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Original Research Article

A COMPREHENSIVE AND HOLISTIC DIAGNOSTIC APPROACH IN A PATIENT WITH TORSION CYST: A CASE REPORT

I Made Dwi Tirtana[1)*], Fenyta Christyani[1)], AA Eka Wardani[2)]
[1)] Intern Doctor of Obstetrics and Gynecology RSUD Wangaya Denpasar, Bali
[2)] Obstetrics and Gynecology Specialist RSUD Wangaya Denpasar, Bali
*Corresponding Author, E-mail: dwitirtana93@gmail.com

ABSTRACT

Ovarian torsion is one of the most common causes of adnexal abdominal pain. In this case, we report A 38-years old woman, P2002, who has been suffering from acute lower abdominal pain and a developing abdominal mass for the past year. Other complaints like fever or vaginal discharge were denied. Her last menstrual period (LMP) was one week ago. Transvaginal ultrasound examination showed a hypoechoic picture measuring 6.16 cm x 6.07 cm with a Whirpool sign (+) on left adnexa. She was diagnosed with ovarian cyst torsion. The patient then underwent a laparotomy cystectomy.

Keywords: Abdominal Pain, Adnexa, Ovarian Torsion

INTRODUCTION

Ovarian torsion is defined as the partial or complete rotation of the ovarian vascular pedicle, which obstructs venous outflow and later arterial inflow (Chang, Bhatt and Dogra, 2008). Ovarian torsion is one of the most common causes of adnexal abdominal pain. Torsion, in fact, involves the adnexa rather than just the ovary in up to 67 percent of cases, with less than 50 percent associated with an ovarian mass at surgery (Argenta *et al.*, 2000). Ovarian cysts causing clinical complications are relatively common with a reported 4% of women being admitted to hospital with an ovarian cyst by the age of 65 (Bottomley and Bourne, 2009). Ovarian cysts are also common in older women, with up to 18% of post-menopausal women having simple ovarian cysts up to 21% having any type of ovarian mass (Dørum *et al.*, 2005). The clinical manifestations of ovarian torsion are non-specific. The patient's initial complaint is sudden abdominal pain, which may be accompanied by nausea, vomiting, peritoneal irritation, and leukocytosis (Bacanakgil *et al.*, 2018). Early detection and treatment of ovarian torsion can improve the cure rate.

CASE REPORT

A 38-years old woman, P2002, complaints with acute lower abdominal pain. She described the pain as a sharp non-radiating type of pain in the right iliac fossa

with sudden onset, without the busting factor. and sometimes until the patient feels claustrophobic, until he wakes up from sleep, and until he passes out. Pain is associated with nausea, anorexia, and cold sweats during every bout of abdominal pain, with no relieving factors. Since one year ago she complained of a growing abdominal mass with dysmenorrheal. Other complaints such as a history of vaginal discharge, fever, diarrhea, constipation, dysuria, or recent illnesses was denied. The patient's last menstrual period (LMP) was one week ago. She currently using an IUD for contraception (Fig.1). No surgical history was noted.

Figure 1. Patient's Intra Uterine Device (IUD)

On physical examination, she is conscious, her vitals sign is stable, her pulse is 82 bpm, her blood pressure is 120/80 mmHg, her respiratory rate is 20 times per minute, her temperature is normal. The cardiovascular and respiratory systems are normal. The abdomen was found to be within normal limits, with no guarding or rigidity. Genital internal examination revealed a palpable mass in the left adnexa with pain. The laboratory blood test results showed a hemoglobin level of 10.7 g/dL, mild leukocytosis with a leukocyte count of 8.200/uL. Transvaginal ultrasound examination showed a hypoechoic picture measuring 6.16 cm x 6.07 cm with a Whirpool sign (+) on left adnexa (Fig.2). The patient then underwent a laparotomy cystectomy.

Intraoperative findings confirmed the left ovarium torsi for a 6 cm cyst diagnosed by ultrasound (Fig. 3). That left ovary looks necrotic and the stalk is twisted. Ovarian distortion was performed but the necrotic appearance did not improve and bleeding was observed from the necrotic ovary. Because such a large cystic mass caused ovarium torsi with ischemic changes and hemorrhagic ovarian tissue, the decision was made by the surgical team to perform a left-sided salpingo-oophorectomy. there were no major intraoperative complications. The pain disappeared completely after surgery and the final pathological diagnosis was benign mucinous cystadenoma.

Figure 2. A hypoechoic 6.16 cm x 6.07 cm mass with a Whirpool sign (+) on left adnexa

Laparotomy cystectomy was perfomed. Visible cystic mass 6x6 cm in size accompanied by necrosis tubal tissue in the twisted area of the left adnexa, the mass sticking to the posterior uterus and colon (Fig.3). The adhesions were severly released. It was decided to perform the act of salfingo-oophorectomy sinistra then

carried out an examination of anatomical pathology. Her histopathology report revealedendometriosis cyst in the ovaries with a focused hemorrhagic infarction. The postoperative recovery was uncomplicated.

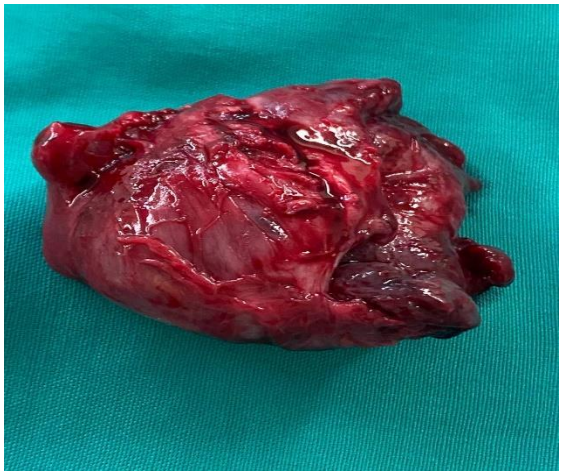

Figure 3. Macroscopic intraoperative of left adnexa with cyst

DISCUSSION

Ovarian cyst torsion is a complete or partial rotation of the ovarian vascular pediculus which causes obstructs of blood flow (Chang, Bhatt and Dogra, 2008). Ovarian torsion is an uncommon condition gynecological surgical emergency and has an overall incidence of 2.7%. About 70% of ovarian cyst torsion occurs on the right side (Hibbard, 1985). 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 (Lucchetti *et al.*, 2017). Nevertheless, in our patient was found an ovarian cyst torsion on the left side.

The majority of ovarian cysts that present with rupture or torsion are functional cyst, include serous and mucinous cystadenomas. Serous cysts probably have no long-term sequelae following rupture. Dermoid and endometriosis cysts may also rupture. Such cases are rare but may be associated with severe peritonitis and systemic disturbance, followed by adhesion formation (Ayhan *et al.*, 2000).

The other risk factors of ovarian cyst torsion are pregnancy, ovarian stimulation history of abdominal surgery and tubal ligation (Larraín, Casanova and Rojas, 2018). Ovarian tumors larger than 5 cm also carry a risk of ovarian torsion (Huang, Hong and Ding, 2017). The possible consequences of delayed diagnosis are serious, including ovarian necrosis, peritonitis, and death. Underlying pathology was found in 79% of the cases. Serous cystadenomas are thin walled, translucent cysts usually unilocular, varying between 20-30 cm size. They are often unilateral or bilateral.

Ultrasound, like adnexal torsion, is the first-line imaging modality for diagnosis. An ultrasound scan typically shows an enlarged ovary with a bizarre hypoechoic mass in a reticular pattern, which appears to be a whirl-pool sign. If the cyst has ruptured, the appearances are less typical, and the presence of some free peritoneal fluid is often all that is required to confirm the diagnosis. During normal ovulation, however, 40% of women will have some free fluid in the Pouch of Douglasdetected by ultrasound (Queenan *et al.*, 1980). As a result, caution must be exercised to ensure that the findings correspond to the presentation and that the free fluid is not an incidental finding related to the stage of the ovarian cycle.

The availability of transvaginal ultrasound at the point of initial contact for women with pelvic pain has been demonstrated to be effective at making a diagnosis. In a study of 1000 women attending an acute gynaecology unit where

ultrasound was performed at the initial assessment, 90 of 399 women were clinically suspected to have a significant ovarian cyst (greater than 5 cm in diameter), and this was confirmed in 31% of the cases by using ultrasound. Importantly, the ultrasound assessment was associated with a significant reduction in the number of women deemed to need admission (from 37% to 19%) and a decrease in the need for follow-up examinations as well (from 26% to 18%) (Queenan *et al.*, 1980).

Other tests that must be performed in ovarian torsion include laboratory tests, which revealed leukocytosis in 56% of cases. If the patient has amenorrhea, a urine pregnancy test must be performed to rule out pregnancy. Laparoscopy, on the other hand, is now considered the gold standard in the management of fallopian tube torsion (Jain *et al.*, 2016).

CONCLUSION

Torsion cyst is one of the common gynecological diseases found and needs proper treatment, therefore the determination of initial diagnosis and rapid handling must be done to avoid complications.

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