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Giant Ovarian Torsion in a 77-Year-Old Postmenopausal Woman: Diagnostic Challenges and Surgical Management in a Low-Resource Setting

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Abstract

Background: *Ovarian torsion is an uncommon gynecological emergency in postmenopausal women. Its presentation is often atypical, particularly when associated with giant ovarian cysts, leading to delayed diagnosis and increased morbidity.*

Case presentation: *A 77-year-old postmenopausal woman presented with progressive lower abdominal pain over two weeks, which became severe and was associated with nausea, vomiting, and abdominal distension. Clinical examination revealed a large mobile abdominal mass extending above the umbilicus. Ultrasonography demonstrated a giant complex right adnexal mass with ovarian enlargement, heterogeneous internal echoes, absent Doppler flow, and a twisted vascular pedicle (whirlpool sign). Emergency laparotomy revealed a giant torsed ovarian mass with ischemic and necrotic changes. Total abdominal hysterectomy with bilateral salpingo-oophorectomy was performed. Histopathology confirmed a benign mucinous cystadenoma.*

Conclusions: *Although rare, ovarian torsion should be considered in postmenopausal women presenting with acute or subacute abdominal pain and adnexal masses. Early surgical intervention is essential, particularly in low-resource settings where advanced imaging is unavailable.*

Keywords: *Ovarian torsion; Postmenopausal women; Giant ovarian cyst; Mucinous cystadenoma; Case report*

1. Background

Adnexal torsion accounts for a small proportion of gynecological emergencies and is most frequently encountered in women of reproductive age [1,2]. In postmenopausal women, adnexal torsion is rare and often presents with non-specific or subacute symptoms, which may delay diagnosis. The presence of an adnexal mass, particularly a giant ovarian cyst exceeding 10 cm in diameter, significantly increases the risk of torsion due to increased ovarian weight and mobility [1,3]. Furthermore, the risk of malignancy in adnexal masses rises with age, necessitating careful evaluation and definitive surgical management.

2. Case Presentation

A 77-year-old postmenopausal woman, para 1, presented with gradually progressive lower abdominal pain for two weeks. The pain acutely worsened and was associated with nausea, vomiting, and abdominal distension. There was no history of vaginal bleeding or bowel symptoms. On examination, the patient was hemodynamically stable. Abdominal examination revealed a large, mobile mass extending above the umbilicus. Bimanual pelvic examination confirmed a right adnexal mass. Pelvic ultrasonography demonstrated a large complex right adnexal mass measuring approximately 22 × 18 × 16 cm, with heterogeneous internal echoes and ovarian enlargement. Color Doppler imaging showed absent vascular flow and a twisted vascular pedicle consistent with the whirlpool sign. Serum tumor markers were within normal limits. Advanced imaging such as computed tomography or magnetic resonance imaging was not available due to resource constraints.

Emergency exploratory laparotomy was performed via a vertical midline incision. Intraoperatively, a giant right ovarian mass was identified, twisted multiple times around its pedicle with marked congestion, edema, and features of ischemia and necrosis. No gross peritoneal deposits were observed. A total abdominal hysterectomy with bilateral salpingo-oophorectomy was performed. The postoperative course was uneventful. Histopathological examination confirmed a benign mucinous cystadenoma.

3. Discussion

Ovarian torsion in postmenopausal women represents a diagnostic challenge due to its rarity and atypical clinical presentation [1,5]. Unlike younger women, who often present with sudden onset severe pain, postmenopausal patients may experience prolonged or intermittent symptoms, contributing to delayed diagnosis. Previous studies have demonstrated longer intervals between presentation and surgical intervention in this age group.

Ultrasonography with color Doppler remains the first-line diagnostic modality [3,4]. Findings such as ovarian enlargement, heterogeneous echotexture, absent or reduced blood flow, and the whirlpool sign are suggestive of torsion. The whirlpool sign, in particular, has been shown to significantly increase diagnostic accuracy and is especially valuable in low-resource settings.

Giant ovarian cysts are rare in postmenopausal women but markedly increase the risk of torsion. Given the increased risk of malignancy in this population, definitive surgical management with hysterectomy and bilateral salpingo-oophorectomy is generally recommended [1,5]. Histopathological evaluation remains essential to confirm the diagnosis and exclude occult malignancy. Early surgical intervention prevents complications such as ischemic necrosis, peritonitis, and prolonged morbidity.

4. Conclusion

This case highlights the importance of maintaining a high index of suspicion for ovarian torsion in postmenopausal women presenting with abdominal pain and adnexal masses. Prompt diagnosis and early surgical intervention are crucial, particularly in low-resource settings where access to advanced imaging is limited.

Figure 1. *Gross specimen showing a giant torsed ovarian mass with marked hemorrhagic discoloration, congestion, and ischemic changes.*

5. Declarations

Ethics Approval: According to the institutional policy of El-Obeid Maternity Teaching Hospital, ethical approval is not required for single case reports.

Consent for Publication: Written informed consent was obtained from the patient for publication of this case report and the accompanying clinical images.

Availability of Data and Materials: Not applicable.

Competing Interests: The authors declare no competing interests.

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Authors' Contributions: The authors were responsible for patient management and manuscript preparation.

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