

Ovarian Fibrothecoma: A Rare Cause of Ovarian Torsion in Postmenopausal Woman

Ovarian Fibrotekoma: Postmenopozal Kadında Over Torsiyonun Nadir Bir Nedeni

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ABSTRACT

Ovarian torsion is a common gynecological surgical emergency. It is usually associated with a cyst or a tumor, which is typically benign. The most common cause of ovarian torsion is mature cystic teratoma. We herein present an unusual case of torsion in the ovarian fibrothecoma. We report a case of ovarian torsion in a 47-year-old postmenopausal woman who came to the emergency department with acute abdominal pain. In this case report, we highlight Doppler ultrasonography and the magnetic resonance imaging features of ovarian torsion. She underwent an urgent surgery due to a torsion indicated. Total abdominal hysterectomy and bilateral salpingo-oophorectomy was performed. The final pathologic diagnosis revealed torsion of left ovarian fibrothecoma. Ovarian fibrothecoma are usually asymptomatic. They can become symptomatic when they are torsed.

Key Words: Magnetic Resonance Imaging, Ovarian Fibrothecoma, Ovarian Torsion

ÖZET

Over torsiyonu acil cerrahi müdahale gerektiren bir jinekolojik patolojidir. Genellikle benign over tümörleri ya da kistleri ile ilişkilidir. Over torsiyonunun en sık nedeni matür kistik teratomlardır. Biz burada overde fibrotekoması bulunan, akut karın ağrısı şikayeti ile acil servise başvuran ve over torsiyonu izlenen 47 yaşında postmenopozal dönemde olan nadir görülen bir vakayı sunduk. Bu vakada over torsiyonunun doppler ultrasonografi ve manyetik rezonans görüntüleme özelliklerini vurguladık. Hastamız over torsiyonuna bağlı olarak acil cerrahiye alındı. Total abdominal histerektomi ve bilateral salpingooferektomi uygulandı. Patoloji sonucu fibrotekoma bulunan sol overde torsiyon olarak geldi. Ovarien fibrotekomalar genellikle asemptomatiklerdir. Torsiyone oldukları zaman bulgu verebilirler.

Anahtar kelimeler: Manyetik Rezonans Görüntüleme, Ovarian Fibrotekoma, Over Torsiyonu

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INTRODUCTION

Ovarian torsion results from the rotation of the ovary about its pedicle, to an extent that the ovarian arteries and or veins are obstructed. This condition generally results from a benign tumor of the ovary and usually occurs in younger women. Clinical signs include sudden onset of lower abdominal pain associated with other constitutional symptoms like nausea, vomiting and diarrhea.

Ovarian fibrothecomas that accounts for 1-4% of all ovarian tumors are the most common benign neoplasias of the ovarian stroma (1,2). They are included in the sex cord stromal tumors of ovaries and may present at any age but it occurs most frequently in the 4th–6th decades of life. Ovarian fibrothecomas are usually confused with uterine myomas or malignancy and hardly diagnosed preoperatively as they appear solid in ultrasonography (3). These lesions are generally

asymptomatic and detected at routine gynecologic examination (4). However these tumors are sometimes accompanied by ascites and cancer antigen 125 (CA 125) elevation in serum; clinical picture in that case may resemble that of malign ovarian tumors (4,5). As they originate from the ovarian stroma, they may secrete hormone (estrogen) and cause some clinical signs depending on estrogen release.

CASE REPORT

A 47-year-old postmenopausal woman, (gravidia 2, para 2) presented to the emergency department with an acute onset of right lower quadrant abdominal pain, which was severe and progressive in intensity. Gynecological examination revealed a large fixed fluctuant abdominal mass within the pelvis and revealed mild tenderness in the left lower quadrant. White blood cell count was $7.3 \times 10^9/L$ (normal range, [4 to 11] $\times 10^9/L$). The initial laboratory workup revealed anemia (hemoglobin was 10.4 g/dl). Cancer antigen 125 (CA-125) was measured 64.37 IU/ml (normal range <35 IU/ml).

Grey scale transvaginal ultrasonography scan showed a solid mass arising from the left ovary. There was no vascular flow in the solid mass on the color Doppler examination (figure 1). A contrast-enhanced MR (magnetic resonance) scan of the pelvis was revealed a large poorly enhancing, solid mass arising from the left adnexa, measuring 10,5 cm craniocaudal \times 8,3 cm AP (anteroposterior) \times 5,7 cm transverse (Figure 2). Free fluid was detected between lower intestinal bowel segments and the left adnexial mass in the pelvis. The patient underwent laparotomy due to a torsion indicated by the clinical and imaging findings. Total abdominal hysterectomy and bilateral

salpingo-oophorectomy was performed. Pathology showed a hemorrhagic, necrotic ovarian tumor and measuring 135 mm \times 100 mm \times 70 mm. Histology showed torsion and venous infraction of ovarian fibrothecoma, with no malignancy.

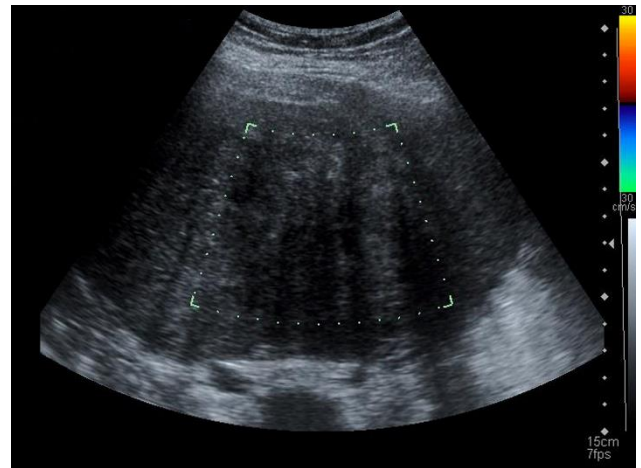


Figure 1. Color doppler examination shows no vascular flow in the solid mass

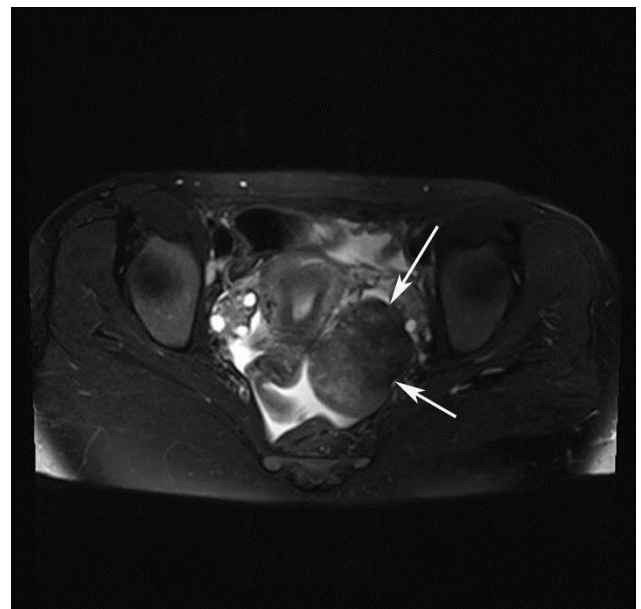


Figure 2. (A) Axial T2W with fat sat image shows a hypointense- heterogeneous signal intensity mass (arrows) in left adnexa. T1W axial fat-saturation image

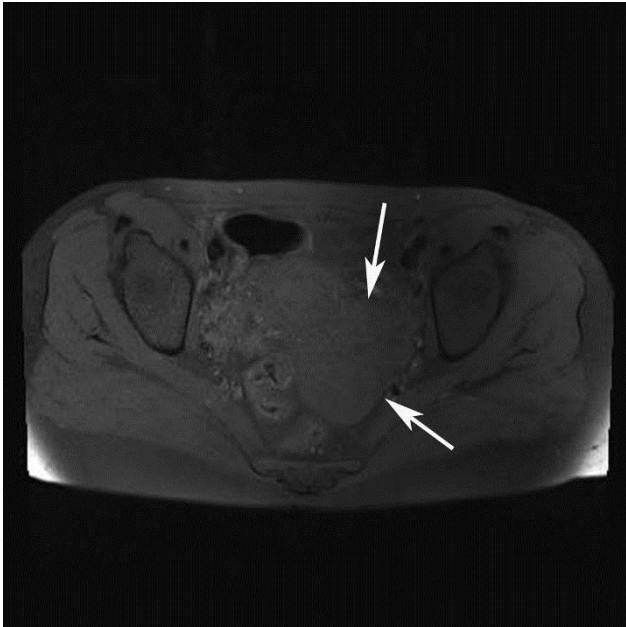


Figure 2. (B) Showing hypointense lesion in left adnexa (arrows). Axial

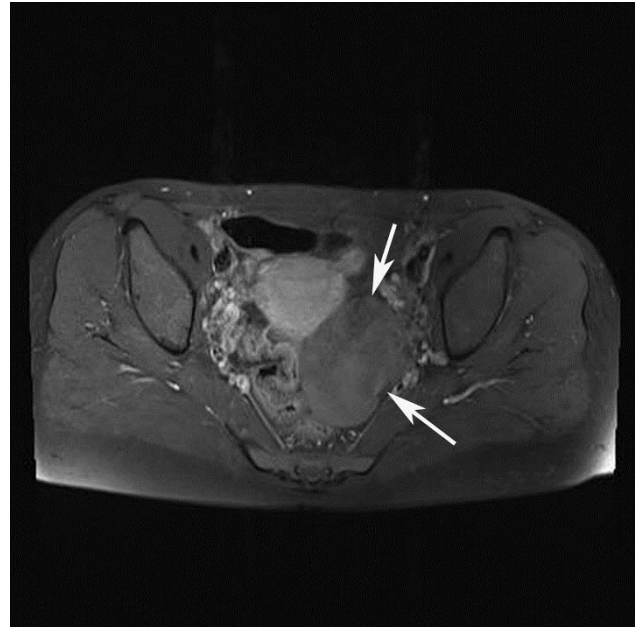


Figure 2. (D) fat-suppressed T1W postcontrast images show poorly contrast enhancement within the left adnexial mass.



Figure 2. Showing hypointense lesion in left adnexa (arrows) (C) sagittal

DISCUSSION

Ovarian fibroma/fibrothecomas are the most common benign tumors of the ovary, which are included in the sex cord stromal tumors of the ovary. They are almost always benign and curable by surgical excision. This tumor is usually seen in postmenopausal women (2,6). Our patient was a 47-year-old postmenopausal woman. It is common to misdiagnose ovarian fibromas as uterine fibromas or malign ovarian tumor at the preoperative period (3,7). A fibrothecoma with atypical ultrasound appearance may be mistaken for a malignancy, in particular if associated with fluid in the pouch of Douglas or ascites, high color content and raised CA 125 levels (3-5). CA125 serum level was high in our case and our patient has ascites. These tumors are generally asymptomatic but they can become symptomatic when they are torsed.

Torsion of the ovary is a rare but serious cause of gynecologic surgical emergency with a

prevalence of 2.7% (8). Early detection of ovarian torsion is crucial to reduce mortality and morbidity, and surgical treatment is the keys to preserve fertility and salvage the twisted ovary (9). However, the clinical diagnosis of ovarian torsion usually relies only on non-specific clinical signs, which delay the diagnosis, such as the presence of abdominal pain and ultrasonographic finding of an adnexal mass.

Although adnexal torsion is a common gynecologic emergency affecting females of all ages (10), torsion occurs more frequently in adolescents and young women (11).

Torsion of the pedicle results in occlusion of blood flow in the ovarian vein, with a risk of thrombosis. The traditional surgical procedure for correcting adnexal torsion involves removal of the affected adnexa (including the twisted pedicle), in order to prevent the development of pulmonary embolism caused by migration of the thrombus from the ovarian vein, and infection secondary to ovarian necrosis caused by torsion of the pedicle.

An ultrasound is the first modality to evaluate the ovary and ovarian torsion. The main sonographic features of an ovarian torsion include a morphologically abnormal ovary, with or without ovarian blood flow. The presence of blood flow within the ovary does not exclude ovarian torsion, it suggests that the ovary is viable and can be salvaged with surgery. As this patient presented to the emergency department with severe abdominal pain and a significant increase in abdominal girth, the first

imaging study ordered in the emergency department was a contrast-enhanced computed tomography (CT) of the abdomen and pelvis, due to suspected malignancy or any other acute abdominopelvic process, thus bypassing the typical first line abdominopelvic ultrasound, to save time. CT is usually used as an adjunct modality when diagnosis is not straight forward on ultrasound and also when a wider field of view is needed, as in the case of our patient.

Clinical signs of torsion include pain, fever, and an elevated white blood cell count. The finding of a well-defined low-signal-intensity mass on T1- and T2- weighted images, an absence of fat, and a few patchy areas of increased signal intensity on T2-weighted images suggested a diagnosis of torsion in the fibroma.

CONCLUSION

Ovarian fibrothecoma is usually asymptomatic. They can become symptomatic when they are torsed. Ovarian fibrothecomas are very difficult to diagnose with sonography: The differential diagnosis includes uterine fibroma. MR imaging is a useful imaging modality and should be performed when ultrasound does not provide definitive information for ovarian tumor. The treatment included fertility -sparing operation or more radical surgery depending on whether the patient wishes future childbearing or not. Although uncommon, ovarian fibrothecomas should be considered in the differential diagnosis of ovarian torsion, in addition to benign entities such as mature cystic teratoma.

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