Case Report

Open Access   CrossMark

Ovarian fibroma with torsion in post hysterectomy patient: case report and review of literature

Abstract

Ovarian fibromas are uncommon benign tumours arising from sex cord–stromal elements of the ovary. Due to their solid nature, they may resemble malignant ovarian lesions on imaging, particularly in postmenopausal women. The diagnostic process becomes more complex in patients with prior hysterectomy, where altered pelvic anatomy can obscure clinical and radiological interpretation. We present rare case of post hysterectomy ovarian fibroma.

Keywords: ovarian fibroma, post hysterectomy adnexal mass, torsion, tumour markers

Rajashree Dayanand Katke,[1] Kanchan Jadhav,[2] Shubhangi Nawarange[3]

[1]Department of Obstetrics and Gynecology, Grant government Medical College, St George's Hospital Former Superintendent, Cama And Albless Hospitals, Mumbai – 400001, Maharashtra, India

[2]Department of Obstetrics and Gynecology, Grant Government Medical College, St George's Hospital, Mumbai – 400001, Maharashtra , India

[3]Department of Obstetrics and Gynecology, Assistant Professor, Grant Government Medical College, St George's Hospital, Mumbai – 400001, Maharshtra, India

Correspondence: Dr. Rajashree Dayanand Katke, MDOBGY, FICOG, FMAS, MCOG, Professor and unit chief & Former Head of the Department, Mumbai – 400001, Maharashtra, India, Tel +91 9869917830

Introduction

Benign ovarian masses requiring intervention arise in roughly 3-6% of women with retained ovaries after hysterectomy. These account for 80-90% of post-hysterectomy adnexal lesions needing surgery, often presenting 2-5 years postoperatively. Risk is higher with unilateral oophorectomy (up to 5.9%) versus bilateral ovarian conservation (3.8- 4.3%).[1] Ovarian fibroma is a benign sex cord–stromal tumour with incidence being 1% to 4.7% of all ovarian tumours.[2] They can clinically and radio logically mimic malignant ovarian neoplasms in postmenopausal women. In post-hysterectomy patients, absence of the uterus and post-surgical adhesions may further complicate diagnosis, making differentiation between benign and adnexal masses difficult.[4] We present a case of ovarian fibroma in a postmenopausal woman with previous hysterectomy, complicated by torsion, highlighting the diagnostic and management challenges.

Case report

A 60-year-old P3L2NND1 female presented with complain of abdominal pain persisting for 1 month. There was no history of anorexia, evening rise of temperature or weight loss. She was hypertensive since 3 years on tablet amlodipine. Patient had previous vaginal deliveries and history of vaginal hysterectomy in 2017. On examination patient's general condition was fair with average built, vitally stable and no abnormality detected in respiratory, cardiovascular or central nervous system. On per abdominal examination: right sided tenderness present, Obesity present. On per speculum, Vaginal vault was intact no obvious growth seen. Per vaginal examination suggestive of a hard, mobile mass approximately 8cm × 7 cm felt in the right

fornix. Ultrasound was suggestive of post-hysterectomy status with a solid mass measuring 7.2cm × 5.1 cm seen in the pelvis- right ovary not seen separately, left ovary measured 2.6cm × 1.4 cm. MRI done was suggestive of post-hysterectomy status with no residual uterine tissue. Heterogenous, mixed signal intensity lesion (8cm × 6.5 cm) in right adnexa, with complex cystic and solid components, located in right ovarian fossa, abutting colon.

Her tumour markers: LDH-210 U/L (mildly elevated), CA 125 - 11.9 U/ml, AFP 2.96 ng/ml, CEA - 2.08 ng/ml, CA 19.9 -24.50 U/ ml. All routine investigations were within normal limits. Medical optimisation was undertaken with oral hypoglycaemic for deranged blood sugar levels. Intraoperative findings suggested a right adnexal pedunculate mass measuring 8 cm× 6.5 cm × 6 cm with 2.5 turns of torsion with gangrenous changes at base. The mass had a firm consistency and a multilobulated appearance. The cut section was grey-white, homogenous and free of haemorrhage. The patient underwent exploratory laparotomy with excision of a right ovarian mass, a right salpingectomy and a left salpingo-oophorectomy. Histopathology report suggestive of a right ovarian mass with well encapsulated, well circumscribed tumour showing mixed cellularity with predominant hypo-cellular and hyper cellular areas. Tumour cells in hyper cellular areas are arranged in intersecting fascicles with intervening collagenized stroma, in storiform pattern. Hypo cellular areas show scattered spindle cells embedded in heavily collagenized stroma. Individual tumour cells show spindled cells with pointed ends having scant evidence of mitosis / necrosis / atypia seen. Impression: Right Ovarian Fibroma. The right fallopian tube was normal histology, while the left ovary and fallopian tube had normal histology. The patient recovered well post-operatively and was discharged.
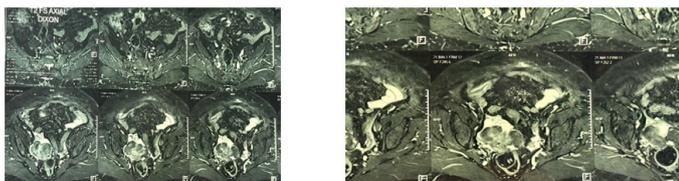
MRI: Lobulated T2 hypointense solid lesion in right adnexa

Discussion

Ovarian fibromas are benign stromal tumours, often presenting with non-specific symptoms such as abdominal pain or mass.[3]

Torsion at pedical
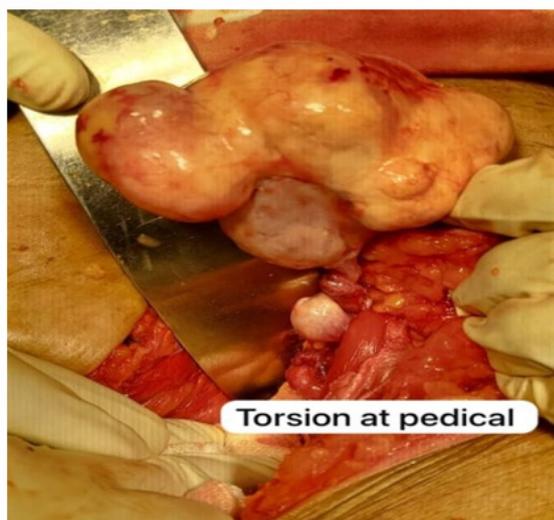
In Situ findings

Cut section: grey, white solid areas

However in some cases, torsion may be the presenting feature, leading to acute abdomen and requiring urgent surgical intervention.[3] Ovarian fibroma can be bilateral in 4%-8% of patients and multiple

in 10% of case.[4] Post-hysterectomy adnexal masses are uncommon but often benign and epithelial ovarian malignancies, with roughly 50–60% of ovarian cancers diagnosed after menopause. Epithelial ovarian carcinomas: about 85–90% of all ovarian malignancies, germ-cell tumours (malignant): about 5%, sex-cord stromal tumours (malignant): about 3–6%.[4]

Evaluation becomes more complex in patient with prior hysterectomy. Post-surgical anatomical changes and adhesions may distort pelvic structures, causing benign lesions to appear suspicious on imaging.[5] Ultrasonography, though widely used as an initial modality, may not reliably distinguish benign from malignant solid masses. MRI provides better tissue characterisation; however, its interpretation may still be affected by post-operative changes.

Most adnexal masses detected after hysterectomy arise from preserved ovarian tissue and are benign, including cysts, cystadenomas, endometriomas, and fibromas.[4] Careful integration of imaging findings with tumour markers is essential for appropriate management.Recent data, suggest that convolutional neural networks based on MRI may greatly aid in the non-invasive preoperative differentiation of these tumours.[6]

Salpingo-ophorectomy is recommended treatment in post hysterectomy ovarian fibroma.

Conclusion

This case highlights the importance of considering ovarian neoplasms in the differential diagnosis of pelvic masses in post-hysterectomy women. Early recognition and surgical management are essential for optimal outcomes, especially when torsion is present.

Acknowledgments

Conflicts of interest

Funding

References

1. Berek JS, Chalas E, Edelson M, et al. Prophylactic and risk-reducing bilateral salpingo-oophorectomy: recommendations based on risk of ovarian cancer. *Obstet Gynecol*. 2010;116:733–43.

2. Torre LA, Trabert B, DeSantis CE, et al. Ovarian cancer statistics, 2018. *CA Cancer J Clin*. 2018;68:284–296.

3. Katke RD. Torsion of a Huge Ovarian Fibroma presented as acute Abdomen. *Journal of Case Reports*. 2015;5:195–198.

4. Cambruzzi E, Pegas KL, Milani DM, et al. Angiosarcoma arising in an ovarian fibroma: a case report. *Patholog Res Int*. 2010;2010:842592.

5. Baloglu A, Bezircioglu I, Cetinkaya B, et al. Development of secondary ovarian lesions after hysterectomy without oophorectomy versus unilateral oophorectomy for benign conditions: a retrospective analysis of patients during a nine-year period of observation. *Clin Exp Obstet Gynecol*. 2010;37:299–302.

6. Zheng Y, Wang H, Weng T, et al. Application of convolutional neural network for differentiating ovarian thecoma-fibroma and solid ovarian cancer based on MRI. *Acta Radiol*. 2024;65:860–868.