supply. In some cases Conversely, it may appear that the ovary had torsed around the appendix and may have contributed to the focal distal appendicitis. It is very difficult to assess the causative relationship between the both

**Case Report**

A 35-year old female patient presented to surgical op with the complaints of lower abdomen pain for past 3 days, insidious onset which was progressively increased in severity intermittently, dull aching type without any radiation no history of relieving and aggravating factors. Patient also has history of nausea, vomiting 3 episodes per day with loss of appetite. Patient had history of sterilization done 1 year back, with no other significant history and on examination there was supra pubic fullness and lower abdomen guarding and tenderness. CT was done showing appendicolith in appendix measuring 6.3mm with mild fat stranding and 8 × 5 cm anechoic cyst noted in left

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adnexa. The patient was taken to the operating room for an exploratory laparotomy with a presumed diagnosis of left ovarian torsion (OT). Operative findings included a torsed left ovary with adhesions to omentum. The distal appendix was edematous and gangrenous changes. The patient underwent an appendectomy and a left salpingo-oophorectomy. Postoperatively she progressed well, tolerated her diet, and was discharged home on the first postoperative day. She was well at the 4-week follow-up examination, having completely recovered from her surgery.

## DISCUSSION

Ovarian torsion most commonly occurs in the presence of ovarian tumors and cysts (Heloury *et al.*, 1993). As exemplified by the current case and others, it can also occur in normal ovarian tissue (Heloury *et al.*, 1993). Tumors involved in OT are usually benign (Sommerville *et al.*, 1991; Petersen *et al.*, 1955). Young children tend to have either torsion of an immature cystic teratoma or torsion with no underlying pathology, whereas older children are more likely to have torsion associated with a cyst (Heloury *et al.*, 1993). The causes of OT with normal adnexa are unclear. Because OT often causes hemorrhagic infarction and significant edema of the ovary, it can be difficult to ascertain on pathological examination whether a cyst was present before the event. Of interest, a significant number of patients with OT in one large series had an underlying solid or cystic mass that may have served as a lead point for torsion (Oelsner *et al.*, 1993). When OT and acute appendicitis occur concomitantly, it is often not evident which is the primary event. In our case, it appeared that the ovary had torsed around the appendix and may have contributed to the focal distal appendicitis. Conversely, the inflammatory response set off by an acute appendicitis might have affected the hemodynamics of the ovarian blood supply. Of interest, tortuous veins are thought to be among the predisposing factors in OT. It is difficult to find a precedent to help elucidate the causative relationship, and conflicting opinions have been put forth in previous literature reports. Diagnosis of OT is often confirmed with CT and sonography (Heloury *et al.*, 1993; Cohen *et al.*, 1999; Oelsner *et al.*, 1993). Ultrasonic signs of OT include solid, cystic, or complex pelvic masses with or without associated fluid in the Pouch of Douglas, and multiple follicles in the cortical portions of a unilaterally enlarged ovary. In this case, duplex imaging demonstrated no flow to the torsed ovary. In fact, ultrasonography with color Doppler can be helpful for differentiating acute OT from appendicitis (Petersen *et al.*, 1955). Treatment of OT is surgical. Attempts should be made to salvage the ovary whenever possible (Oelsner *et al.*, 1993). Preservation of future fertility is crucial. If the ovary appears viable and no tumor is present, surgical options include detorsion of the ovary and ovarian cystectomy in cases of ovarian cysts (Oelsner *et al.*, 1993). In fact, Cohen *et al.* reported that laparoscopic detorsion of the twisted, ischemic, hemorrhagic adnexa is a viable option with minimal morbidity and can result in full recovery of ovarian function. After an OT episode, children may be at increased risk for a repeat event. After unilateral ovarian loss, the contralateral

ovary may be at risk for future torsion. Consequently, some advocate oophorectomy in both retained detorsed and contralateral ovaries. Ovarian biopsy should be considered whenever suspicion of malignancy is entertained. Treatment for ovarian malignancies involves salpingo-oophorectomy, and complete staging with evaluation of omentum, retroperitoneal lymph nodes, contralateral ovary, and peritoneal surfaces (Oelsner *et al.*, 1993). Unilateral salpingo-oophorectomy is indicated in cases where the ovary is not salvageable or if tumor involvement is present (Oelsner *et al.*, 1993). If a tumor is suspected, preoperative tumor markers including alpha-fetoproteins and beta-human chorionic gonadotropin may aid in postoperative treatment (Heloury *et al.*, 1993). Several studies have reported on the use of a laparoscopic approach not only diagnostically but also therapeutically, for detorsion with or without fixation, ovarian cystectomy, and treatment of associated surgical lesions. Laparoscopic surgery for pediatric uterine adnexal torsion has been described to be safe and result in short hospitalizations, good cosmetic results, and rapid return to baseline activity. Ovarian pathology coincidental with acute appendicitis is rare and an indication for surgery in pediatric female patients. Ovarian sparing should be performed whenever possible, although torsed ovary is seldom salvageable. Diagnosis consists of physical examination, CT scan of abdomen and pelvis, and ultrasonic study with Doppler color flow. Treatment is operative and often requires salpingo-oophorectomy along with an appendectomy.

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