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Case Report

Vaginal leiomyoma: a diagnostic dilemma in vaginal mass

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ABSTRACT

Vaginal leiomyoma is extremely rare entity. These tumours are thought to arise from Mullerian smooth muscle cells in the sub-epithelium of the vagina. Vaginal leiomyoma can occur anywhere in vaginal canal but the most common location is anterior vaginal wall. Here, we report a case of 35year old female who presented to us with mass in vagina mimicking the cystocele associated with vaginal discomfort. On clinical evaluation and preoperative imaging, it was found to be vaginal leiomyoma and it was managed surgically by enucleating the vaginal mass by giving transverse incision on anterior vaginal wall. Same mass was sent for histopathological examination which confirmed vaginal leiomyoma.

Keywords: Cystocele, Enucleation, Ultrasound, Vaginal leiomyoma

INTRODUCTION

Overall, the vaginal tumours like papilloma, haemangioma, mucosal polyp and leiomyoma are rare. Vaginal leiomyoma is a benign neoplasm arising from vascular smooth muscle cells or embryonic cells. Till now, only about 300 cases reported since the first case detected in 1733 by Denys de Leyden. Other possibilities of vaginal mass include smooth muscle cell tumour from vagina, rectum, bladder, or urethra.[1] They may have varied clinical presentation including being completely asymptomatic to symptoms being dyspareunia, urinary incontinence, dysuria and vaginal discomfort.

Being a rare condition, it has to be evaluated and diagnosed carefully as it may be easily misdiagnosed with other conditions like cystocele, vaginal cysts, paraganglioma, vaginal sarcomas. Ultrasound pelvis and MRI pelvis are modality of choice to diagnose the vaginal mass. However, the final diagnosis is made only by histopathological examination. Treatment of choice for the vaginal mass is the enucleation of the mass.

CASE REPORT

Authors reported a case of 35-year-old lady who presented with complaints of something coming out of vagina for 2 years, gradually progressive in size, associated with coital difficulty and vaginal discomfort it was not associated with menstrual abnormality, vaginal discharge and urinary complaints. Her menstrual cycles were regular with average flow. On inspection of perineum and vulva, a mass was seen coming from anterior vaginal wall, approximately 1 cm from urethral meatus. On palpation, 4×4 cm firm mass with broad base felt at right anterolateral wall of vagina which was non tender, mobile, non-reducible. On per speculum examination, cervix was normal. Further workup, ultrasound pelvis showed a well-defined solid, relatively hypoechoic lesion with regular margins in upper to mid vaginal canal seen separately from external Os showing significant internal vascularity suggestive of neoplastic aetiology with sub septate uterus. MRI pelvis revealed a well circumscribed lesion of 32×30×35 mm in lower aspect of 2/3rd of vagina that expands the vaginal cavity predominantly on the right side without obvious diffusion restriction suggestive of benign neoplastic aetiology likely leiomyoma/paraganglioma. No

obvious extra vaginal extension seen with complete septate uterus (Figure 1a).

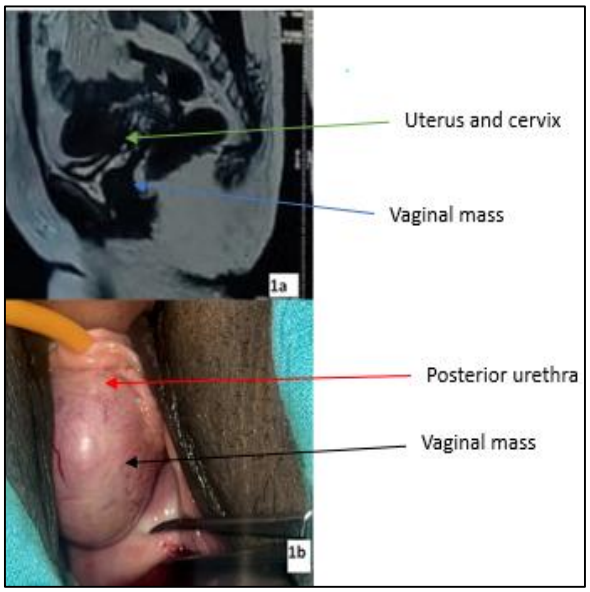

Figure 1: (a) MRI image of vaginal leiomyoma (blue arrow) in relation to the uterus and cervix (green arrow). (b) Intra operative image of vaginal leiomyoma (black arrow) located on the anterior vaginal wall at the posterior aspect of urethra (red arrow).

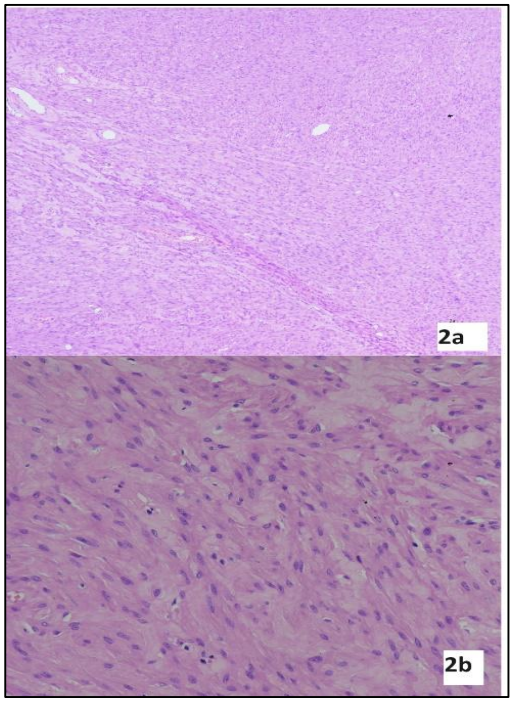

Figure 2: (a) Tumor composed of cells arranged in fascicles of smooth muscle cells with intervening thin-walled blood vessels (hematoxylin and eosin, X40). (b) Smooth muscle with spindled nuclei, bland chromatin and moderate amount of cytoplasm (hematoxylin and eosin, X200).

Routine blood investigations were done. Her haemoglobin was 11 gm%, thyroid stimulating hormone (TSH) and glycated haemoglobin levels were within normal limits. Chest X-ray was done as a part of routine pre operative workup. Patient was planned for vaginal mass enucleation. A foley's catheter was introduced into the urethra to prevent the injury. Diluted vasopressin was injected in the tissue space. Transverse incision was given on the vaginal mass; vaginal mucosa was separated from the mass by blunt dissection and the mass was enucleated. Redundant tissue was cut and approximated. Gross examination of the mass revealed a firm mass of 4×4 cm white in colour, cut section showed a whorled appearance and was sent for histopathology. Histopathology confirmed the vaginal leiomyoma. Her post-operative period was uneventful and patient was discharged on post-operative day 2. Patient followed up after 6 weeks, the vaginal surgical site was healed completely.

DISCUSSION

Leiomyomas are the benign tumours of female genital tract, most common site being uterus and to some extent, in the cervix, round ligament and uterosacral ligament. Vaginal leiomyoma is a rare benign tumour that frequently occurs in females aged between 35 and 50 years.[2] It can appear anywhere within the vagina; However, it is more commonly observed on the anterior vaginal wall (69.5%) than on the posterior (17%) and lateral (13.5%) walls.[3] These masses may be sessile or pedunculated, non-tender, firm in consistency. They may be asymptomatic or may present with pain, dyspareunia, urinary obstructive symptoms depending on their site and size. It may often be misdiagnosed as vaginal cyst, cystocele, paraurethral cyst and Gartner cyst. Anterior wall leiomyomas may be easily confused with bladder prolapse, cystocele or urinary tumour. Although these tumours are benign, solitary, and very slow growing, we should always rule out the possibility of sarcomatous changes. Hence it is important to confirm its diagnosis before proceeding to its management.

Pre-operative diagnosis is made by clinical examination and imaging such as ultrasound or MRI. On MRI, these lesions typically present as well-defined solid masses with low signal intensity on T1 and T2-weighted images, displaying homogeneous contrast enhancement. It is especially valuable in cases where fibroids exhibit rapid growth or have unclear boundaries on ultrasound pelvis or if a strong suspicion of malignancy exists. It has a sensitivity ranging from 88 to 93% and a specificity ranging from 66 to 91%.[3] In the present case, ultrasound showed Well defined solid, relatively hypoechoic lesion with regular margins in upper to mid vaginal canal seen separately from external Os showing significant internal vascularity suggestive of neoplastic aetiology like leiomyoma/ paraganglioma. Lactate dehydrogenase levels assessment helps in differentiating benign leiomyoma from malignant leiomyosarcomas as these levels are raised comparatively more in the latter. Surgical enucleation of

the tumour by vaginal route is the traditional mode of management for vaginal leiomyoma. Abdominoperineal approach or laparoscopy may be needed for large upper vaginal leiomyoma.[4] Although it's a benign tumour but local recurrence can occur after incomplete resection.

CONCLUSION

Vaginal leiomyoma is a benign mesenchymal tumour usually asymptomatic. It can be misdiagnosed easily with cystocele, vaginal cyst or Bartholin cyst. Mostly it appears as painless, firm mass on anterior vaginal wall. Transvaginal ultrasound is the first choice of investigation and transvaginal surgical excision is the preferred modality of treatment for vaginal leiomyoma. The final diagnosis is made by histopathology and also rule out the malignant component.

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