Case Report

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Giant Ovarian Fibrothecoma in a Postmenopausal Woman Mimicking Malignancy with Bilateral Hydronephrosis: A Case Report

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ABSTRACT

Sex cord-stromal tumors (SCSTs) are rare ovarian neoplasms accounting for less than 5% of all ovarian tumors. This case report presents a 59-year-old postmenopausal woman with a giant ovarian fibro-thecoma presenting with abdominal pain, distention, pelvic heaviness, and mild hematuria. Radiological investigations revealed a large adnexal mass causing bilateral hydronephrosis. Surgical management included total hysterectomy with bilateral salpingeo-oophorectomy, and final pathology confirmed a benign fibro-thecoma. This case highlights diagnostic and therapeutic considerations in managing large ovarian SCSTs in postmenopausal women.

Keywords: Sex cord-stromal tumor, fibro-thecoma, ovarian neoplasm, postmenopausal, hydronephrosis, ovarian mass

INTRODUCTION

Sex cord-stromal tumors (SCSTs) are a rare group of ovarian neoplasms accounting for approximately 5-8% of all ovarian tumors.[1] Among them, fibrothecomas represent a subtype that lies along a histological spectrum between fibromas and thecomas, containing both fibroblastic and thecal elements.[2,3] These tumors are typically benign and often asymptomatic or incidentally discovered. However, in rare instances, they can grow to considerable sizes and exhibit imaging features that closely mimic malignant ovarian neoplasms.[4,5]

The current case is notable for a giant ovarian fibrothecoma presenting with bilateral hydronephrosis, an uncommon complication resulting from ureteral compression.[6,7] The large size of the tumor and complex imaging characteristics initially raised concern about malignancy, leading to extensive surgical planning. Furthermore, renal function was compromised due to obstructive uropathy, adding urgency and complexity to the case.

This report highlights the diagnostic dilemma posed by such tumors, the importance of careful preoperative evaluation, and the value of intraoperative frozen section analysis in guiding surgical decision-making.[8,9] By highlighting these challenges, this case contributes to the limited literature on fibrothecomas presenting with hydronephrosis and serves as an important lesson in avoiding overtreatment in similar clinical scenarios.

CASE REPORT

A 59-year-old postmenopausal woman presented with a 3-month history of progressive right flank and lower abdominal pain, accompanied by gradual abdominal distention and gross hematuria, which she reported as visible blood in the urine. Urinalysis confirmed gross hematuria, revealing >50 red blood cells per high-power field.

Her medical history was unremarkable, except for a ureteroscopic laser lithotripsy performed 12 years prior for nephrolithiasis. She denied any recent urinary tract infections, weight loss, or systemic symptoms.

On physical examination, she had abdominal distention, right-sided tenderness, and a palpable firm pelvic-abdominal mass extending above the pelvis.

Initial imaging with transabdominal ultrasound revealed a large right adnexal mass measuring approximately 14 × 12 × 8.5 cm, extending to the level of the umbilicus. This prompted further evaluation with magnetic resonance imaging, which demonstrated a heterogeneous, well-circumscribed, complex mass causing compression of both ureters, resulting in bilateral hydronephrosis Figure 1. These features raised strong radiological suspicion for an invasive or borderline ovarian malignancy.

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Laboratory investigations revealed normal tumor markers, including CA-125 and CA 19-9, but renal function was impaired, with a serum creatinine of 1.8 mg/dL and eGFR of 35 mL/min/1.73 m^2, likely due to obstructive uropathy.

In view of bilateral hydronephrosis and impaired renal function, bilateral double-J (DJ) ureteral stents were placed preoperatively to relieve ureteral obstruction and preserve kidney function.

Following stabilization, the patient underwent elective exploratory laparotomy via midline incision. Peritoneal fluid was aspirated and sent for cytology. Intra-operatively, a large solid mass originating from the right ovary was identified. En-bloc excision of the mass with the right adnexa was performed, along with total abdominal hysterectomy and left adnexectomy.

A frozen section analysis of the mass indicated a benign stromal tumor with no features of malignancy. Based on this intraoperative finding, no omentectomy or lymphadenectomy was performed. The final procedure completed was a total abdominal hysterectomy with bilateral salpingeo-oophorectomy.

Pathological Findings

Grossly, the tumor measured 13 × 10 cm, was solid, and encapsulated Figure 2. Histopathology confirmed a fibro-thecoma with spindle-shaped fibroblastic and thecal-like cells in a collagenous matrix. The tumor stained positive for inhibin, calretinin, and vimentin, supporting the diagnosis of fibrothecoma. No atypia or mitotic activity was found. All other tissues examined were benign.

Cytology

Peritoneal fluid was negative for malignancy and showed reactive mesothelial cells with inflammatory cells and histiocytes.

Postoperative Course

Creatinine improved from 1.8 to 1.1 mg/dL by postoperative day 7.

eGFR: 35 mL/min/1.73 m^2 pre-op → 68 mL/min/1.73 m^2 post-op.

DJ stents removed after 4 weeks; no hydronephrosis on ultrasound at 3 months.

Patient asymptomatic at 6-month follow-up.

The patient's symptoms resolved, and renal function improved postoperatively. She was discharged on postoperative day four in good condition.

DISCUSSION

Fibrothecomas are benign SCSTs of the ovary, most commonly seen in peri- and post-menopausal women.[10,11] They represent a spectrum between fibromas and thecomas, with varying proportions of fibroblastic and thecal cells.[12] While many are small and asymptomatic[13], larger tumors may present with nonspecific abdominal or pelvic symptoms due to mass effect[14], such as pressure on the bladder or ureters, occasionally leading to hydronephrosis.[15]

Some fibrothecomas may produce estrogen[16], potentially leading to endometrial hyperplasia or abnormal uterine bleeding, particularly in postmenopausal women.[17]

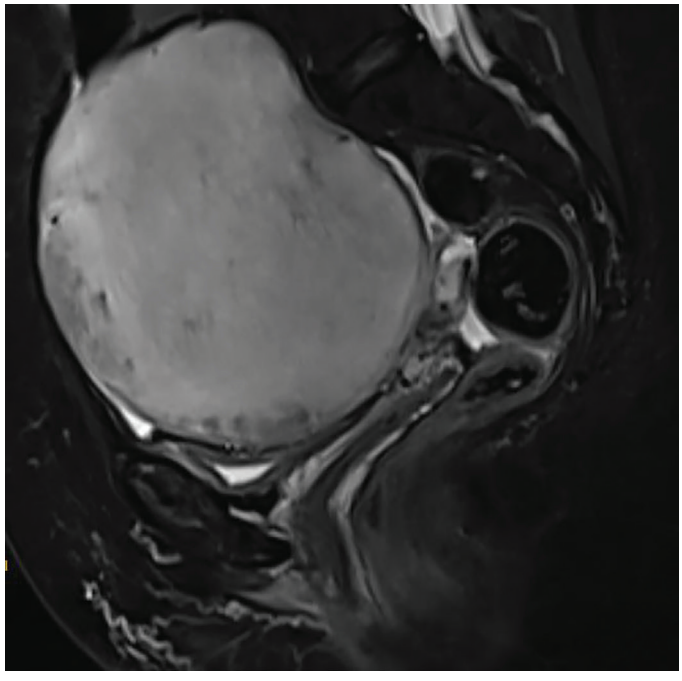

Figure 1. Preoperative MRI showing the large adnexal mass
MRI: Magnetic resonance imaging

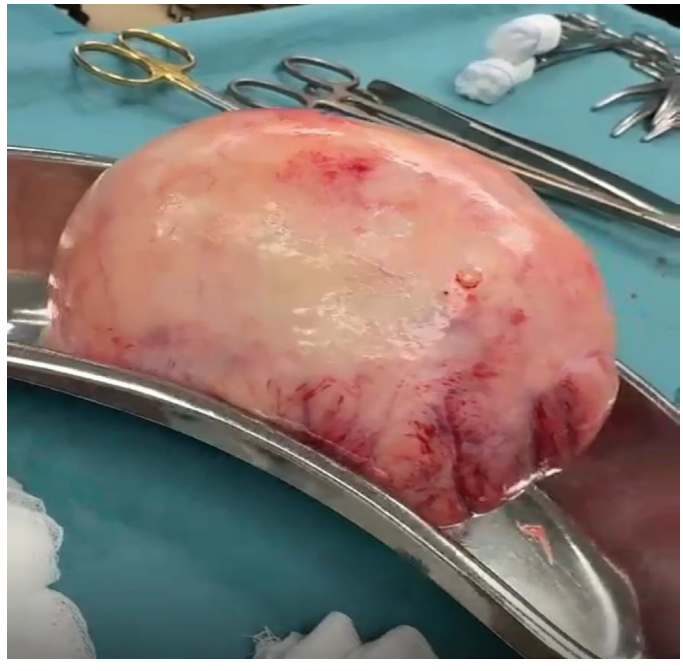

Figure 2. Intraoperative photo of the excised ovarian mass

In the present case, no hormonal symptoms or endometrial pathology were noted.

Imaging findings may be misleading, especially in large tumors with solid components or degenerative changes, raising suspicion for malignancy. As tumor markers, such as CA-125, are often non-specific or within normal limits in such cases[18,19], they are not reliable for diagnosis. Therefore, surgical exploration is often necessary when imaging suggests a complex adnexal mass.

Frozen section during surgery may provide valuable intraoperative guidance, as in the presented case.[20,21] In benign tumors, especially in postmenopausal women, total hysterectomy with bilateral salpingeo-oophorectomy is the standard approach.[22,23] Conservative surgery may be considered in younger patients with fertility concerns.[24,25]

This case highlights the need for a broad differential when evaluating complex adnexal masses and the importance of integrating clinical[26], radiological, intraoperative, and histological data in guiding management, and highlights the value of intraoperative histopathology to potentially avoid unnecessary extensive surgery.

CONCLUSION

This case highlights the importance of a multidisciplinary approach in the management of large adnexal masses in postmenopausal women. The combination of imaging, tumor markers, intraoperative frozen section, and histopathology facilitated optimal care. Avoidance of unnecessary radical surgery in a benign case preserved quality of life without compromising patient safety.

Ethics

Informed Consent: Informed consent was obtained from the patient for the publication of this case report and any accompanying images.

Authorship Contributions

Surgical and Medical Practices: A.E.M.A.S., N.R.H.A., M.A., W.H., Concept: A.E.M.A.S., N.R.H.A., M.A., W.H., Design: A.E.M.A.S., N.R.H.A., M.A., W.H., Data Collection or Processing: A.E.M.A.S., N.R.H.A., M.A., W.H., Analysis or Interpretation: A.E.M.A.S., N.R.H.A., M.A., W.H., Literature Search: A.E.M.A.S., N.R.H.A., M.A., W.H., Writing: A.E.M.A.S., N.R.H.A., M.A., W.H.

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