**Ovarian mass in postmenopausal women, A case report**

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**Consent statement**

Written informed consent was obtained from the patient to publish this report in accordance with the journal’s patient consent policy.

**Abstract**

Ovarian masses have varied presentations and pose a diagnostic challenge, especially in postmenopausal women where a detailed evaluation is needed to rule out malignancy. Here we report a case of a postmenopausal woman with ovarian mass with a different history, clinical findings, and radiological investigations but similar histopathological observations.

Keywords: Postmenopausal, ovarian mass, laparotomy, salpingo-oophorectomy, ovarian cyst.

1. **Introduction:**

Menopause is the absence of menstrual cycles for at least twelve consecutive months, indicating the end of the reproductive age for women.The mean age of menopause is 51 and can differ between women.1 A simple ovarian cyst is defined as an anechoic round or oval lesion without septations, solid wall irregularities, or internal echoes.2 Ovarian cysts are diagnosed with increasing frequency in postmenopausal women as more patients are undergoing imaging in connection with medical care.3 Prevalence of ovarian masses in postmenopausal women varies widely from 2% to 10%. Most ovarian cysts in postmenopausal women are unilateral and up to 64% are serous cystadenomas followed by mucinous cystadenoma and dermoid, both being 7% 4 and 4.3% being endometrioma.3,5 Torsion of abdominopelvic mass is a common gynecologic surgical emergency, with a prevalence of 2.7%. A classic presentation of abdominopelvic mass accident (torsion, rupture, hemorrhage) is the acute onset of abdominal pain with clinical evidence of peritonitis and an adnexal mass.5 Abdominopelvic masses in postmenopausal females need a high index of suspicion to determine whether they are benign or malignant 6 as ovarian cancer is the 7th most commonly diagnosed cancer among women in the world and constitutes 4% of all cancers diagnosed in women.7 Preoperative identification of the malignant potential is a challenging issue for a gynecologist as it often presents late, (stage 3-4), with a high mortality rate.8,9 Previously, all adnexal masses in postmenopausal women were managed by surgery to rule out malignancy. Later, it became apparent that a vast majority of adnexal masses in postmenopausal women have a benign nature.7 Although imaging techniques help in making a diagnosis but histopathology plays a key role to rule out other differential diagnoses.6

1. **Method:**

We reported this case following the updated consensus-based Surgical Case Report (SCARE) Guidelines.10

1. **Case presentation:**

59 years old, P5L5 frail, postmenopausal female reported to the emergency room with complaints of lower abdominal pain and a history of incomplete voiding for 3 years increased in severity and associated with vomiting for 1 day. There was no history of breathing difficulty, abdominal distension, weight loss, and cancer in the past or family.

Abdominal examination revealed a midline mass of 22cm\*20cm in hypogastric, left and right iliac fossa corresponding to 22 weeks of pregnancy. Mass was slightly tender, cystic in consistency, smooth surface, mobile side to side with regular and well-defined margins. The lower pole could not be reached.

On vaginal examination, the mass with the above features could not be separated from the uterus. Right fornix was full and left fornix was free. Cervical movements were not transmitted to the mass. It was diagnosed as a benign ovarian tumor based on history and pelvic examination.

Routine hematological, biochemical investigations and tumor markers (CA125 being 73.5 IU/ml) were within normal limits.

Pelvic ultrasonography showed a large heterogeneously hypoechoic to isoechoic cystic abdominopelvic lesion measuring 11.8cm\*11.4cm\*9.9cm (volume 693cc) in the midline with no evidence of internal calcifications, septations, internal vascularity, and solid components.

RMI I score calculated was 0. Plain and contrast Computed tomography of the abdomen and pelvis revealed a large well defined, thin-walled cystic abdominopelvic lesion measuring 13.5cm\*11.5cm\*11cm (volume 888cc) in the midline with twisted pedicle (Figure 1). Based on imaging the lesion is likely right ovarian cystadenoma with torsion.

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| (A) | (B) | (C) |
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Fig 1: CT scan showing (A) A large well-defined cystic lesion in the midline abutting anterior abdominal wall and sacral vertebra posteriorly displacing bowel loops laterally with maintained fat plane. (B) Free fluid was noted adjacent to a large abdominal cystic lesion and displacing adjacent bowel loop. (C) Inferiorly the lesion is abutting dome of the urinary bladder.

Exploratory laparotomy with total abdominal hysterectomy with bilateral salphingo-oophorectomy revealed a right ovarian cyst of 20cm\*20cm\*20cm in size, reddish brown in color, twisted twice with a fallopian tube of the right side (Figure 2). Uterus, left tubes and ovary appeared normal (Figure 2). All other andominal and pelvic organs were normal and para-aortic lymph nodes were not palpable. Cut section shows hemorrhagic fluid of approximately 1000ml with no septation. Endometrium and myometrium grossly normal. Tumors weighs 3.7kg.

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| --- | --- |
| (A) | (B) |
|  |  |

Fig 2: (A) Pfannenstiel incision with uterus and right sided ovarian cyst. (B) A right ovarian cyst of 20cm\*20cm\*20cm in size, reddish brown in color, twisted twice with fallopian tube of right side. Uterus, left tubes and ovary appeared normal.

Specimen sent for histopathological examination revealed right ovarian cyst with large areas of hemorrhage, fibrinous exudates along with mixed inflammatory cells and hemosiderin laden macrophages. Endometrium shows cystic atrophy, myometrium shows adenomyosis, cervix shows chronic mild cervicitis and Nabothian cysts, right fallopian tube was infracted. Left tube was unremarkable and left ovary shows cystic follicles. Finally, the abdominopelvic mass was diagnosed as right simple ovarian cyst with infraction.

The patient was then discharged on day 5 of operation without any intra or post-operative complications

**DISCUSSION**

As the vast majority of these cysts are benign, they all require evaluation before deciding on surgical removal or careful follow-up.4 In the large, multisite Prostate, Lung, Colorectal, and Ovarian Cancer Screening Trial, simple cysts were observed in 14% of postmenopausal women and none develop in ovarian cancer over 4 years of follow-up.2

Adding tumor marker with findings of ultrasonography only increase specificity not sensitivity in diagnosing ovarian cancer.4 In our country the features of advanced ovarian cancer may overlap with pelvic and peritoneal TB.11

Women with ovarian masses constitute a challenging condition in general practice because the clinical features and findings from physical examination are usually nonspecific.7

**CONCLUSION**

Postmenopausal simple cysts of the ovary are not uncommon4 and size of tumor doesn’t determine the malignancy potential.8 Still ovarian cancer will continue to be a risk for postmenopausal woman presenting with ovarian cyst as the majority of patients will not be diagnosed at an early stage.7

Physicians must maintain heightened awareness and index of suspicion when approaching an ovarian mass because the early diagnosis can improve the patient´s prognosis.7 The morbidity, economic burden, and outcomes can be improved by using conservative management where possible, use of laparoscopic techniques where appropriate, thus avoiding laparotomy where possible and referral to a gynaecological oncologist when appropriate.3,4

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**Key clinical message**

Ovarian mass in a postmenopausal woman is commonly a malignant condition. Ovarian mass can present in different ways. Early diagnosis and prompt intervention is important for reducing the cancer burden.

**Author contributions**

AJ conceptualized the study. RM and AS were in charge of the case. AJ and PY wrote the original manuscript and reviewed and edited the manuscript. AJ, PY and SM corrected and edited the original manuscript.

**Ethical approval**

Ethical approval is not required for case reports at our hospital

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**Data Availability**

None

**Conflict of interest**

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