

Puzzling Pelvic Pathology: A Case Report and Review of Literature

¹Rema. V. Nair, Professor, Department of Obstetrics & Gynaecology, Sree Mookambika Institute of Medical Sciences, Kulasekharam, Kanyakumari District, Tamil Nadu.

²Deeksha Pandey, Professor, Head of Department, Department of Obstetrics & Gynaecology, Sree Mookambika Institute of Medical Sciences, Kulasekharam, Kanyakumari District, Tamil Nadu.

³Priyanka. N.V, Postgraduate, Department of Obstetrics & Gynaecology, Sree Mookambika Institute of Medical Sciences, Kulasekharam, Kanyakumari District, Tamil Nadu.

³Kavya Arja, Postgraduate, Department of Obstetrics & Gynaecology, Sree Mookambika Institute of Medical Sciences, Kulasekharam, Kanyakumari District, Tamil Nadu.

⁴Arif Khan, Associate Professor, Department of Radiology, Sree Mookambika Institute of Medical Sciences, Kulasekharam, Kanyakumari District, Tamil Nadu.

⁵Lilarani Vijayaragahavan, Professor, Department of Pathology, Sree Mookambika Institute of Medical Sciences, Kulasekharam, Kanyakumari District, Tamil Nadu.

Corresponding Author: Deeksha Pandey, Professor, Head of Department, Department of Obstetrics & Gynaecology, Sree Mookambika Institute of Medical Sciences, Kulasekharam, Kanyakumari District, Tamil Nadu

How to citation this article: Rema. V. Nair, Deeksha Pandey, Priyanka. N.V, Kavya Arja, Arif Khan, Lilarani Vijayaragahavan, “Puzzling Pelvic Pathology: A Case Report and Review of Literature”, IJMACR- October - 2023, Volume – 6, Issue - 5, P. No. 37 – 41.

Open Access Article: © 2023, Rema. V. Nair, et al. This is an open access journal and article distributed under the terms of the creative common’s attribution license (<http://creativecommons.org/licenses/by/4.0>). Which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

Type of Publication: Case Report

Conflicts of Interest: Nil

Abstract

We report here a rare yet interesting case with abdomino-pelvic mass that remained a diagnostic dilemma till the final histopathological report of the surgical specimen. A 38-year-old, parous lady presented to us with complaints of early satiety and abdominal distention for the past two months. On examination a large abdomino-pelvic mass with variegated consistency was noted. Ultrasonography suggested malignant ovarian tumor. CA 125 levels and

RMI score also implied the same. However, because of the visualization of both ovaries separately on MRI, a diagnosis of sub-serosal fibroid with sarcomatous changes was suggested. Per-operatively owing to the presence of ascites, solid-cystic consistency and bowel adhesions malignancy couldn’t be ruled out. Presence of a normal looking ovarian tissue on top of the mass explained the visualization of both ovaries separately on MRI and a likelihood of benign nature of the ovarian

tumor. Only the final histopathology finding of ovarian fibroma with foci of endometriosis within could put the pieces of this puzzling case together. To the best of our knowledge this is only the third case of coexisting ovarian fibroma with endometriosis within.

Keywords: Ovarian Fibroma, Malignant Ovarian Tumor, Subserosal Fibroid, Endometriosis

Introduction

With good clinical acumen topped up with advanced imaging modalities, masses arising from the genital tract in women, are easy to diagnose. However, at rare occasions they may still pose a diagnostic challenge to the clinician.

We report here an interesting case with abdominopelvic mass that remained a diagnostic dilemma till the final histopathological report of the surgical specimen.

Case report: A 38-year-old, parous lady presented to us with complaints of early satiety and abdominal distention for the past two months. For the past two weeks she also had diffuse lower abdominal pain and increased bowel frequency. Her menstrual cycles were regular. She was a known diabetic on oral hypoglycemic agents for the past ten years.

Patient was of normal built. Her vital signs were stable. There was no evidence of lymphadenopathy. Abdominal examination revealed a mass corresponding to 24 weeks size of the gravid uterus with variegated consistency and restricted mobility. Pelvic examination confirmed the same findings, and the uterus couldn't be felt separately from the mass.

Ultrasound abdomen and pelvis showed large heterogenous lobulated mass lesion measuring approximately 16x9.5x7.2 cm on right side reaching the midline with moderate ascites. With a doubt of malignant ovarian tumor magnetic resonance imaging (MRI) was

done. MRI study revealed a large lobulated pelvic mass measuring 15x9x7.2 cm along the postero-superior aspect of uterus with loss of fat planes and minimal ascites. Both ovaries were seen separately. Thus, a likelihood of pedunculated sub-serosal fibroid with hemorrhagic and mucinous degeneration was suggested. (Figure 1) A possibility of sarcomatous transformation was also considered in view of diffusion restriction on diffuse weighted imaging (DWI). (Figure 2)

All her routine blood investigation were within normal limits. X-ray chest was normal. However, serum Cancer Antigen 125 (CA-125) level was elevated to 263 U/mL. All other tumor markers were negative.

Patient was planned for exploratory laparotomy with three differential diagnoses in mind - a) Pedunculated sub-serosal fibroid with sarcomatous change, b) Ovarian malignancy, c) Meigs's syndrome (ovarian fibroma with ascites).

For surgery abdomen was opened in layers with a midline incision. Around 200-300 ml of ascitic fluid was noted and sent for cytology. An approximately 15x10 cm mass which was mostly solid with three to four cystic areas was seen arising from the right ovary. The mass was occupying the pouch of Douglas, with adhesions to the sigmoid colon. A 3x2 cm normal looking ovarian tissue could be identified clearly sitting on the postero-superior aspect of the mass. Omentum appeared normal with no metastatic deposits. (Figure 3)

Right sided ovarian mass was carefully excised by clamping, cutting, and ligating the infundibulopelvic and suspensory ligament of ovary. We proceeded with total hysterectomy with removal of the other side of tube and ovary. Infracolic omentectomy and pelvic lymph node sampling was done.

The histopathological examination of excised specimen revealed it to be a mitotically active cellular ovarian fibroma with focal hemorrhagic infarction and foci of endometriosis. (Figure 4)

Discussion

This case is being reported as it posed a real diagnostic challenge for us. Patient's age (38 years), a short history (2 months), symptoms (early satiety, abdominal distension, bowel symptoms) and examination findings (variegated abdomino-pelvic mass with restricted mobility) suggested a malignant ovarian tumor.

Ovarian cancer is insidious in presentation with few sentinel symptoms. Understanding the symptoms and physical findings with a low threshold for diagnostic imaging is the only recommended approach for ovarian cancer detection in women without familial risk factors. (1,2)

Ultrasonography is the most commonly performed imaging modality used to evaluate pelvic pathologies. (3) Higher imaging modalities usually help to confirm the diagnosis in indeterminate abdomino-pelvic tumors. (4-6) However, in our case ultrasound suggested malignant ovarian tumor whereas MRI gave the diagnosis of pedunculated sub-serosal fibroid with possibility of sarcomatous transformation. Both the ovaries were visualized separately on MRI. As per the literature too visualization of discrete normal ovaries excludes an ovarian aetiology of a pelvic mass. (7)

In our case CA-125 was elevated. The RMI-1 score for the index patient was calculated to be 263 (cutoff for malignancy: 200). (8,9)

Concerned with the ambiguous findings, keeping in mind the possibility of a malignant ovarian tumor we decided for staging laparotomy. Even the operative finding could not make the picture clear and pointed towards possible

malignancy with presence of ascites, solid-cystic areas in the ovarian mass and dense adhesions with the sigmoid colon. A decision to go ahead with surgical staging as for a malignant ovarian tumor was taken. One interesting finding worth mentioning per-operatively was the presence of normal ovarian tissue at the postero-superior aspect of the tumor. On co-relating it with imaging it was now clear how both the ovaries appeared normal on MRI. (Figure 1)

Finally, the histopathology of the excised specimen cleared the enigma. The mass was reported to be an ovarian fibroma with foci of endometriosis. Ascitic fluid was negative for malignant cells. Omentum and pelvic lymph nodes were found to be negative for any malignant deposits.

Presence of endometriosis within the fibroma, explains elevated CA125 levels. To the best of our knowledge this is only the third case of coexisting ovarian fibroma with endometriosis, reported in English literature. The first being reported in the year 2017, where a 29-year-old unmarried lady presented with coexisting ovarian fibroma and endometriosis, with elevated CA 125 level (589.8 U/mL). (10) Another similar case was reported in a supernumerary ovary with elevated CA 125 (114 U/mL) and CA19-9 (402 U/mL) levels. (11)

Conclusion

Despite extensive understanding and experience, a pelvic mass at times can present a diagnostic dilemma. In cases of confusion with inconclusive imaging finding and elevated CA 125 levels, a rare possibility of endometrioma within ovarian fibroma should be kept in mind.

Figure Legend

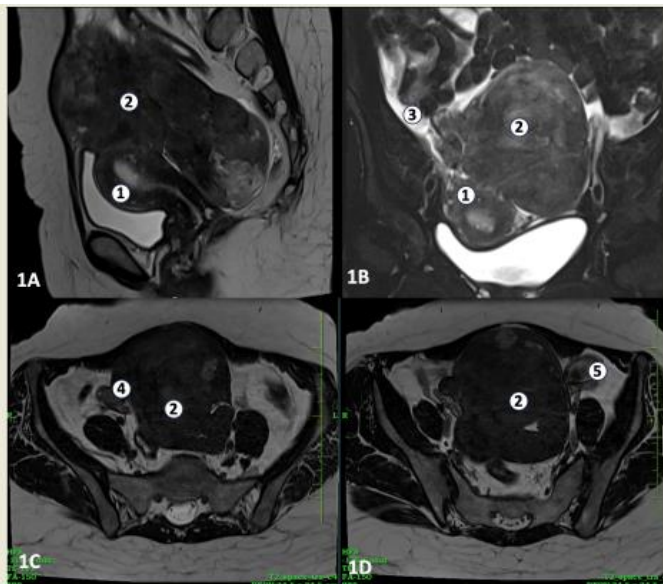


Figure 1: T2 sagittal, axial and Coronal MRI images 1A) T2 sagittal image showing a large well differentiated heterogenous mass lesion in the midline pelvis. The lesion is seen abutting the uterine fundus and posterior myometrium with well-maintained fat planes. 1B) T2 coronal image showing free fluid in the abdomino-pelvic cavity, suggestive of mild ascites. 1C) T2 axial image showing Right and 1D) left ovaries separately. (Marked areas in the figure – 1. Uterus, 2. Heterogenous Mass, 3. Ascites, 4. Right Ovary, 5. Left Ovary)

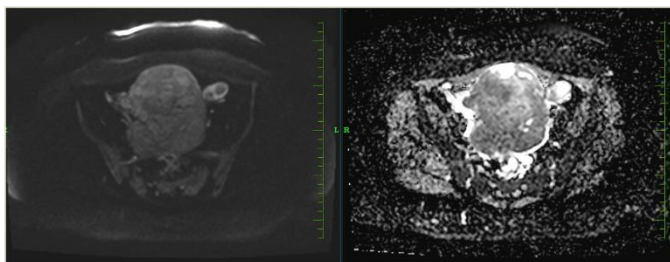


Figure 2: Diffusion restriction on diffuse weighted imaging (DWI) shows areas of bright signal in DWI and low signal in ADC indicating diffusion restriction, suggestive of areas of suspected malignant transformation.

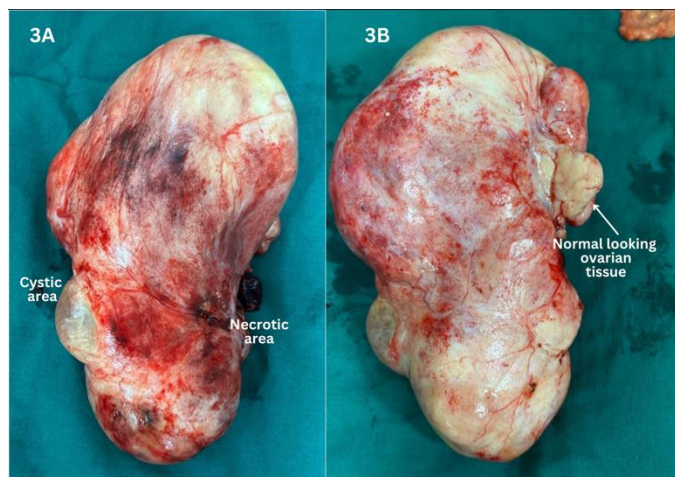


Figure 3: Surgical specimen showing excised Tumor mass. 3a: Ventral aspect of the tumor 3b. Dorsal aspect of the tumor

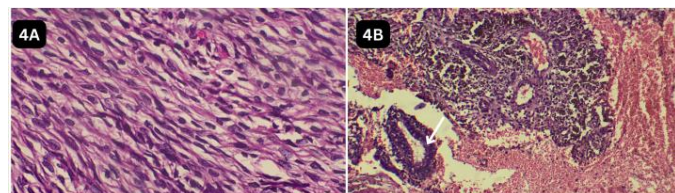


Figure 4a: Representative sections from the tumor showing cellular neoplasm displaying spindled to ovoid tumor cells with bland nuclei and scant eosinophilic cytoplasm arranged in fascicles against a variably collagenous stroma. (H&E 40X) 4b: Area of hemorrhage and infarct type necrosis with foci of endometriosis within the hemorrhagic area (H&E 10X)

References

- Orr B, Edwards RP. Diagnosis and Treatment of Ovarian Cancer. *Hematol Oncol Clin North Am.* 2018 Dec;32(6):943–64.
- Givens V, Mitchell GE, Harraway-Smith C, Reddy A, Maness DL. Diagnosis and management of adnexal masses. *Am Fam Physician.* 2009 Oct 15;80(8):815–20.
- Khattak YJ, Hafeez S, Alam T, Beg M, Awais M, Masroor I. Ovarian masses: is multi-detector computed

tomography a reliable imaging modality? *Asian Pac J Cancer Prev APJCP*. 2013;14(4):2627–30.

4. Andreotti RF, Timmerman D, Strachowski LM, Froyman W, Benacerraf BR, Bennett GL, et al. O-RADS US Risk Stratification and Management System: A Consensus Guideline from the ACR Ovarian-Adnexal Reporting and Data System Committee. *Radiology*. 2020 Jan;294(1):168–85.

5. Timmerman D, Van Calster B, Testa A, Savelli L, Fischerova D, Froyman W, et al. Predicting the risk of malignancy in adnexal masses based on the Simple Rules from the International Ovarian Tumor Analysis group. *Am J Obstet Gynecol*. 2016 Apr;214(4):424–37.

6. Levine D, Brown DL, Andreotti RF, Benacerraf B, Benson CB, Brewster WR, et al. Management of asymptomatic ovarian and other adnexal cysts imaged at US Society of Radiologists in Ultrasound consensus conference statement. *Ultrasound Q*. 2010 Sep;26(3):121–31.

7. Agirlar Trabzonlu T, Modak M, Horowitz JM. MR Imaging of Mimics of Adnexal Pathology. *Magn Reson Imaging Clin N Am*. 2023 Feb;31(1):137–48.

8. Jacobs I, Oram D, Fairbanks J, Turner J, Frost C, Grudzinskas JG. A risk of malignancy index incorporating CA 125, ultrasound and menopausal status for the accurate preoperative diagnosis of ovarian cancer. *Br J Obstet Gynaecol*. 1990 Oct;97(10):922–9.

9. Tantipalakorn C, Tinnangwattana D, Lerthiranwong T, Luewan S, Tongsong T. Comparisons of Effectiveness in Differentiating Benign from Malignant Ovarian Masses between Conventional and Modified Risk of Malignancy Index (RMI). *Int J Environ Res Public Health*. 2023 Jan 3;20(1):888.

10. Chougule A, Garg R. SMA-Positive Fibroma With an Intramural Endometriotic Cyst Mimicking

Ovarian Leiomyoma. *Appl Immunohistochem Mol Morphol AIMM*. 2017;25(5):e38–9.

11. Ogishima D, Sakaguchi A, Kodama H, Ogura K, Miwa A, Sugimori Y, et al. Cystic Endometrioma with Coexisting Fibroma Originating in a Supernumerary Ovary in the Rectovaginal Pouch. *Case Rep Obstet Gynecol*. 2017;2017:7239018.