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Case Report

A rare case of vaginal leiomyoma: diagnostic challenges and management

Ashwini H. Pai, Madhurya Rudravadeyara Matada, Veena M. Vernekar, Madhu Patil*

Department of Obstetrics and Gynaecology, Subbaiah institute of medical sciences, Purle, Shimoga, Karnataka, India

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***Correspondence:**
Dr. Madhu Patil,
E-mail: 259madhu@gmail.com

ABSTRACT

Primary vaginal leiomyomas are rare benign smooth muscle tumors that can pose a diagnostic challenge due to their unusual location and nonspecific presentation. We report a case of a female aged 29 years, on her routine checkup for primary infertility. On examination Incidental vaginal mass was found, a well-defined mass visualized in the anterior vaginal wall extending into right vaginal wall indenting into vaginal canal. Cervix was not visualized. Imaging showed well-defined lesion suggestive of anterior vaginal fibroid of size 5.1 × 6.8 × 7.3 cm. The patient underwent diagnostic laparoscopy followed by complete surgical excision by abdomino-vaginal approach. Histopathological examination confirmed the diagnosis of leiomyoma. The postoperative period was uneventful, and the patient remained symptom-free on follow-up. This case highlights the importance of considering vaginal leiomyoma in the differential diagnosis of vaginal masses. Early diagnosis and surgical management result in excellent outcomes with minimal recurrence risk.

Keywords: Vaginal neoplasms, Leiomyoma, Diagnostic imaging, Surgical excision, Infertility

INTRODUCTION

Vaginal leiomyomas are rare benign smooth muscle tumors arising from the vaginal wall, with fewer than 350 cases reported worldwide since their first description in 1733.[1,2] These tumors predominantly originate from the anterior vaginal wall and often present diagnostic challenges due to their uncommon location and nonspecific clinical manifestations.[3,4] While many cases remain asymptomatic, patients may experience symptoms such as vaginal mass, pressure effects on adjacent organs, abnormal bleeding, dyspareunia, or infertility.[5,6] The rarity and overlapping presentation with other pelvic pathologies, such as cervical fibroids or prolapsed submucosal uterine fibroids, complicate early and accurate diagnosis.[7] Imaging modalities, including ultrasound and magnetic resonance imaging, may be inconclusive, necessitating surgical exploration for definitive diagnosis and management.[6] This case report highlights the diagnostic difficulties encountered and successful surgical management of a large anterior vaginal leiomyoma, emphasizing the importance of considering vaginal leiomyoma in the differential diagnosis of vaginal masses.

CASE REPORT

A 29-year-old nulligravida woman with six years of married life presented for evaluation of primary infertility. She reported regular menstrual cycles without any history of abnormal uterine bleeding, pelvic pain, or other gynecological complaints. There were no urinary symptoms or history of dyspareunia. On general physical examination, the patient was moderately built, well-nourished, and fully oriented to time, place, and person. Abdominal examination revealed a soft, non-tender abdomen without palpable masses. Speculum examination showed a well-defined mass on the anterior vaginal wall, extending into the right vaginal wall and indenting the

vaginal canal, with the cervix not visible. Bimanual examination revealed a firm, approximately 6 × 6 cm mass on the anterior vaginal wall, with the cervix not separately palpable and uterine size indeterminate.

The differential diagnosis included cervical polyp, cervical fibroid, and vaginal malignancy. Imaging studies comprised transabdominal and transvaginal ultrasound, which demonstrated a retroverted uterus measuring 6.5 × 3.6 × 4 cm with an endometrial thickness of 5 mm, and a fibroid-like lesion measuring 6 × 6 × 6.7 cm within the vaginal canal, possibly arising from the cervix and showing internal vascularity. Magnetic resonance imaging revealed a well-defined lesion measuring 5.1 × 6.8 × 7.3 cm, suggestive of an anterior vaginal fibroid (Figure 1).

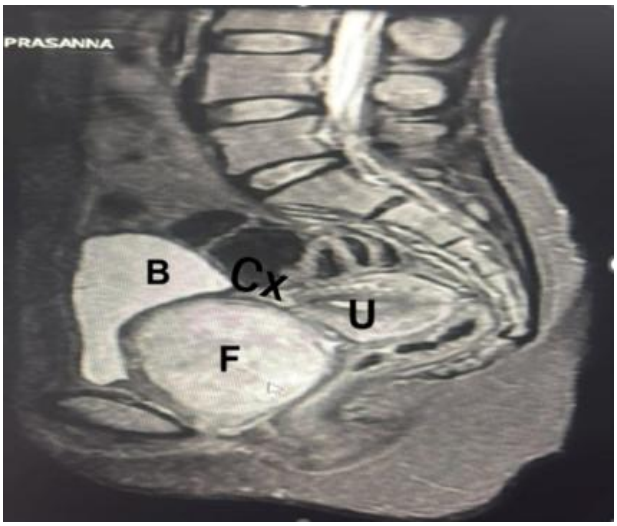

Figure 1: MRI showing a well-defined lesion (5.1 × 6.8 × 7.3 cm) suggestive of anterior vaginal fibroid (F). B - Urinary bladder; Cx - Cervix; U - Uterus

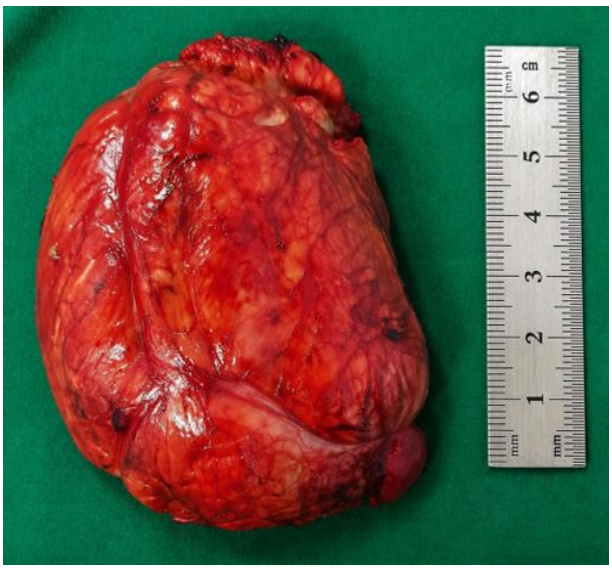

Figure 2: An anterior vaginal wall fibroid 6 × 6 cm in size, separate from the cervix and lacking a stalk or pedicle.

Diagnostic laparoscopy was performed to assess the upper extent of the mass, confirming that the fibroid was separate from the uterine body and cervix. Surgical excision was carried out via an abdomino-vaginal approach, with an incision on the anterior vaginal wall to remove the mass en bloc. Intraoperative findings included a 6 × 6 cm anterior vaginal wall fibroid, separate from the cervix and lacking a stalk or pedicle (Figure 2).

Histopathological examination revealed a well-circumscribed, encapsulated mass with a smooth, glistening, bosselated surface. The mass was firm with no areas of hemorrhage or necrosis. Microscopic analysis showed smooth muscle cells arranged in fascicles and interlacing bundles, with elongated nuclei and moderate cytoplasm, along with focal hyaline changes (Figure 3).

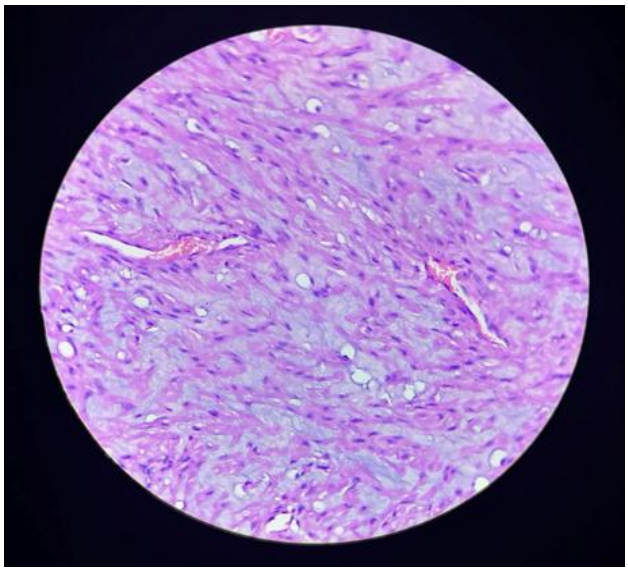

Figure 3: Smooth muscles cells arranged in fascicles and interlacing bundles. Nuclei elongated with moderate cytoplasm. Focal areas of hyaline changes seen. (Staining: Haematoxylin and Eosin stain; Magnification - 40x)

DISCUSSION

Primary vaginal leiomyomas are rare benign smooth muscle tumors, predominantly arising from the anterior vaginal wall, with approximately 300–350 cases reported worldwide.[8] These tumors may be asymptomatic or present with symptoms such as vaginal mass, urinary complaints, dyspareunia, or infertility.[7] These tumors predominantly arise from the anterior vaginal wall but can also originate from lateral or posterior walls, as seen in some atypical presentations.[8,9] Their rarity and nonspecific symptoms often lead to diagnostic challenges, frequently resulting in misdiagnosis as cervical fibroids, cystoceles, or vaginal malignancies, as reported in multiple cases.[10-12]

Clinical presentation varies widely depending on tumor size, location, and involvement of adjacent structures. Common symptoms include a palpable vaginal mass,

dyspareunia, urinary complaints such as frequency or retention, abnormal vaginal bleeding, and rarely infertility.[1,5] Some cases remain asymptomatic and are incidentally detected during routine examinations or imaging.[8,9]

Imaging modalities such as ultrasound and magnetic resonance imaging (MRI) are valuable but may not definitively distinguish vaginal leiomyomas from cervical or uterine fibroids.[5,9] MRI typically shows well-demarcated, solid masses with intermediate signal intensity on T1- and T2-weighted images, but degenerative changes or atypical features can complicate interpretation.[9] Translabial sonography has been suggested as an adjunct to improve diagnostic accuracy.[9] In some cases, fine-needle aspiration cytology or biopsy may aid diagnosis, especially when malignancy is suspected.[9]

Surgical excision remains the definitive treatment, with the approach tailored according to tumor size, location, and extent.[13,14] Vaginal enucleation is preferred for smaller, accessible tumors, while larger or more complex masses may require an abdominoperineal or combined abdominal and vaginal approach.[5,8,9] Complete en bloc removal is emphasized to minimize recurrence risk and to allow thorough histopathological evaluation.[5,8] In some large cases, hysterectomy may be necessary to achieve adequate access or when associated uterine pathology is present.[5,8]

Histopathology confirms diagnosis, showing well-circumscribed tumors composed of interlacing bundles of smooth muscle cells with minimal mitotic activity and no atypia in benign cases.[1,9] Although vaginal leiomyomas are typically benign, sarcomatous transformation, while rare, has been reported, underscoring the importance of thorough pathological assessment and follow-up.[5,8]

Postoperative outcomes are generally excellent, with symptom resolution and preservation of reproductive and sexual function when managed appropriately.[1] Recurrence is uncommon but regular follow-up is recommended to detect any regrowth early.[9]

CONCLUSION

Vaginal leiomyomas, though rare, should be considered in the differential diagnosis of vaginal masses, especially when imaging and clinical findings are inconclusive. Early diagnosis and complete surgical excision offer excellent symptomatic relief and preservation of reproductive potential. Awareness of this entity is essential to avoid misdiagnosis and to guide appropriate management.

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REFERENCES

1. Jahan N, Jahan S, Akter S, Chowdhury P, Mahmud KF, Ishrat S, Banu J. Vaginal leiomyoma, a rare variety in a subfertile women. Sch Int J Obstet Gynec. 2021;4(5):187-90.
2. Wethmar E, Mouton A, Dreyer G. Vaginal leiomyoma presenting as a lateral vaginal wall mass. S Afr J Gynaecol Oncol. 2017;9(1):16-8.
3. Yavuz O, Kula AH, Bayramoğlu Z, Aydin NYM, Mankan KA, Akdöner A. Extrauterine leiomyomas in uncommon locations: two case reports and literature review. Front Med (Lausanne). 2024;11:1408247.
4. Deepika, Goyal S, Garg P, Kanwat J, Kaur N. Vaginal leiomyoma in a perimenopausal woman: a rare case report and review of the literature. J Family Med Prim Care. 2024;13(5):2161-3.
5. Bansal N, Jain V, Gupta V, Bharadwaj A. A case of vaginal leiomyoma: a rare entity. J South Asian Feder Obst Gynae. 2015;7:231-3.
6. Egbe TO, Kobenge FM, Metogo JAM, Manka'a Wankie E, Tolefac PN, Belley-Priso E. Vaginal leiomyoma: medical imaging and diagnosis in a resource low tertiary hospital: case report. BMC Womens Health. 2020;20(1):12.
7. De Barry L, Bahall V. Atypical manifestations of uterine leiomyomas: expecting the unexpected. Case Rep Womens Health. 2023;40:e00571.
8. Gowri R, Soundararaghavan S, Oumachigui A, Sistla SC, Iyengar KR. Leiomyoma of the vagina: an unusual presentation. J Obstet Gynaecol Res. 2003;29:395-8.
9. Gupta M, Saini V, Jindal R, Kumari S, Nargotra N. Vaginal leiomyoma: case report and literature review. J South Asian Feder Menopause Soc. 2017;5(1):62-5.
10. Gao Y, Qin Y, Li J, Qian J, Yao J. Vaginal leiomyoma: A case report. Exp Ther Med. 2022;24(5):661.
11. Patil RR, Vijay NR, Joshi S. An Unusual Presentation of Vaginal Leiomyoma. J Midlife Health. 2019;10(4):204-205.
12. Muhammad H, Rashid R, Othman S, Ahmed N, Ali R, Abdullah A, et al. Vaginal leiomyoma: a case report. Int J Surg Open. 2023;58:100663.
13. Chen M, Li Y, Chi Y, Xia E. Diagnosis and management of vaginal leiomyoma: a case report and literature review. Ginekol Pol. 2023;94(10):858-61.
14. Touimi Benjelloun A, Ziad I, Elkaroini D, Boufettal H, Mahdaoui S, Samouh N. Vaginal leiomyoma mimicking a cystocele: a case report. Int J Surg Case Rep. 2022;93:106955.

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