International Journal of Reproduction, Contraception, Obstetrics and Gynecology
Verma A et al. Int J Reprod Contracept Obstet Gynecol. 2024 Dec;13(12):3748-3750
www.ijrcog.org
pISSN 2320-1770 | eISSN 2320-1789

DOI: https://dx.doi.org/10.18203/2320-1770.ijrcog20243617

Case Report

Ossified ovarian fibroma-a rare entity

Aruna Verma*, Pankhudi Srivastava

Department of Obstetrics and Gynaecology, LLRM Medical College Meerut, UP, India

Received: 30 Septembet 2024
Accepted: 15 November 2024

***Correspondence:**
Dr. Aruna Verma,
E-mail: arunaverma36@gmail.com

ABSTRACT

Ovarian fibroma are sex cord stromal tumors of pure stromal variety; they originate from excessive growth of the stroma and connective tissue of the cortex of the ovary. As per the available literature, incidence of ovarian fibromas accompanied by further ossification are quite uncommon. Our study's goal is to offer a rare instance that has been appropriately recognized and treated, together with a depiction of the pathogenic mechanisms behind it.

Keywords: Ovarian fibroma, Sex cord stromal tumor, Postmenopausal

INTRODUCTION

Ovarian fibromas are classified as ovarian tumors in the sex cord-stromal group (SCSTs). They make for 1-4.7% of all ovarian tumors and are the most common solid ovarian neoplasm.[1] These are sex cord stromal tumors of the pure stromal variety; they originate from excessive growth of the stroma and connective tissue of the cortex of the ovary. Less than 1% of instances have been documented to have focal fibro-sarcomatous alterations, despite the majority of them being benign.[2]

With a median age of 48 years, these tumors are typically observed in women who are perimenopausal or postmenopausal.[2] Tumors can be unilateral or bilateral; but mostly (90%), the tumors are unilateral, and 70% of them are on the left side.[3]

As fibromas expand, patients may experience pressure and mass in the abdomen. This could be because of the tumor's size or the severity of ascites, which is a common side effect of ovarian fibromas. Smaller tumors are typically asymptomatic.[4]

CASE REPORT

A 50-year-old female P5L5A1, presented to LLRM medical college in view of mass in abdomen for 5 years (gradually increased to present size. She is in the perimenopausal age group with last menstrual period 7 months back.

She is of average built with normal general physical examination.

On abdominal examination- A mass corresponding to 30 weeks fundal height was felt arising from pelvis as lower limit could not be reached. Mass was firm to hard in consistency, irregular surface, moving side to side horizontally and non-tender.

On bimanual examination-Uterus 8-10 weeks size, deviated to left side, anteverted.

Right adnexal mass was felt as described above and was moving with cervical motion.

USG whole abdomen showed large heterogeneously hyperechoic lesion of size 15.2×21.5×17.3 seen in the abdomen extending from mid-abdomen superiorly up to the pelvis region inferiorly. Both ovaries were not visualized separately. Lesion showed calcified and cystic changes without internal vascularity and few dilated tortuous vessels were noted on the left side of adnexa. Multiple fibroids visualized in the uterus. These findings

suggested ovarian mature teratoma/peritoneal lesion with multiple uterine fibroids.

All tumor markers (CA-125, CA19.9, CEA, B HCG, LDH) were within normal limits.

CECT imaging findings are suggestive of, large heterogeneously enhancing partially calcified lobulated solid lesion (19×15.3×17.2 cm) in mid and lower abdomen in right lateral and medial locations. No enlarged lymph nodes seen. Bulky uterus with multiple fibroids seen (Figure 1).

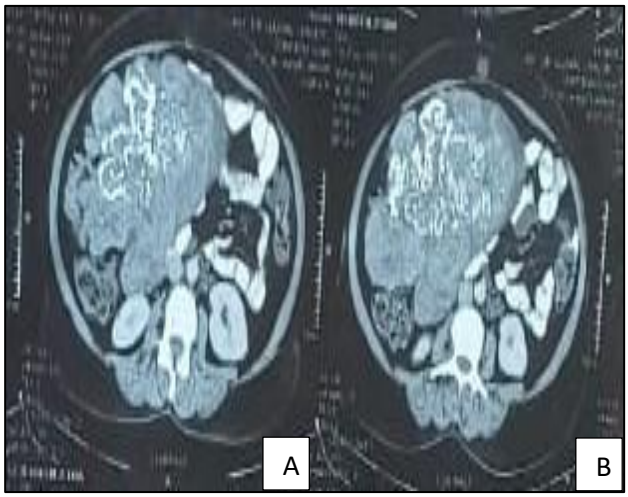

Figure 1 (A and B): CECT imaging of lower abdomen showing large heterogenous calcified mass towards right side.

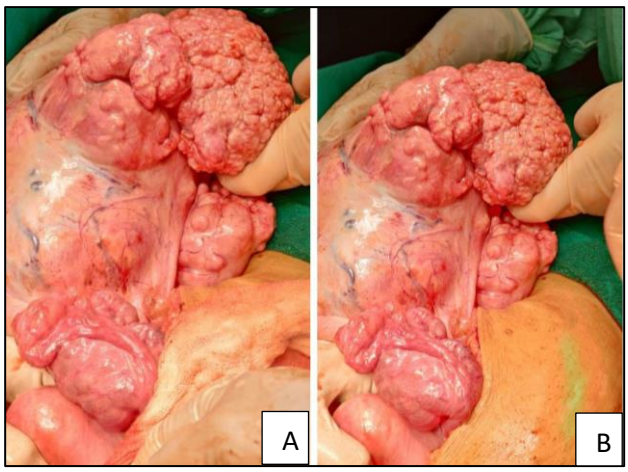

Figure 2 (A and B): Intraoperative picture showing large irregular ovarian tumor and enlarged uterus with multiple fibroids.

Her exploratory laparotomy was planned after doing all pre operative investigations and preanesthetic checkup. Intraoperative findings included- around 50 CC peritoneal fluid seen- collected in heparinized syringe and sent for cytology. A large ovarian mass approx. 22×20 cm arising from right ovary, firm to hard in consistency, irregular surface, with papillary projections. Uterus was corresponding to 8-10 weeks size with multiple fibroids. Left sided tube and ovary were found to be normal (Figure 2).

Total abdominal hysterectomy with bilateral salpingooophorectomy done.

Abdominal cavity was inspected and palpated for any metastasis. No evidence of metastasis found. Keeping malignancy in mind infracolicomentectomy was also done.

On pelvic and paraaortic lymph node sampling lymph nodes were found to be normal.

Patient had an uneventful intra- and postoperative course and was discharged on postoperative day 8, after total stitch removal.

Histopathology report showed multiple fibroids in myometrium of varying size. Cervical lips and endocervical canal patent. Attached left ovary and tubes normal. A 24×16×14 cm size right ovarian mass seen. Outer surface is greyish white to greyish brown, firm to hard, bosselated. It is gritty on cut, and the cut surface showed greyish white solid and lobulated mass. No area of hemorrhage or necrosis seen. Cut lumen of the right fallopian tube was filled with brownish fluid.

Microscopy showed ovarian mass consisting of uniform, bland, spindle cells (fibroblast) arranged in short intersecting fascicles. Stroma showed collagen and hyaline deposits with focal calcified area. Individual cells showed no nuclear atypia.

Left ovary and fallopian tube were within normal limits. Endometrium atrophic. Lymph nodes negative for malignancy.

The impression was fibroma.

DISCUSSION

Ovarian fibromas are rare, benign solid tumors of the ovary that are frequently seen in perimenopausal women. Tumor can mimic uterine fibroids and other gynecological tumors, making preoperative identification challenging in most cases. Radiological imaging is the major diagnostic modality which is later confirmed by histology.

Since these tumors are generally found in postmenopausal women, total abdominal hysterectomy and bilateral salpingo-oophorectomy are usually carried out.

Ossification is a well-known condition that can happen anyplace in soft tissue. Trauma, persistent inflammation, non-absorbed hematomas, malignancies, hypercalcemia, and hypervitaminosis are some of the etiologies.[5] Except in the case of a mature cystic teratoma or a heterologous

mixed mesodermal tumor, calcification in the ovary is quite unusual.

Osseous metaplasia of the ovary has been reported in cases of endometriosis, mucinous cystadenoma, cystadenocarcinoma, supernumerary ovary, Sertoli Leydig cell tumor in association with a cloacal anomaly, and ovarian thecomas (which occasionally share features with fibromas, giving rise to the term fibro thecoma).[6-11]

Hyalinization, dystrophic calcification, and osseous metaplasia are the most likely causes of calcification in ovarian neoplasms.[12]

Another explanation could be that tumor cells produce bone-forming substances such transforming growth factor-β or bone morphogenetic proteins, which lead to the metaplastic transformation of undifferentiated mesenchymal stromal stem cells into osteoblasts. [12]

According to several experts, osseous metaplasia appears to be an unusual response to tissue aggression throughout the healing process.

This odd event has not been linked to any predictive relevance.

CONCLUSION

Ovarian fibromas are rare tumors, and the presence of ossification in them is an uncommon characteristic. Its pathogenic mechanism and clinical implications are yet uncertain. Its treatment requires surgical removal along with histopathological analysis for definitive diagnosis.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: Not required

REFERENCES

1. Cho YJ, Lee HS, Kim JM, Joo KY, Kim M. Clinical characteristics and Surgical Management options for ovarian fibroma/fibrothecoma: A study of 97 cases. Gynecol Obstet Invest. 2013;76:182-7.
2. Leung SW, Yuen PM. Ovarian Fibroma: A review on the clinical characteristics, Diagnostic Difficulties and Management options of 23 cases. Gynecol Obstet Invest. 2006;62:1-6
3. Silvanesaratman V, Dutta R, Jayalakshmi P. Ovarian Fibroma, clinical and histopathological characteristics. Int J 248 Gynecol Obstet. 1990;33(3):243-7.
4. Dolan MS, Hill C, Valea FA. Benign Gynecologic Lesions, in Comprehensive Gynecology. Lobo RA. Editors. 2016, Elsevier Health Sciences.
5. Landim FM, José MT, Deborah NMB, Jose ES Jr, Joao BBBF, Roney GFF. Vaginal osseous metaplasia. Arch Gynecol Obstet. 2009;279(3):381-4.
6. Gabrilovich S, Kowal N, Zhang R. Ovarian Endometrioma with Osseous Metaplasia: A Case Report and Review of the Literature. J Gynecol Surg. 2019;35(4):246-52.
7. Misselevich I, Boss JH. Metaplastic bone in a mucinous cystadenoma of the ovary. Pathol Res Pract, 2000;196(12):847-8.
8. Bosscher J, Barnhill D, O'Connor D, Doering D, Nash J, Park R. Osseous metaplasia in ovarian papillary serous cystadenocarcinoma. Gynecol Oncol. 1990;39(2):228-31.
9. Badawy SZ, Kasello DJ, Powers C, Elia G, Wojtowycz AR. Supernumerary ovary with an endometrioma and osseous metaplasia: a case report. Am J Obstet Gynecol, 1995;173(5):1623-4.
10. Godbole P, Outram A, Sebire N. Osseous metaplasia in a benign ovarian cyst in association with cloacal anomaly. J Clin Pathol, 2005;58(3):334-5.
11. Morizane M, Ohara N, Mori T, Murao S. Ossifying luteinized thecoma of the ovary. Arch Gynecol Obstet, 2003;267(3):167-9.
12. Kumar R, Archana S, Pradip KS, Pranab D. An Unusual Case of Extensive Osseous Metaplasia in Fibroma of Ovary. Int J Surg Pathol. 2018;26(8):733-4.

Cite this article as: Verma A, Srivastava P. Ossified ovarian fibroma-a rare entity. Int J Reprod Contracept Obstet Gynecol 2024;13:3748-50.