

RARE CASE OF VAGINAL MASS: BENIGN SPINDLE CELL NEOPLASM HISTOPATHOLOGICAL DIAGNOSIS

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ABSTRACT

Vaginal pathologies are rare and often present with nonspecific clinical findings, making diagnosis challenging. Sonography plays an important role in the evaluation, preoperative planning, and management of vaginal lesions. We report a rare case of benign spindle cell neoplasm of the vagina in a 34-year-old primipara.

The patient presented with a three-year history of enlarging, painless vaginal mass, measuring 2 × 2 cm and increasing to 4 × 4 cm. Transvaginal and transperineal ultrasound demonstrated a well-defined heterogeneous ovoid mass arising from the right vaginal wall, measuring 4 × 2.8 × 3.3 cm, with no vascularity (color score 1), suggestive of myoma. Diagnostic cystourethroscopy followed by complete surgical excision was performed. Intraoperatively, a 7 × 5 cm pedunculated mass attached to the right distal posterolateral vaginal wall was identified and excised en bloc. Histopathologic examination revealed a benign spindle cell neoplasm.

Benign spindle cell tumors of the vagina are exceedingly uncommon and may mimic more prevalent vaginal lesions clinically and sonographically. This case highlights the complementary roles of thorough clinical examination, transvaginal and transperineal ultrasonography, surgical excision, and histopathologic evaluation in establishing the diagnosis and contributes to the limited literature on benign vaginal spindle cell neoplasms.

CASE REPORT

Patient is a 34 year old Gravida 1 Para 1 (1001), with a 3-year history, nontender vaginal mass measuring 4 x 4cm. No other associated gynecologic symptoms such as abnormal uterine bleeding, increasing abdominal girth, unintentional weight loss, urinary symptoms or changes in bowel habits. Physical examination, noted soft, nontender abdomen. Upon inspection, there was a 6 x 4 x 4 cm tan-white, doughy pedunculated mass protruding from the vagina (Figure 1) attached to the distal posterolateral vaginal wall by a 5 x 2 x 2cm pedicle.

Transvaginal ultrasound showed retroverted uterus measuring 3.37 x 3.88 x 3.73cm. Posterior wall adenomyosis with wall thickness of 1.64 cm. Thin, hyperechoic endometrium and polycystic ovarian morphology, bilateral.

Transperineal scan showed normal post-void urine volume, no prolapse, intact levator ani muscle with normal genital hiatus on 3D scan. Urethral length was measured at 2.62 cm with diameter of 0.39 cm. Assessment of the anterior compartment showed detrussor muscle thickness of 0.19 cm.



Figure 1: Tan-white vaginal mass

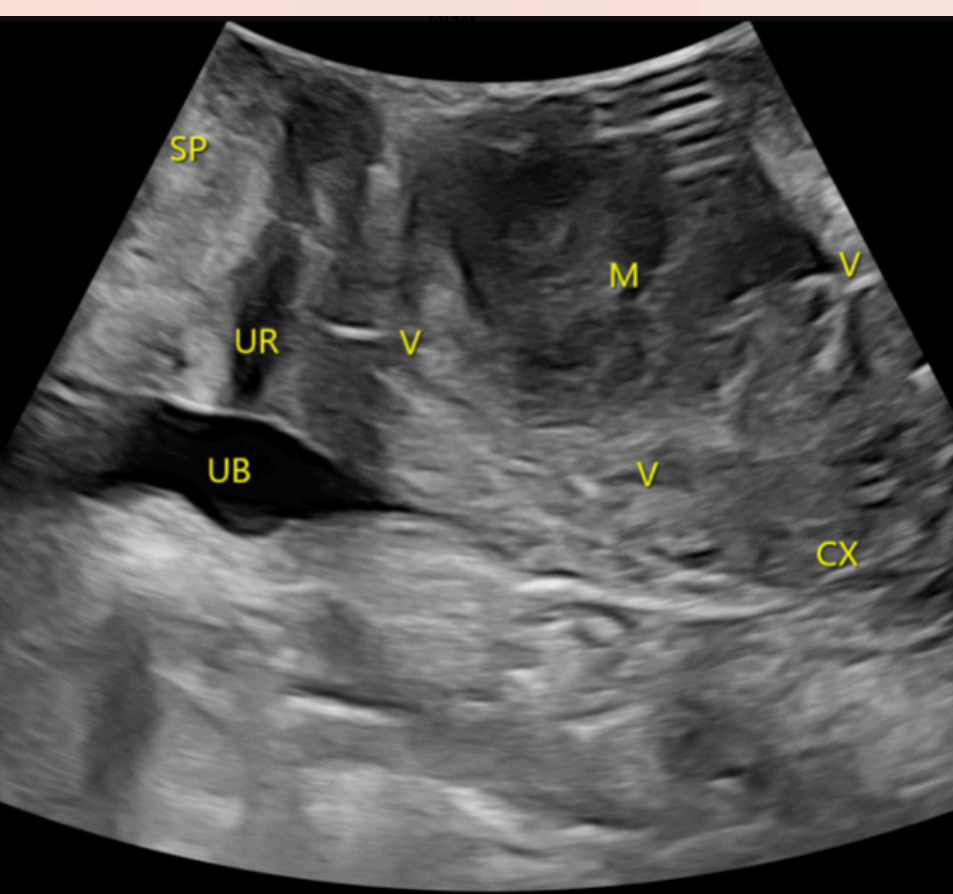


Figure 2: Introital mass (M) as seen on trans perineal scan and its relative anatomical structures: symphysis pubis (SP), Urethra (UR), Urinary bladder (UB), Vagina (V), cervix (C)

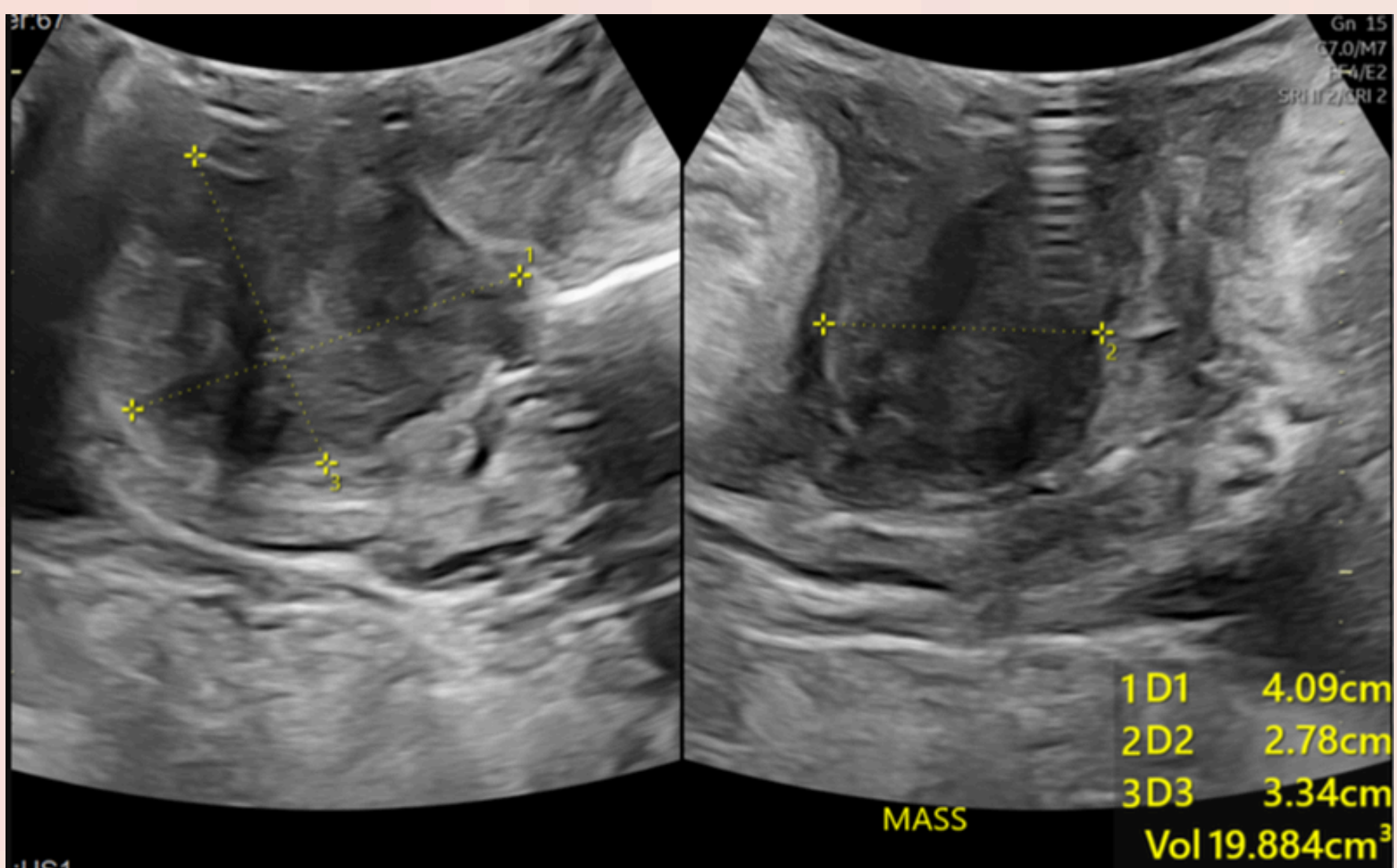


Figure 3: Introital mass as seen on transperineal scan

Patient underwent cystoscopy followed by excision of vaginal mass. On vaginoscopy, cervix was pink and smooth. This was followed by diagnostic cystourethroscopy, and noted the urethral mucosa was smooth and pink. Intact ureterovesical junction. The trigone was granular and pale. Bilateral ureteral orifices were patent with good efflux of urine. There bladder walls were smooth and pink with no lesions seen. Mass was incised; an encapsulated mass measuring 6 x 4 x 4 cm was excised en toto. On cut section, noted with smooth white cut surface. Histopathology of the excised mass revealed a benign spindle cell neoplasm.

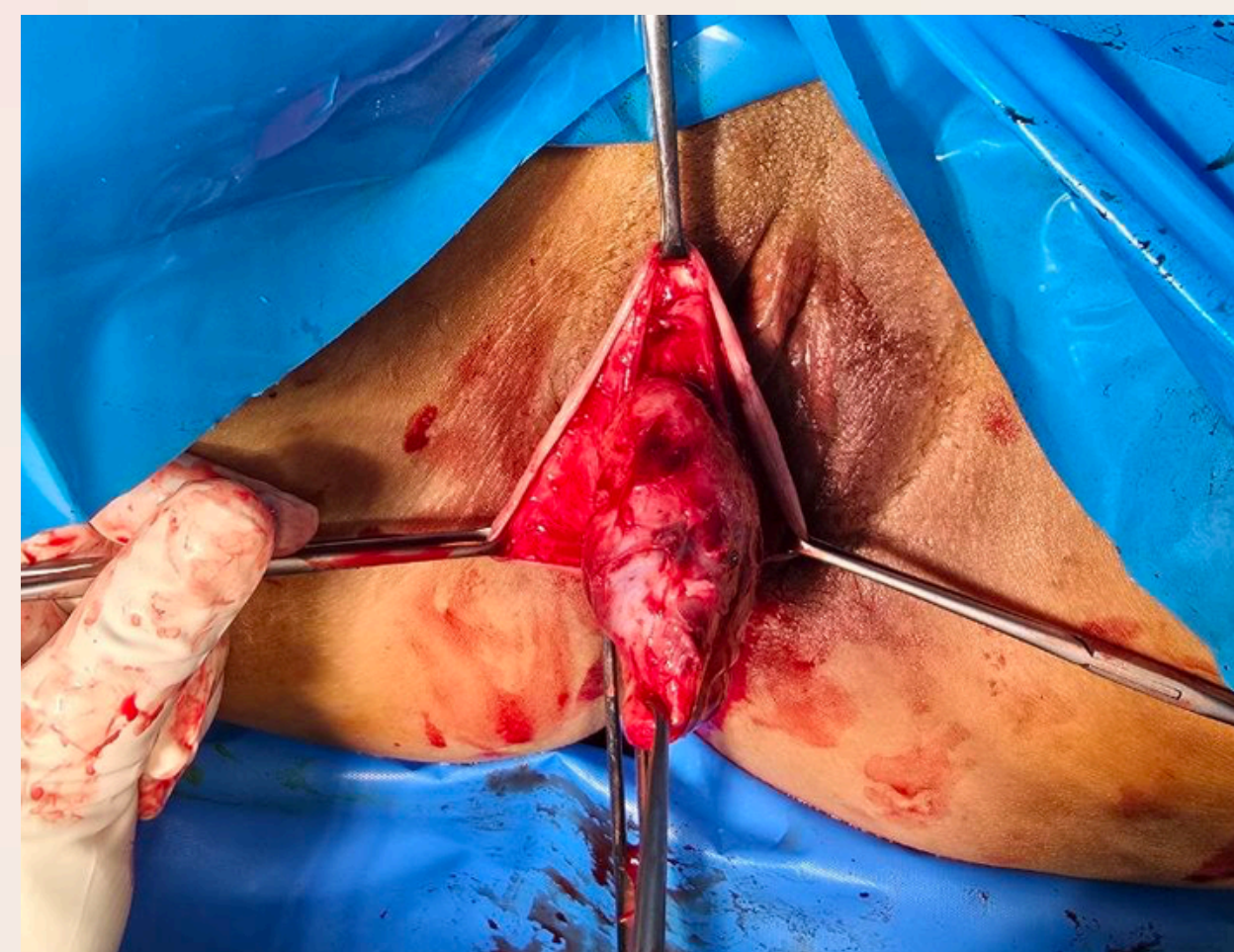


Figure 3: . Intraoperative 6 x 4 x 4 cm firm mass

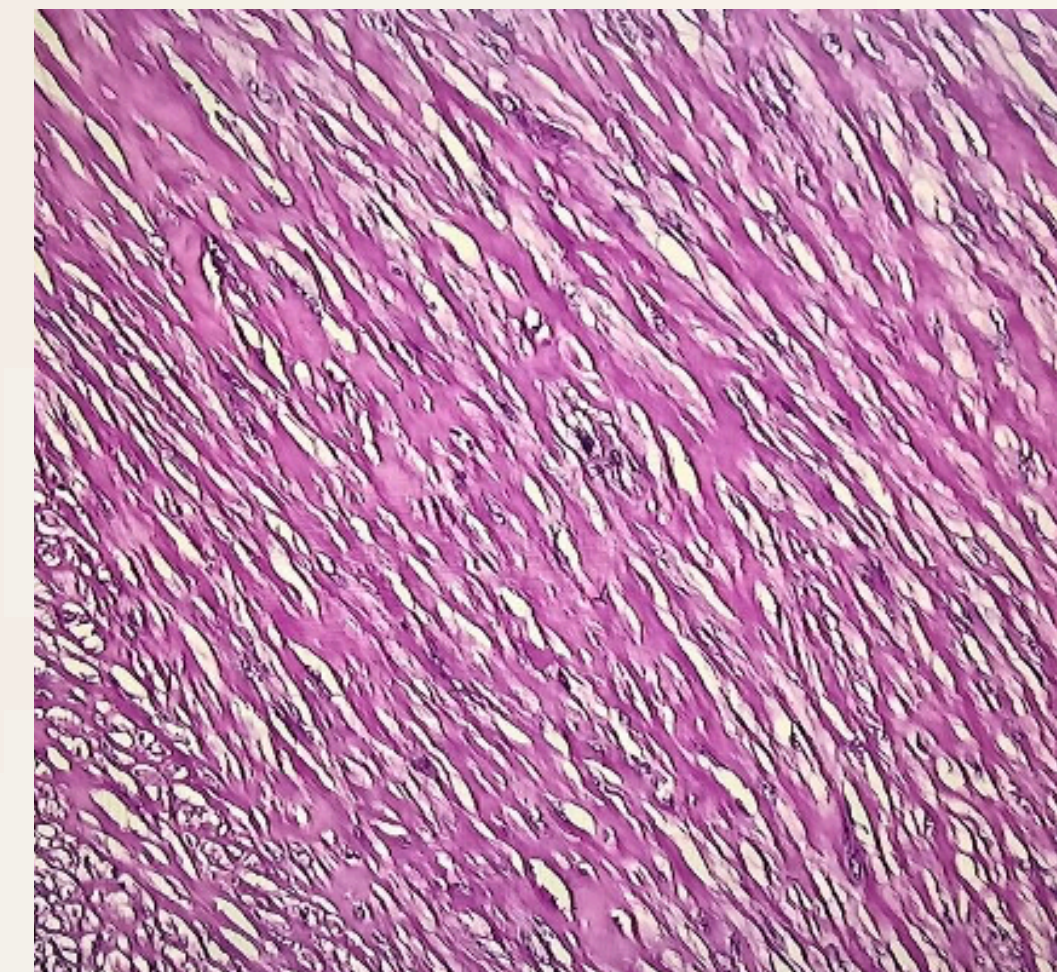


Figure 4: Histopathology of the mass, showed spindle cells on 40x magnification

DISCUSSION

Vaginal masses are rare and include a broad spectrum of benign and malignant lesions arising from epithelial, mesenchymal, or embryologic tissues. Because of their nonspecific presentation, they are frequently mistaken for more common gynecologic conditions, making diagnosis challenging. In this case, the patient's slowly enlarging, painless vaginal mass warranted further evaluation despite the absence of associated gynecologic or urinary symptoms.

Although magnetic resonance imaging remains the preferred modality for evaluating vaginal tumors, its use is limited by cost and availability. Transvaginal and transperineal ultrasonography provide accessible and cost-effective alternatives for assessing lesion morphology, vascularity, and its relationship to adjacent pelvic structures. Multimodal ultrasonography in this patient excluded uterine pathology, pelvic organ prolapse, and urinary tract involvement, thereby narrowing the differential diagnosis and facilitating surgical planning. Nevertheless, definitive diagnosis required histopathologic examination after complete excision.

The differential diagnosis of solid vaginal masses includes various benign mesenchymal spindle cell tumors with overlapping clinical, imaging, and histologic features. Consequently, careful clinical assessment, multimodal imaging, and histopathologic evaluation remain essential for accurate diagnosis and appropriate management of these rare vaginal lesions.

CONCLUSION

This case highlights the importance of maintaining a broad differential diagnosis when evaluating a chronic, slowly enlarging vaginal mass. A systematic diagnostic approach incorporating careful physical examination, multimodal ultrasonography, cystoscopy evaluation when indicated, and definitive histopathologic examination is essential for accurate diagnosis and appropriate management. As benign spindle cell neoplasms of the vagina remain exceedingly uncommon, reporting additional cases contributes to a better understanding of their clinical presentation, imaging characteristics, pathologic spectrum, and optimal management.