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Case Report

Case report: giant ovarian cyst torsion mimicking malignancy in a postmenopausal female

Pooja Gayakwar*, Ashok Kumar, Nirmala Vaddhi, Saema Ansari

Department of Obstetrics and Gynecology, Dr. Babasaheb Ambedkar Memorial Hospital, Central Railway, Byculla, Mumbai, Maharashtra

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***Correspondence:**
Dr. Smriti Agrawal,
E-mail: poojagayakwar@gmail.com

ABSTRACT

Ovarian torsion is a gynaecological emergency that is uncommon in postmenopausal women. Large adnexal masses in this age group frequently raise suspicion for malignancy due to their size and complex imaging features, posing a diagnostic challenge. We present the case of a 53-year-old postmenopausal woman who presented with acute abdominal pain and progressive abdominal distension. Imaging studies revealed a large complex adnexal cyst with features suggestive of ovarian malignancy and torsion. Emergency exploratory laparotomy demonstrated torsion of a giant ovarian cyst. Histopathological examination confirmed a benign ovarian cyst with no evidence of malignancy. This case emphasizes the importance of considering ovarian torsion as a differential diagnosis in postmenopausal women presenting with large adnexal masses and acute abdomen.

Keywords: Ovarian torsion, Giant ovarian cyst, Postmenopausal, Adnexal mass, MRI, Mimicking malignancy

INTRODUCTION

Ovarian torsion refers to the partial or complete rotation of the ovary on its ligamentous supports, resulting in compromise of its vascular supply1. It accounts for approximately 2–3% of gynaecological emergencies and is more commonly observed in women of reproductive age. [1,2]

In postmenopausal women, adnexal masses are more likely to be malignant, especially when they are large and demonstrate complex imaging features.[3,4] Because torsion, haemorrhage, infarction and neoplasm can produce overlapping clinical and imaging features, distinguishing torsion from malignancy can be challenging on preoperative imaging alone.[5,6] The present case highlights the importance of considering ovarian torsion as a differential diagnosis even in postmenopausal women with suspicious adnexal masses.

CASE REPORT

A 53-year-old postmenopausal woman presented with acute onset of lower abdominal pain and progressive abdominal distension. There was no history of postmenopausal bleeding or significant weight loss. On examination, Patient was vitally stable. Per abdomen, abdominal distension present. Mild generalised tenderness present. On percussion dull note present. Large tense cystic abdominal mass palpable with side-to-side mobility, restricted vertical mobility. On percussion, dull note.

Management

Ultrasound/CT findings

Large multiloculated cystic adnexal mass, f/s/o ovarian malignancy.

Magnetic resonance imaging

Bulky uterus with multiple fibroids. Anterior wall fibroid measuring approximately 4×4 cm, Posterior wall fibroid measuring approximately 3×7 cm. Large adnexal cystic lesion measuring 19×11×8.7 cm. Hyperintense lesion with internal suspicious contents, areas of diffusion restriction, twisted haemorrhagic pedicle showing T1 hyperintensity, peripheral enhancement along the left paramedial and posteroinferior wall extending to the lateral wall, mild surrounding inflammatory changes. These findings were suggestive of: Malignant adnexal mass with associated ovarian torsion.

Provisional diagnosis

The provisional diagnosis was a malignant ovarian tumour with associated ovarian torsion. The patient was taken up for emergency exploratory laparotomy. Intraoperatively, a giant ovarian cyst measuring approximately 15×10×5 cm was identified, showing bluish-black discoloration suggestive of venous congestion and ischemic changes secondary to torsion. A twisted pedicle confirmed the diagnosis of ovarian torsion. There were no peritoneal deposits or ascites. A total abdominal hysterectomy with bilateral salpingo-oophorectomy was performed.

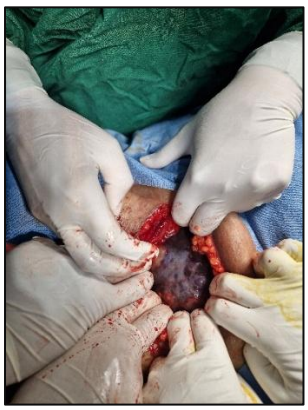

Figure 1: Bluish discoloration of ovarian cyst due to torsion.

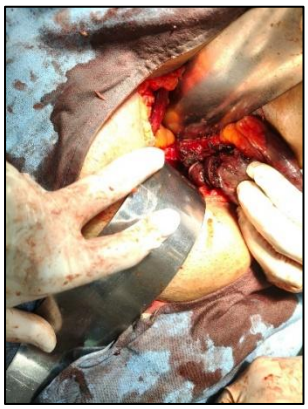

Figure 2: Multiloculated cyst with 3-4 twists at the pedicle.

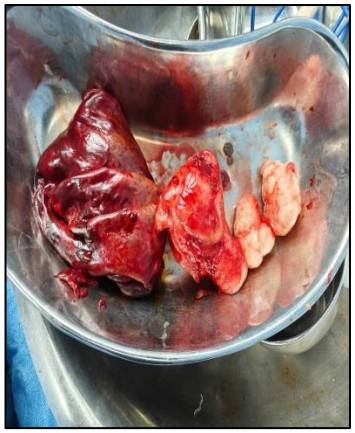

Figure 3: Specimen of uterus, cervix, right ovary with torsion with two fibroids.

Histopathological examination

Histopathological examination confirmed a benign ovarian cyst, most consistent with a serous cystadenoma, with no evidence of malignancy.

DISCUSSION

Ovarian torsion is an important gynaecological emergency accounting for about 2–3% of gynaecological emergencies and is most common in reproductive-age women.[1,2] In postmenopausal patients the likelihood that a large or complex adnexal mass is malignant is higher, so definitive evaluation and often surgical management are recommended.[3,4] Patient in concern, a 53-year-old with a giant complex adnexal cyst and acute abdomen, therefore presented the expected diagnostic dilemma: torsion was possible but malignancy was the primary preoperative concern.

MRI showed diffusion restriction, internal complexity, peripheral enhancement and a T1-hyperintense twisted haemorrhagic pedicle, findings that can closely mimic ovarian cancer.[5-7] The twisted pedicle sign clearly seen in our case remains a relatively specific imaging clue that favors torsion and was pivotal in distinguishing torsion from neoplasm.[8,9]

Case in discussion parallels recent reports by Marwaha et al and Ali et al where large complex cysts in postmenopausal women produced malignant-appearing imaging but proved to be torsion of benign cysts at surgery.[5,6] Bekele Getaneh et al further showed that atypical imaging and elevated tumor markers can mislead clinicians toward malignancy despite benign pathology.[7] These similarities underscore that large benign adnexal cysts in postmenopausal women may undergo torsion and mimic cancer unless torsion-specific signs are sought.

Given the higher baseline malignancy risk in postmenopausal adnexal masses, guidelines and many authors favour definitive surgical management when

imaging is suspicious.[3,4] A total abdominal hysterectomy with bilateral salpingo-oophorectomy was performed. Histopathology confirmed a benign serous cystadenoma, consistent with management reported in similar cases.[5,6] Fertility-sparing detorsion is generally reserved for younger patients and is less applicable postmenopausally.[10]

CONCLUSION

Ovarian torsion should be considered an important differential diagnosis in postmenopausal women presenting with large adnexal masses and acute abdomen, even when imaging findings suggest malignancy. Prompt diagnosis and timely surgical management are crucial and may help avoid unnecessary radical treatment.

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