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Case Report

Fibroadenoma of the Skene's gland: a rare paraurethral tumor in a postmenopausal female

Syed Naureen Nazar*, Altaf Shaikh, Syed Ubaid, Abdul Sattar Dawa

Department of General Surgery, JIIU'S Indian Institute of Medical Science and Research, Jalna, Maharashtra, India

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***Correspondence:**
Dr. Syed Naureen Nazar,
E-mail: naureensyed94@gmail.com

ABSTRACT

Skene's glands are paraurethral structures homologous to the male prostate and are an uncommon site for neoplastic lesions. Fibroadenoma, a benign biphasic tumor typically arising in the breast, is exceedingly rare in this location. A 70-year-old female presented with a 3-month history of a paraurethral swelling associated with difficulty in micturition. Local examination revealed a bright red paraurethral mass at the 11-12 O'clock position, clinically mimicking a urethral caruncle without associated discharge or bleeding. The lesion clinically mimicked a urethral caruncle and was surgically excised. Histopathological examination demonstrated a well-circumscribed biphasic lesion composed of slit-like and tubular glands within fibromyxoid stroma. The glands were lined by benign cuboidal to columnar epithelium with a preserved basal cell layer and focal apocrine change. No cytological atypia was identified. A diagnosis of fibroadenoma of the paraurethral (Skene's) gland was made. Fibroadenoma of the Skene's gland is an exceptionally rare entity. Histopathological evaluation is essential for diagnosis, and complete surgical excision results in excellent outcomes.

Keywords: Skene's gland, Paraurethral mass, Fibroadenoma, Voiding difficulty, Female urethral lesion

INTRODUCTION

Skene's glands are periurethral glands located adjacent to the distal urethra and are considered homologous to the male prostate.[1] Pathologies involving these glands include cysts, infections, and rarely neoplasms. Paraurethral masses often pose a diagnostic challenge due to overlapping clinical presentations and diverse etiologies.

Fibroadenoma is a benign fibroepithelial tumor characterized by proliferation of both epithelial and stromal components and is most commonly encountered in the breast. Its occurrence in extramammary sites, particularly the paraurethral region, is exceedingly uncommon.

We report a rare case of fibroadenoma arising from the Skene's gland in a postmenopausal female presenting with obstructive urinary symptoms. Due to the extreme rarity of this entity and its overlap with more common paraurethral lesions, it is frequently misdiagnosed clinically. Hence accurate diagnosis requires careful histopathological evaluation.

CASE REPORT

A 70-year-old female presented with a 3-month history of a gradually increasing paraurethral swelling associated with difficulty in passing urine. There was no history of pain, discharge, bleeding, or dyspareunia.

On local examination, a well-defined, bright red, firm, non-tender paraurethral mass measuring approximately 1.5×1 cm was noted overhanging the urethral meatus at approximately 11-12 o'clock position. Surface appeared smooth, with no evidence of ulceration or discharge. The lesion clinically mimicked a urethral caruncle.

The patient underwent complete surgical excision of the paraurethral mass. No perioperative complications were noted.

Gross examination revealed a well-circumscribed grey-white mass measuring 2×1.5 cm.

Histopathological examination demonstrated a well-circumscribed encapsulated lesion composed of widely spaced tubular and slit-like compressed glands within a fibromyxoid stroma. The glands were lined by benign cuboidal to columnar epithelium with an underlying basal cell layer. Focal apocrine metaplasia was noted. Focal areas showed adjacent fibromuscular tissue with overlying transitional-type epithelium, likely representing paraurethral/urethral interface. No cytological atypia or mitotic activity was identified.

Based on these findings, a diagnosis of fibroadenoma of the paraurethral (Skene's) gland was made.

The postoperative course was uneventful. The patient was followed up for 9 months, during which she remained asymptomatic with no evidence of recurrence.

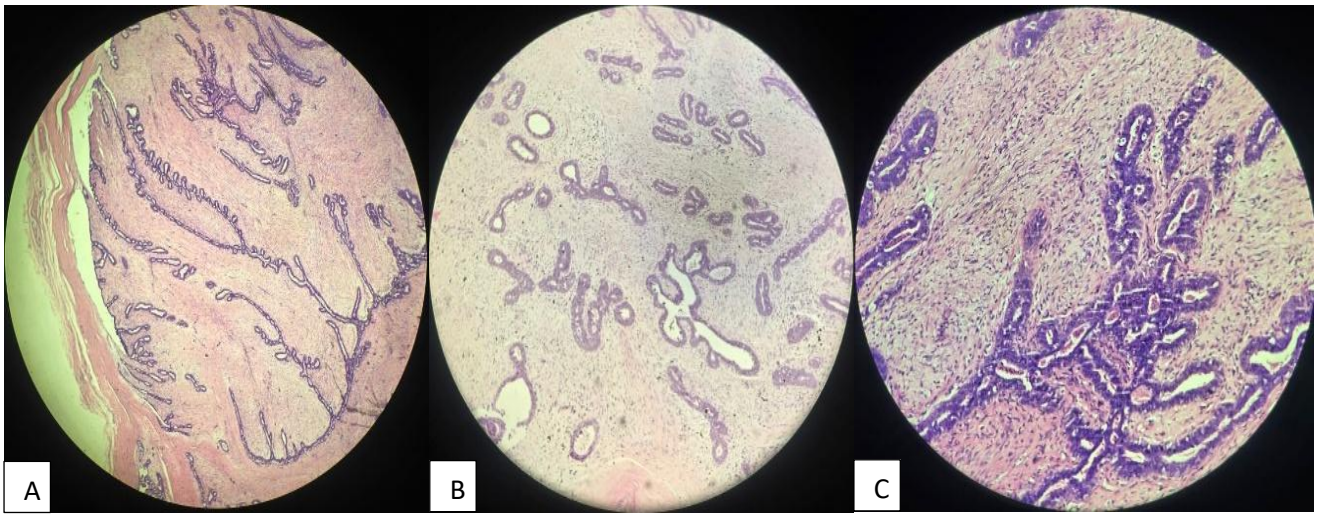

Figure 1 (A-C): Histopathological features of Skene gland fibroadenoma. (A) Low-power view showing a well-circumscribed lesion with lobulated architecture and cleft-like compressed ductal spaces within fibrous stroma. (B) Intermediate-power view demonstrating elongated and variably shaped ducts within fibrous stroma, suggestive of intracanalicular architecture. (C) Higher-power view showing benign glandular epithelium with surrounding fibrous stroma, confirming a biphasic fibroadenoma-like lesion.

DISCUSSION

Paraurethral masses in females represent a heterogeneous group of lesions, including cystic, inflammatory, and neoplastic conditions. Common entities include Skene duct cysts, urethral diverticula, leiomyomas, and, rarely, neoplasms of glandular origin. Clinical differentiation among these conditions is often challenging due to overlapping presentations, making histopathological evaluation essential for definitive diagnosis.[2,3,11]

Skene's glands are periurethral structures homologous to the male prostate and may exhibit a range of pathological changes, including glandular proliferations and neoplasms.[1,4] However, true fibroepithelial tumors arising in this location are exceedingly rare.

Fibroadenoma is a benign biphasic tumor characterized by proliferation of both epithelial and stromal components and is most commonly encountered in the breast. Extramammary fibroadenomas have been described in limited locations, and their occurrence in the paraurethral region is exceptionally uncommon.[5] The present case demonstrated classical histomorphological features of fibroadenoma, including a well-circumscribed encapsulated lesion with slit-like and tubular glandular structures embedded within a fibromyxoid stroma, closely resembling its mammary counterpart.[6]

The clinical presentation in this case, characterized by a red, firm paraurethral mass associated with voiding difficulty, also raised the possibility of more common lesions such as urethral caruncle or vascular lesions. This highlights the limitation of clinical assessment alone and underscores the importance of histopathological examination.[3,7]

The diagnosis of fibroadenoma in the paraurethral region remains a subject of ongoing debate due to overlapping histomorphological features with paraurethral adenomas and glandular proliferations. Some authors suggest that such lesions may represent paraurethral adenomas or glandular proliferations rather than true fibroadenomas.[7] However, the presence of a well-defined biphasic architecture with characteristic intracanalicular patterns strongly supports fibroadenoma morphology in this case.

Immunohistochemistry was not performed; however, the diagnosis was established based on characteristic biphasic histomorphology.

The differential diagnosis includes Skene duct cyst, urethral diverticulum, paraurethral adenoma, leiomyoma, and primary urethral malignancies.[2,8,11] Absence of atypia, mitotic activity, and invasive features helps exclude malignant pathology.

Complete surgical excision remains the treatment of choice for paraurethral masses and is associated with excellent outcomes. Consistent with previous reports, our patient had an uneventful postoperative course with no recurrence at 9 months follow-up with no clinical or radiological evidence of recurrence.[2]

CONCLUSION

Fibroadenoma arising from the Skene's gland is an exceptionally rare benign paraurethral tumor that may clinically mimic more common urethral and periurethral lesions such as urethral caruncle or Skene duct pathology. Accurate diagnosis relies primarily on histopathological evaluation demonstrating characteristic biphasic epithelial and stromal proliferation.

Complete surgical excision is both diagnostic and therapeutic, with excellent postoperative outcomes and low risk of recurrence. Awareness of this rare entity is important for clinicians and pathologists when evaluating paraurethral masses in females, particularly in postmenopausal patients presenting with obstructive urinary symptoms.

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