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Case Report

Torsion of giant ovarian cyst in postmenopausal woman: a case report with review of literature

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ABSTRACT

Torsion of ovarian cyst, an acute gynecological emergency, needs attention not only for pain relief but to prevent its serious complications and in certain cases, to preserve the ovary. Though many factors predispose to the pathology, an enlarged ovary is the primary factor in the pathophysiology of torsion. It is rare in postmenopausal women. The Clinical presentation may be variable depending on the extent of pathology, as well as the investigation reports. Ultrasonography, using both grayscale and doppler imaging, and both transabdominal and transvaginal approaches, is the primary diagnostic investigation for patients with clinical suspicion. Surgery is both diagnostic and the treatment of choice. The earlier the treatment, the better the outcome, as it helps prevent complications. In certain cases, the ovary may be preserved through cystectomy and oophoropexy. Torsion of a benign giant ovarian cyst of 24 cm and weighing 3.5 kg in a postmenopausal woman is rare. In our case, a 46 years old postmenopausal parous lady presented with moderate pain abdomen and was found to have a giant ovarian cyst with mild tenderness, diagnosed as 7200 torsions of the right ovarian cyst of 24×20 cm on exploratory laparotomy. Total abdominal hysterectomy with right salpingo-oophorectomy and left salpingectomy was executed considering her age, healthy looking left ovary, and the benign features of the right ovarian cyst. Histopathology revealed a benign mucinous cystadenoma. Her post-operative period was uneventful, and she was found asymptomatic and healthy on follow up.

Keywords: Ovarian cyst, Pain, Postmenopausal, Ultrasound

INTRODUCTION

Axial twisting of an ovarian cyst on its pedicle is called torsion.[1,2] The incidence is about 03% of gynaecological surgical emergencies, 5.9 per 100,000 in women of all age groups, and 9.9 per 100,000 women in the reproductive age group.[2] Though it is common in the reproductive age group, no age is immune to this pathology, ranging from neonates to postmenopausal women.[2,3] Commonest size of the mass being >5 to <10 cm. though largest size reported with this pathology, to the best our knowledge is 30 cm.[4] Enlarged ovary in polycystic ovarian syndrome, ovarian hyperstimulation, functional or neoplastic cyst, even in malignancy if the mass is not yet fixed as in advanced stage, are the risk factors for torsion. A long pedicle, to start with, or one formed by continuous pull from a large ovarian mass, predisposes it to undergo torsion. Many authors reported past tubectomy as a risk factor. Pregnancy is an independent risk factor for the pathology.[5] History of torsion in one ovary has a 10% risk of torsion of the other ovary.[6] It is usually on the right side due to the presence of the sigmoid colon on left side of the pelvis. Pathophysiology of torsion begins with diminished or obliterated venous and lymphatic return leading to stromal edema and internal hemorrhage in ovarian cyst, later arterial obstruction and infarction with subsequent sequelae of rupture, peritoneal bleed, and peritonitis leading to other complications.[1] In 94-100% of case,

patients are symptomatic with acute abdominal pain, which depends on the degree of pathology, twisting, and untwisting.[7,8] Associated nausea and vomiting may be present. The physical examination is also not of much help in diagnosis. Ultrasonography (USG), gray scale and color doppler, both trans-abdominal (TAS) and transvaginal (TVS), is the imaging of choice for the diagnosis, with a sensitivity of 84.4%, and showing affected blood flow, stromal edema, follicular rising and whirlpool sign.[9] Magnetic resonance imaging (MRI) may be used in doubtful cases. Early diagnosis and surgical managements are the treatment to save the ovary with intact vascularity and to prevent the complications of ovarian necrosis, hemorrhage, and peritonitis.

An ovarian cyst of >10 cm is considered a giant ovarian cyst.[10] Torsion is rare in a cyst of >20 cm.[3] It is also rare in postmenopausal age, and the clinical presentation is different in comparison to women in the reproductive age group.[11] With this background, we report a case of torsion of a giant ovarian cyst in a postmenopausal lady with unusual presentations. The aim is to report this rare condition concerning size, postmenopausal status, and its atypical presentation, and to add to the statistics.

CASE REPORT

A 46-year-old lady reported to the gynaecology outpatient department of this institution with complaints of abdominal pain for two days, which was continuous, moderate in intensity, and non-radiating in character. Dull aching back pain, nausea, and four episodes of vomiting a day back with clear fluid as vomitus, accompanied the pain abdomen. There was no vomiting since reporting to this hospital. She consulted in a health care facility, and USG abdomen and pelvis showed a large adnexal mass of 25×25 cm with which she reported to this institution. There was no respiratory or urinary problem, no constipation, loose motion, or abnormal vaginal discharge. She attended menopause two years ago following a normal menstrual cycle. The patient got married at the age of 16 years, multiparous with all vaginal deliveries, last childbirth and tubal sterilization was 26 years back. No relevant past medical, surgical, family or personal history of the lady was there. On arrival to the hospital, the patient was physically and mentally stable, afebrile, without features of dehydration, pallor, icterus, pedal edema, or dyspnoea. Her pulse was 82/min and regular, BP-130/80 mmHg, clinically euthyroid, and her BMI was 34.2 kg/m^2. The cardiovascular, respiratory, and neurological systems did not show any clinically detectable abnormality. The abdomen was uniformly distended up to a little above the upper border of the umbilicus; skin was normal, and the tubectomy scar was healthy. A cystic mass of 24 weeks' pregnant uterus size, arising from the pelvis, occupying the umbilical, both lumbar regions, both iliac fossae, and hypogastrium was palpated. The mass was mildly tender, with limited mobility from side to side and with a smooth surface. No peritoneal free fluid could be demonstrated.

Internal examination revealed a healthy vagina and drawn-up cervix, retroverted, normal size, nontender and mobile uterus, which was felt separate from the mass. All fornices were full of the cystic mass. With the provisional diagnosis of torsion ovarian cyst, she was investigated. USG by TAS and TVS, both gray scale and colour Doppler, revealed torsion of a 24×24 cm anechoic mass arising from the right adnexa, likely to be a right ovarian cyst as the ovary is not seen separately.

All the haematological, urine, and other relevant investigations, including her infective status, were within normal range. CA-125 was 10.2 IU/ml, Papanicolaou smear (PAP) smear did not show any intraepithelial lesion or malignancy. Exploratory laparotomy under regional anaesthesia with informed consent showed two circles (7200) of torsion of a giant right ovarian cyst with dark haemorrhagic patches on the wall, as shown in Figure 1. A fimbrial cyst of 4×4 cm in the left fallopian tube was noted. There was no collection in the peritoneal cavity. The uterus and the other ovary appeared healthy. Total abdominal hysterectomy with right salpingo-oophorectomy and left salpingectomy was done. Her postoperative period was uneventful. Examination of the ovarian cyst showed a 24×20 cm spherical, tense cyst weighing 3.5 kg with dark haemorrhagic and necrotic patches as shown in Figure 2. On cut section of the specimen, a unilocular cyst without any solid area or papillary excrescence was detected and drained 3 liters of thick, clear mucoid fluid as shown in Figure 3.

Histopathology of the specimens reported benign mucinous cystadenoma of the right ovary, papillomatous endocervicitis and benign adenomatous endometrial polyp. On first post-operative follow up she was asymptomatic and healthy.

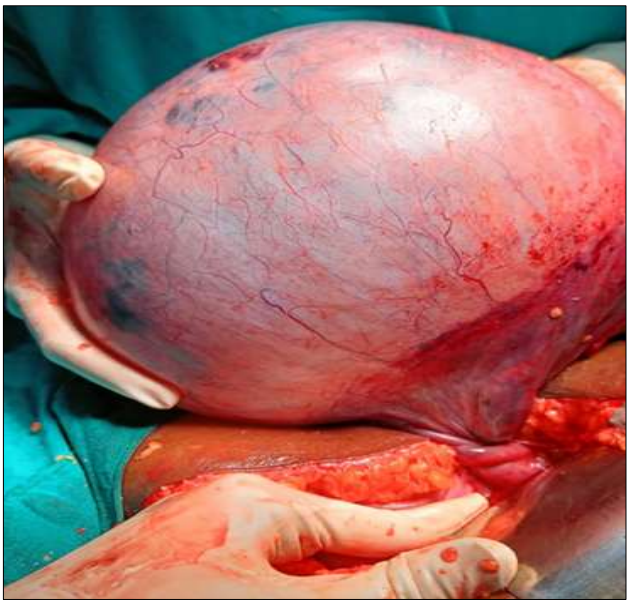

Figure 1: Torsion of a giant right ovarian cyst.

Figure 2: Giant ovarian cyst with necrotic patches on the wall.

Figure 3: Cut section of the ovarian cyst.

DISCUSSION

Ovarian torsion, the rare gynaecological emergency with dreaded consequences in cases of delayed management, depends on many etiological factors. A size of >5 cm ovarian cyst causing imbalance is the primary factor, and the upper limit of size is variable.[12] It may occur in a normal ovary in children.[13] Pregnancy, particularly in the first to mid-second trimester, has a special predilection for torsion as functional cysts, dermoid cysts, and enlarged corpus luteum are common, which increase the ovarian mass.[14] A rare gynecological emergency with variable clinical presentation, diagnostic dilemma depending on the degree of vascular obstruction, and unreliable investigatory findings makes a difficult decision for early surgical intervention.[15]

Associated nausea and vomiting in about 70% of cases, along with abdominal pain, may be confused with surgical conditions like acute appendicitis and renal colic, leading to a misdiagnosis.[12] It is common in benign ovarian lesions, as adhesions in malignancy, with affected mobility prevent the pathology. Torsion is reported in <02.0% of malignant ovarian lesions, which may be in the early stage of the disease.[16]

Our case, a giant benign ovarian cyst in a postmenopausal lady with variable symptoms and minimal signs, was diagnosed by clinical suspicion and USG, and confirmed and managed surgically in time without any sequelae.

CONCLUSION

Torsion of ovarian mass, a gynecological emergency, is not limited by age, menopausal status, larger size, and histological variety, though the incidence varies in different conditions. Each case needs thorough clinical analysis considering the variable presentation, followed by diagnostic and therapeutic surgical intervention to avoid the serious complications. All efforts should be taken to preserve the benign ovary, if possible, in premenopausal women. Measures like cystectomy and fixation of the ovary to the pelvic wall or plication of the ovarian ligament are needed to prevent further torsion.

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