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Paraurethral angiomyxoma: A rare benign tumor mimicking urethral diverticulum - a case report

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Abstract
Angiomyxoma is a rare benign mesenchymal tumor characterized by myxoid stroma and numerous thin-walled blood vessels. It most commonly arises in the pelvic and perineal regions of reproductive-age women. We present a case of a 28-year-old female (P2L2A4) who presented with a gradually enlarging, non-tender vaginal mass for one year. On examination, a 7×5 cm cystic swelling was noted arising from the left lateral vaginal wall. Ultrasonography revealed a well-defined heterogeneous, predominantly hypoechoic mass posterior to the urethra. The patient underwent complete excision of the mass under spinal anesthesia. Histopathological examination confirmed the diagnosis of benign angiomyxoma. The patient recovered well postoperatively and remains symptom-free on follow-up. Early diagnosis and surgical excision are crucial to prevent recurrence and preserve pelvic anatomy.

Keywords: Angiomyxoma, vaginal mass, mesenchymal tumor, surgical excision, histopathology

Introduction
Angiomyxomas are rare benign soft tissue tumors of mesenchymal origin, characterized by abundant myxoid stroma and prominent vascular components. They are predominantly found in the vulvovaginal, perineal, and pelvic regions of women in their reproductive years. Two histological variants exist superficial (benign) and aggressive angiomyxoma. While aggressive angiomyxoma tends to infiltrate surrounding tissues with a high recurrence rate, benign angiomyxoma is typically well circumscribed and encapsulated. Preoperative diagnosis is often challenging due to its resemblance to other paraurethral and vaginal cystic lesions. Here, we present a rare case of benign paraurethral angiomyxoma managed surgically.

Case Presentation
A 28-year-old female, gravida 6 para 2 live 2 abortion 4 (P2L2A4), with previous two lower segment caesarean sections, presented with complaints of a slow growing mass over the vaginal region for one year. The swelling was insidious in onset, gradually progressive, and non-tender. There was no history of white discharge per vaginum, abnormal bleeding, burning micturition, fever, or any bowel or bladder complaints.

The patient's menstrual cycles were regular with average flow for 3-4 days every 30 days. She had no significant medical or surgical history and no known drug allergies.

On general examination, she was afebrile, hemodynamically stable (pulse 88/min, BP 110/70 mmHg), with no pallor or lymphadenopathy. Cardiovascular and respiratory examinations were unremarkable. Abdominal examination was soft and non-tender.

Per speculum examination revealed a healthy cervix and vagina with minimal white discharge. On per vaginal examination, a 7×5 cm cystic swelling was palpable arising from the left lateral vaginal wall, distinct from the urethra.

Ultrasonography of the perineal region demonstrated a well-defined heterogeneous, predominantly hypoechoic mass posterior to the urethra measuring 7.5×3.3 cm. The uterus and adnexa were normal. A provisional diagnosis of paraurethral cyst or urethral diverticulum was made.

The patient was prepared for surgical excision under spinal anesthesia. Under sterile conditions, vaginal wall dissection was performed to expose the mass. The lesion was well encapsulated and separated from the urethra and surrounding tissues with gentle dissection. Complete excision of

the mass was achieved without urethral injury. The specimen was sent for histopathological examination.

Histopathology

Histopathological examination revealed a benign angiomyxoma composed of spindle and stellate-shaped cells embedded in a loose myxoid stroma with numerous thin-walled blood vessels. No cellular atypia, necrosis, or mitotic figures were observed. The final diagnosis was consistent with benign angiomyxoma.

Postoperative Course

The patient's postoperative recovery was uneventful. She was administered intravenous antibiotics (Ceftriaxone, Gentamicin, and Metronidazole) for three days, followed by oral medications. Pain was managed with NSAIDs, and nutritional supplementation with iron and vitamins was provided. She was discharged on postoperative day seven in good condition, advised on hygiene and follow-up. At one-month review, she was asymptomatic with no evidence of recurrence or hematoma.

Discussion

Benign angiomyxoma of the vulva and vagina is an uncommon soft tissue tumor with a favorable prognosis following complete excision. The pathogenesis involves proliferation of fibroblast-like mesenchymal cells within a myxoid matrix, supported by a rich vascular network. Differential diagnoses include urethral diverticulum, Skene's duct cyst, Bartholin's cyst, Gartner's duct cyst, and leiomyoma. Imaging modalities such as ultrasound and MRI help delineate lesion extent and relation to adjacent structures.

Surgical excision remains the treatment of choice. Incomplete excision can lead to local recurrence, though benign angiomyxoma is less likely to recur compared to the aggressive variant. Histopathology is essential for diagnosis and differentiation. Follow-up with periodic pelvic examination and imaging is recommended to monitor for recurrence.

Images

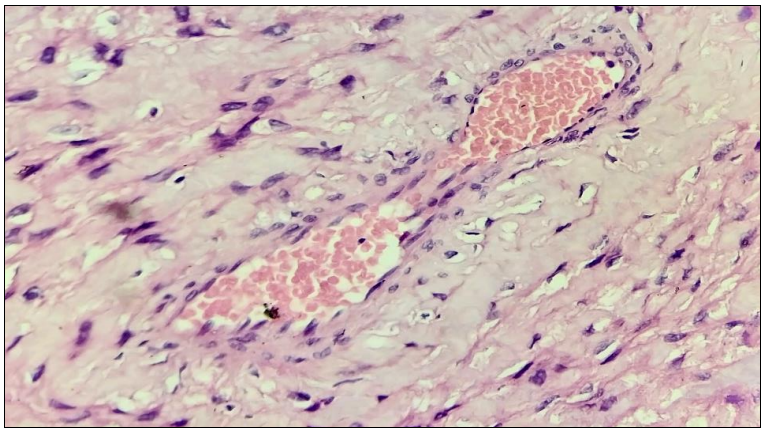

Image 1: Histopathology of paraurethral angiomyxoma

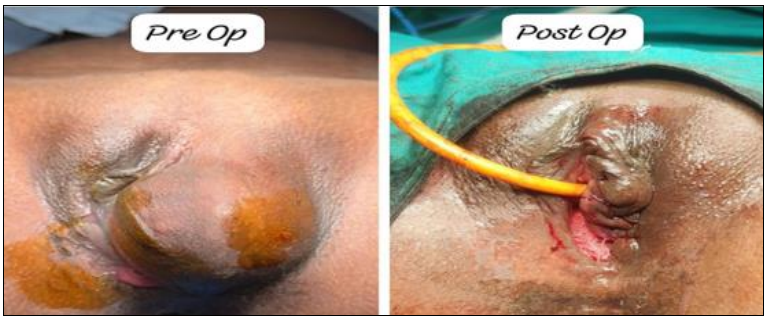

Image 2: Pre-operative and Post-operative clinical appearance of a vaginal angiomyxoma (surgical excision)

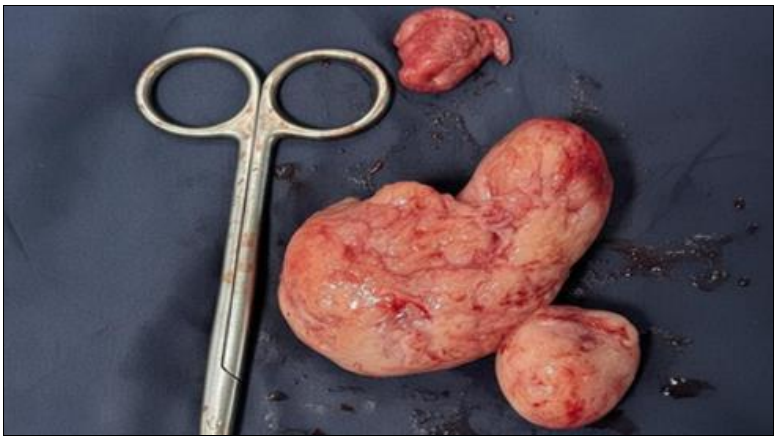

Image 3: Gross appearance of vulval mass

Conclusion

Benign paraurethral angiomyxoma is a rare entity that should be considered in the differential diagnosis of periurethral masses. A thorough clinical and radiological assessment followed by complete surgical excision ensures excellent prognosis. Awareness of this condition is vital to prevent misdiagnosis and inappropriate management.

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