

# OVARIAN CYST TORSION: A CASE REPORT

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**ABSTRACT** Ovarian Cyst Torsion becomes a rare case gynaecological emergency. Definitive diagnosis is sometimes difficult to establish because of clinical symptoms that are similar to some other abdominal diseases. We report 19-year-old woman nullipara with acute lower left abdominal pain since one day before coming to an emergency room. On physical examination, the abdomen appears convex, and the uterine fundus is challenging to assess, there is a palpable mass with a flat surface of mobile mobility of cystic consistency and firm boundaries. On pelvic ultrasounds done showed an adnexal sinus tumour of about 4,6 × 2,1 cm was found. There is a fluid-filled sac next to the cyst measuring 9,05 × 5,05 cm. The patient then underwent a laparotomy, salpingectomy, and cystectomy. During laparotomy, we found a blackish-red colour cystic mass of about 12 × 11 cm that experiencing torsion. Then we did salpingectomy and cystectomy. Histopathologically found Cystadenofibroma ovarium.

**KEYWORDS** Cyst, Ovarian Torsion, Laparotomy, Salpingectomy

## Introduction

Ovarian cyst torsion is a rare gynaecological emergency case but is a common diagnostic challenge in emergencies. The varied imaging features and nonspecific symptoms of ovarian torsion can lead to a delay identification, with misdiagnosis being common.[1] It refers to a complete or partial rotation of the adnexal supporting organ, resulting in ischemic changes in the ovary. Torsion more commonly involves both the ovary and fallopian tube.[2] In patients undergoing emergency surgery for acute pelvic pain, the frequency of adnexal torsions is about 2.5–7.4%.[3] The gold standard to confirm and treat ovary torsion is surgery. There are two surgical methods, laparoscopy and laparotomy.[2]

## Case presentation

A 19-year-old woman nullipara came to the K.R.M.T Wongsonegoro General Hospital Emergency Room with acute of lower left abdominal pain since one day before entering the hospital. Pain is felt suddenly and continuously with a pain scale of 8 and accompanied by nausea, vomiting, and body weakness. Fever, vaginal discharge, dizziness, weight loss are denied. The patient and her family had no history of the previous medical or malignancy.

On examination, her general condition was fair, revealed a compos-mentis. The vital sign was stable, increased blood pressure 148/91 mmHg. Pulse 72 times per minute, respiratory rate 20 times per minute, and normal temperature. Her weight was 45 kg, height 157 cm in BMI was 18,26 kg/m<sup>2</sup>. The results of laboratory blood test haemoglobin level of 11.9 g/dL, leukocytosis with a leukocyte count of 12.800/uL.

Ultrasound radiological examination results showed that the thickness of the inferior bladder wall was 1.56 × 0.8 cm, and there was an adnexa sinistra tumour size 4,6 × 2,1 cm. There is a fluid-filled sac next to the cyst measuring 9,05 × 5,05 cm. She then computed tomography scan (CT Scan) examination with contrast results in a large cyst 10,1 × 10,5 cm which is bladder with a dense structure in the posterior wall measuring 0,85 × 0,82 cm. The patient infused with Ringer Lactate 20 drops per

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DOI:10.5455/IJMRCR.Ovarian-cyst-torsion-case-report

First Received: April 08, 2020

Accepted: April 23, 2020

Associate Editor: Ivan Inkov (BG);

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**Figure 1**

minute, ranitidine injection, ketorolac injection, and hyoscine tablet.

September 2nd 2019 laparoscopy, and laparotomy were performed. During a laparoscopic exploration was found blackish-red cyst mass size 10 cm in the left adnexa sticking with the bowel and omentum. The adhesions were sharply released. The cyst stems appear to have torsion and uterine is challenging to detect because covered by the omentum. I decided to do a laparotomy. On laparotomy was found a blackish-red cyst on the left ovary of about 12 × 11 cm with ovarian cysts that had torsion and necrotic.[Fig.1] Salpingectomy and cystectomy were performed and ovarian cyst after surgery, showing necrotic tissue and gangrenous.[Fig.2] The estimated total bleeding is 50 cc. Histopathological examination confirmed cystadenofibroma of the ovary. The postoperative recovery was uncomplicated.

## Discussion

Ovarian cyst torsion is a complete or partial rotation of the ovarian vascular pediculus which causes obstructs of blood flow.[4] Ovarian cyst torsion can occur at any age with the greatest incidence in women aged 20-30 years.[5] Our patient aged 19 years. About 70% of ovarian cyst torsion occurs on the right side. This is caused by longer utero-ovary ligaments. On the left side, there is limited space due to the presence of the sigmoid colon also contributes to the incidence of lateralization. Nevertheless, in our patient was found an ovarian cyst torsion on the left side.[6]

Ovarian cysts more than 5 cm at risk of becoming torsion. The other risk factors of ovarian cyst torsion are pregnancy, ovarian stimulation history of abdominal surgery and tubal ligation.[7] Ovarian cyst torsion is also associated with ovarian pathology such as dermoid cyst which caused enlargement of the ovaries.[5,6] Intraoperative evaluation in this patient found a cyst measuring 12 × 11 cm, which is the risk factor for ovarian

cyst.

The diagnosis of ovarian cyst torsion tends to be difficult because of clinical parameters with low sensitivity and specificity. Abdominal pain is reported in most patients with ovarian cyst torsion. Such as acute pain occurs in 59-87% of cases, colic pain in 70%, and pain radiating to the pelvis, back or groin in 51% of patients. Patients with incomplete torsion can experience severe pain with asymptomatic episodes. Nausea and vomiting often occur in 59-85% of cases and subfebris in 20%. Other non-specific symptoms include non-menstrual vaginal bleeding and leukocytosis, each reported in around 4.4% and 20% of cases.[8] This patient found acute abdominal pain, nausea and vomiting, and leukocytosis.

Many symptoms and signs of ovarian cyst torsion are also associated with other conditions including Pelvic Inflammatory Disease, tubal ovarian abscess, ovarian cyst rupture, acute appendicitis, and ectopic pregnancy. Ovarian cyst torsion must be a differential diagnosis because in this case can cause loss of functions and effects of other sequels without prompt and adequate therapy.

Routine blood evaluation of acute pelvic pain is carried out to detect evidence of infection, anaemia, and inflammation. There are no specific markers in diagnostic accuracy in adnexa torsion. The most common marker examined is the C-reactive protein that appears in acute-phase inflammation. Leukocyte levels are also frequently measured and increase in about 50% of women with adnexa torsion.[9] The cause of infection is ruled out due to the absence of supporting clinical symptoms, such as fever.

Pelvic ultrasonography is the first supporting examination for patients with suspected ovarian cyst torsion.[6] The ultrasonography grayscale description of ovarian cyst torsion is unilateral ovarian enlargement > 4 cm, pearl strands sign, the coexistence of the mass in the ovary is bent, free of pelvic fluid and torsion vascular pediculus. Doppler ultrasound is also used as a diagnostic tool for ovarian cyst torsion. The presence of flow in Doppler does not exclude torque but shows that the ovaries are viable.

Ultrasonography is cheaper and has the same diagnostic performance from MRI and CT examinations.[9] MRI or CT scan be done if the results of an ultrasound examination are not clear.[10] Focus therapy for ovarian cyst torsion is to maintain ovarian function and prevent other side effects such as bleeding, peritonitis, and adhesion formation. Oophorectomy is only performed on necrotic/gelatinous tissue. Studies show that torsion releases related to the return of ovarian function in some patients, which is being done as soon as possible.[7]

Laparoscopy is a selective procedure with many benefits, including a lower risk of wound complications, less pain and postoperative ileus, shorter hospitalization, reduced adhesion formation, and faster return to normal activities.[11] Follow-up from women who have experienced de-torque or torsion releases, showing recovered function based on the presence of follicular activity at ovarian follow-up, pregnancy rate, response to ovulation induction or second laparoscopy.[12]

## Conclusion

Ovarian cyst torsion can occur at any age. Therefore a high index of suspicion coupled with radiographic evidence and adequate clinical presentation reduces morbidity and complications of the disease. Rapid diagnosis and surgical intervention are the keys to recovery.

## Patient informed consent

The patient give their consent for their images and other clinical information to be reported in the journal.

## Ethics committee approval

The study was approved by the ethics committee K.R.M.T. Wongsonegoro Hospital Semarang Indonesia.

## Conflict of interest

Author declare no conflict of interests. There was no funding applied for this article.

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