

# Unusual presentation of twisted ovarian cyst

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## ABSTRACT

Ovarian torsion (also termed as adnexal torsion) refers to partial or complete rotation of the ovary and a portion of fallopian tube along its supplying vascular pedicle. It occurs commonly in reproductive age group; more on the right side (60%) and often presents with acute lower abdominal pain lasting for few hours and up to 24 h, accounting for 2.7% of acute gynecological conditions. It is one of the devastating conditions, hampering blood supply of ovary which may lead to total necrosis of ovarian tissue and complications, if not diagnosed and managed in time. Hence, we present a case on a twisted ovarian cyst in postmenopausal woman with unusual symptomatology leading to delayed diagnosis and loss of an ovary.

**Key Words:** Menopause, necrosis, torsion

## INTRODUCTION

Ovarian torsion (also termed as adnexal torsion) refers to partial or complete rotation of the ovary and a portion of fallopian tube along its supplying vascular pedicle.<sup>[1]</sup> It occurs commonly in reproductive age group, more on the right side (60%) and often presents with acute lower abdominal pain lasting for few hours and up to 24 h, accounting for 2.7% of acute gynecological conditions.<sup>[2,3]</sup> It is an emergency condition requiring immediate surgery to salvage the ovary. Mostly patients present with acute lower abdominal pain with severe vomiting, fever, and extreme abdominal tenderness localized to the site of affected ovary. The intensity of pain increases with time may radiate from lower abdomen to back and thigh. However, in some cases, it may have nonspecific symptoms leading to delay in diagnosis and dilemma for the gynecologist. Prevalence of ovarian torsion in postmenopausal women is 17%.<sup>[4]</sup>

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## CASE REPORT

A 37-year-old woman with premature menopause for 4 years was referred for persistent vomiting since 15 days, which increased in frequency and intensity from mild (3–4 times in a day) to severe (15–20 times in a day). Later, she developed intolerance to solid food and was on liquid diet since 3 days. There were no complaints of abdominal or pelvic pain, headache or fever. She was treated as a case of food poisoning in another hospital for 7 days, where she was managed conservatively. However, she was not relieved. On admission, the patient was conscious and well oriented. She was afebrile, her pulse rate and blood pressure were 78/min and 120/80 mmHg in right arm supine position, respectively. On examination, her abdomen was soft with no tenderness, guarding, or rigidity. A nontender cystic mass of approximate 5 cm × 5 cm felt through left fornix on vaginal examination, uterus was normal in size and freely mobile. Ultrasonography (USG) report suggested a 6 cm × 4 cm cyst with internal septation arising from left adnexa with absent parenchymal

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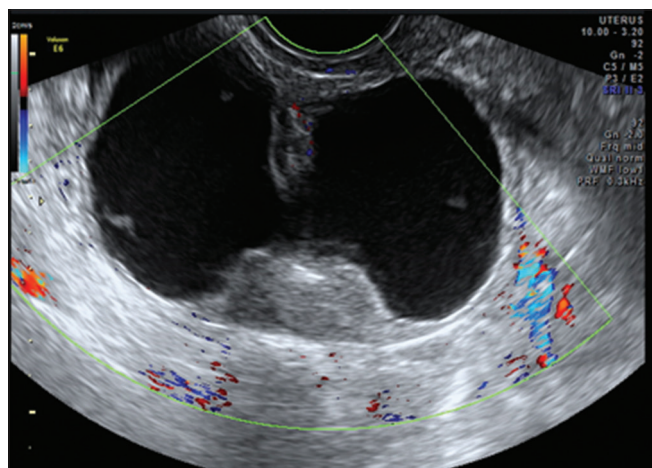
vascularity on Doppler [Figure 1], uterus was normal in size with thin endometrium [Figure 2], and right adnexa not visualized. There was no free fluid in pouch of douglas (POD). Ovarian tumor markers - cancer antigen-125-10.18 U/ml (0–35 U/ml), carcinoembryonic antigen - 2.19 ng/dl (0–3 ng/ml), Beta-human chorionic gonadotropin - 8.24 IU/L (0–10 IU/L), and alpha-fetoprotein - 3.59 ng/ml (0–15 ng/ml), all were within normal range. Her blood investigations showed, hemoglobin - 10.8 g/dl, total counts - 4080/mm<sup>3</sup> and platelets 2.5 lacs. Liver function and renal function tests were within normal limits. Other causes of vomiting were ruled out. Decision for operative laparoscopy was taken. Intraoperative, about 6 cm × 6 cm ovarian cyst was found on the left side, which was twisted about 4 times along its pedicle and appeared hemorrhagic [Figure 3]. No healthy ovarian tissue identified separately, the left tube was also partially twisted along with it. Cyst with ovary removed and sent for histopathological examination. Upper

abdomen and pelvis were found to be normal [Figure 4]. Postoperatively, patient was symptomatically relieved. Histopathology was suggestive of simple hemorrhagic ovarian cyst.

## DISCUSSION

Ovarian torsion occurs because of partial or complete rotation of ovary and tube along its vascular pedicle, hampering vascular supply of the ovary. It has bimodal age distribution occurring mainly in young women (15–30 years) and in postmenopausal women.<sup>[4]</sup> Torsion in young women is often associated with developmental anomalies such as an excessively long tube or absent mesosalpinx whereas in elderly women there may be benign or malignant ovarian tumor (50–60%), polycystic ovaries or adhesions, all of which need to be ruled out.<sup>[1]</sup>

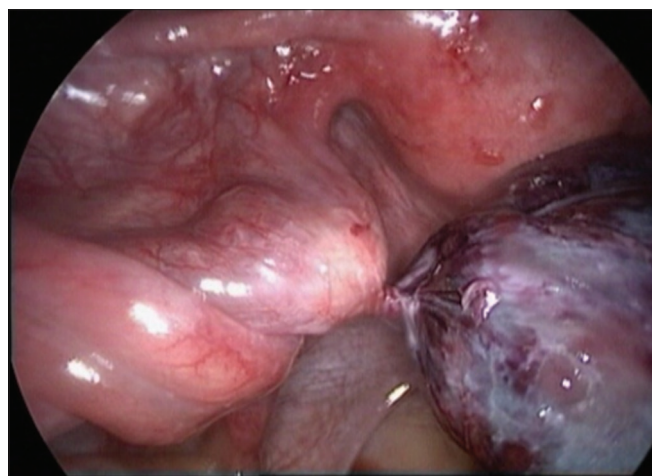
Most common presentation is severe lower abdominal or pelvic pain along with nausea and vomiting (85%).<sup>[5,6]</sup> In some cases, it may be present only with nausea and vomiting as in our case, mimicking gastrointestinal cause



**Figure 1:** Ultrasonography appearance of hemorrhagic cyst with absent vascular flow on Doppler



**Figure 2:** Normal uterus with thin endometrium



**Figure 3:** Intraoperative finding-left side twisted hemorrhagic ovarian cyst



**Figure 4:** Normal right tube and ovary

which may lead to a delay in its diagnosis. There may be tachycardia with adnexal tenderness (50–90%) and raised total leukocytes count. However, absence of these does not exclude torsion. These symptoms can be intermittent or sustained, are highly variable and nonspecific.<sup>[5-7]</sup> The end result of torsion is hemorrhagic infarction and necrosis of ovarian tissue. Cyst can also rupture leading to peritonitis, sepsis, and adhesions.

Most cases of the ovarian torsion can be diagnosed on USG. Ovary appears enlarged because of edema due to venous and lymphatic engorgement. Free fluid can be seen in POD along with probe tenderness. In long standing cases, it may appear as a complex cyst with or without hemorrhage.<sup>[8]</sup> On color Doppler, swirl like image of blood flow in a twisted ovary vascular pedicle known as whirlpool sign may be present (seen in 13–80% of cases). There may be little or no intra-ovarian venous flow, with absent or reversed diastolic flow. However, a normal Doppler flow does not exclude intermittent torsion.<sup>[9]</sup>

Computed tomography (CT) scan is also good at ruling out ovarian torsion if normal ovary is seen. Hounsfield unit >50 on noncontrast CT suggests hemorrhagic necrosis.<sup>[10]</sup> Lack of contrast enhancement may be seen. Since torsion is an emergency condition, hence magnetic resonance imaging is not preferred.

When it occurs in postmenopausal patient, as in our case, possibility of ovarian malignancy should also be kept in mind before proceeding toward management. In most of the cases, emergency salpingo-oophorectomy is done, if not done then it may get infected and cause abscess or peritonitis. However, in case of noninfarcted cyst, simple untwisting can be done. Mortality is very rare. Spontaneous de-torsion has also been reported in few cases.

The prognosis of ovarian torsion is good when diagnosed and managed in time. However, in most of the cases as

in ours, delay in diagnosis leads to infarction and necrosis of ovary.

## CONCLUSION

Ovarian torsion may have nonspecific symptoms which lead to a delay in its diagnosis. Hence, a high level of suspicion is required to salvage the ovary and to prevent complications.

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## Conflicts of interest

There are no conflicts of interest.

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