

The case of the Tubulosquamous vaginal polyp: A little known entity

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INTRODUCTION

The tubulo-squamous polyp [TSP] is an exceptionally rare variant of benign vaginal polyp, with less than 30 cases documented in the literature to date.^{1,2}This entity typically affects postmenopausal women and presents as an incidental, fleshy polypoid mass.²It most frequently arises in the upper part of the vagina². Because of its rarity and complex architectural features, it represents a significant diagnostic challenge and can be mistaken for malignant neoplasms.

CASE PRESENTATION

We report the case of a 59-year-old asymptomatic lady who presented for a routine examination. A fleshy gray white polyp was discovered in the upper vagina. Clinical concerns for malignancy were raised, leading to an elective excision of the lesion for definitive histological characterization.

METHODS AND RESULTS

Gross Findings:The specimen consisted of a polypoid mass measuring 22 x 14 mm. On microscopic examination, a polyp covered by surface squamous epithelium was identified. The polyp showed a biphasic architecture comprising of distinct epithelial elements embedded within a specialized hypocellular fibrous stroma. The epithelial elements were composed of well-circumscribed, expansile nests of largely glycogenated squamous cells. Many of the squamous nests exhibited large areas of central necrotic granular debris and calcification. In addition, scattered tubules and benign glands were noted within the stroma of the polyp. On immunohistochemistry ,the squamous nests and stroma showed strong positivity for Estrogen Receptor (ER). The tubules and glands were positive for NKX3.1 ,showed patchy positivity for Prostate-Specific Antigen and were negative for PAX8. The squamous nests also showed positivity for CK7 and GATA3. The stroma was negative for cytokeratins and CD10.

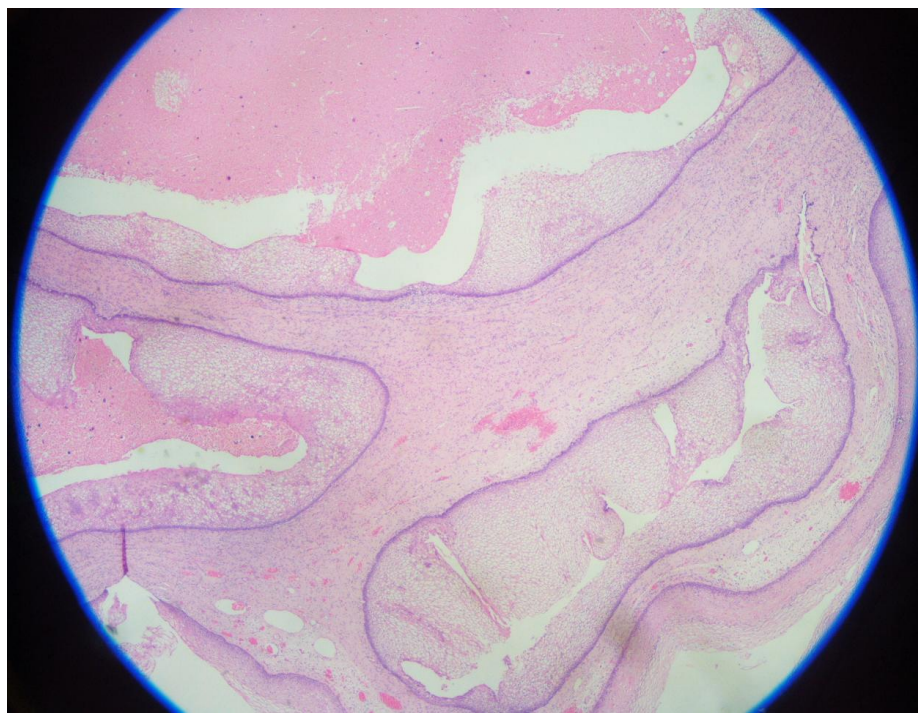


Fig 1 a

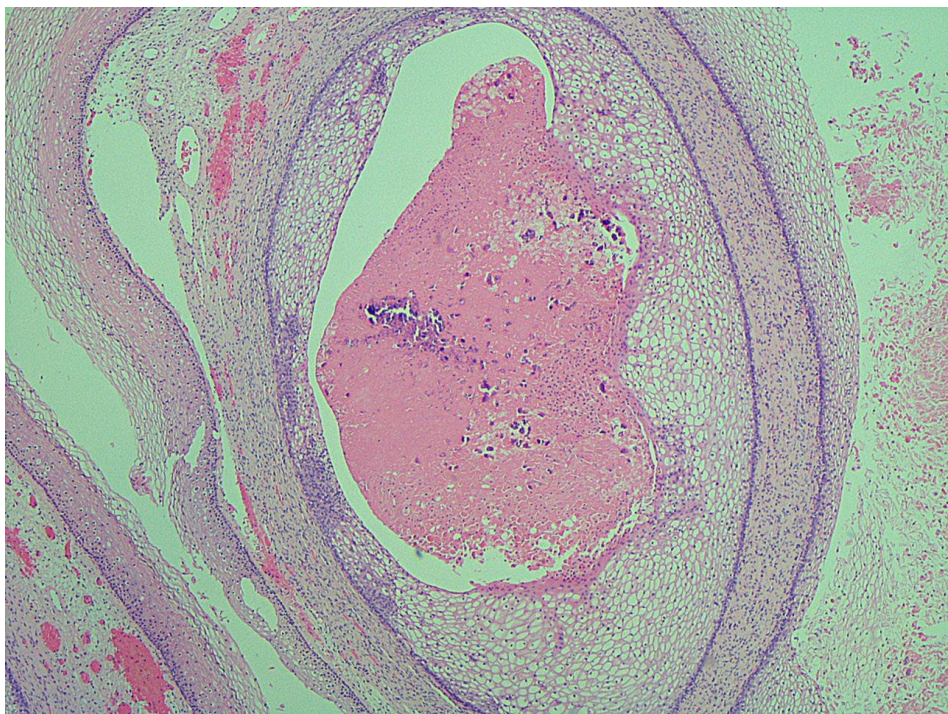


Fig 1 b

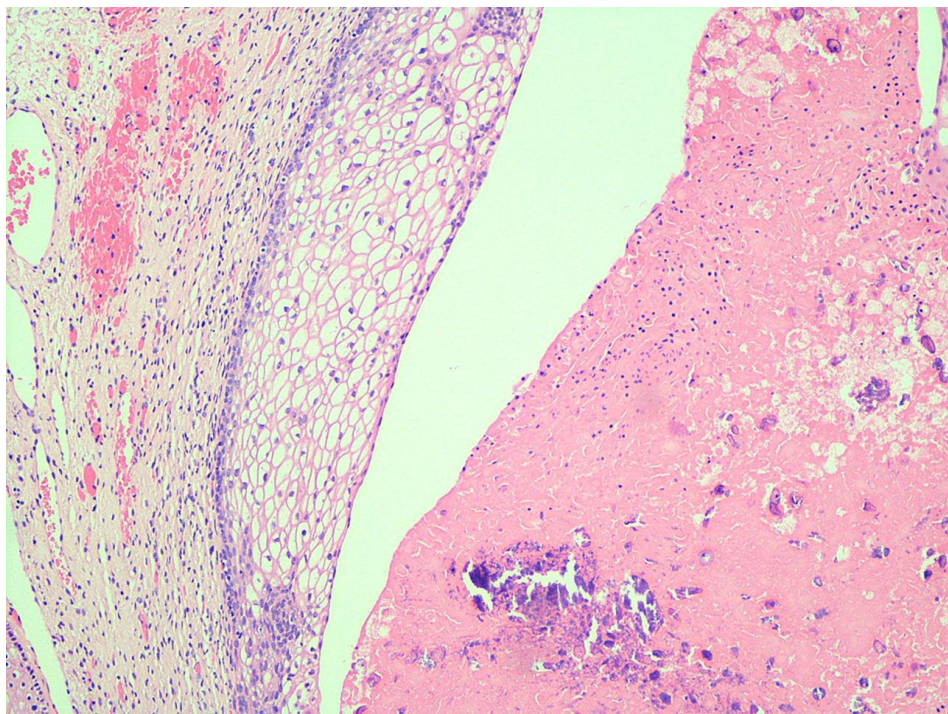


Fig 1 c

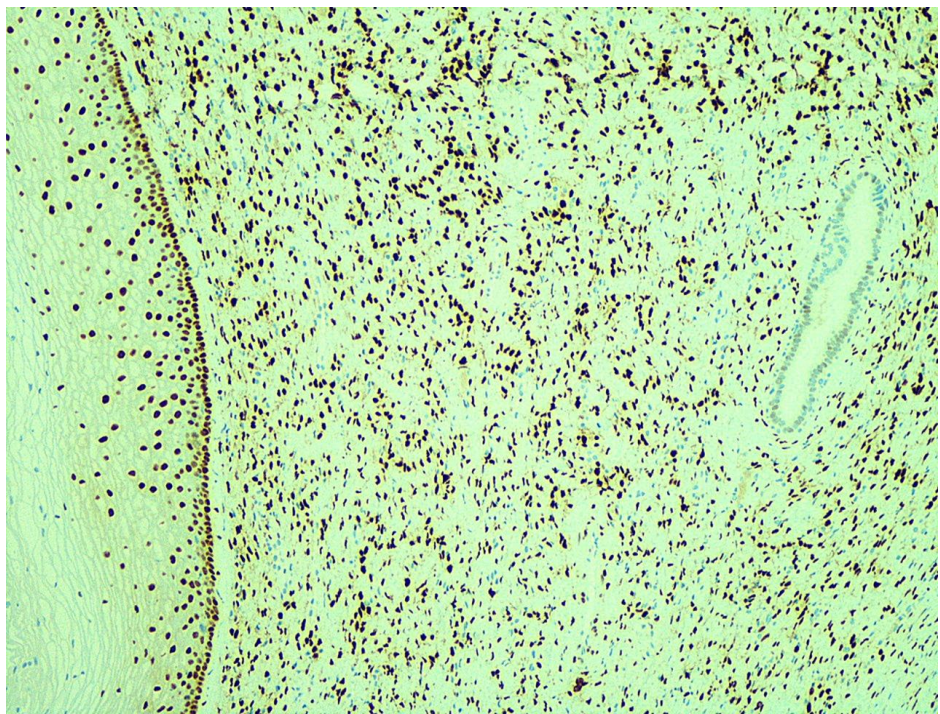


Fig 1d

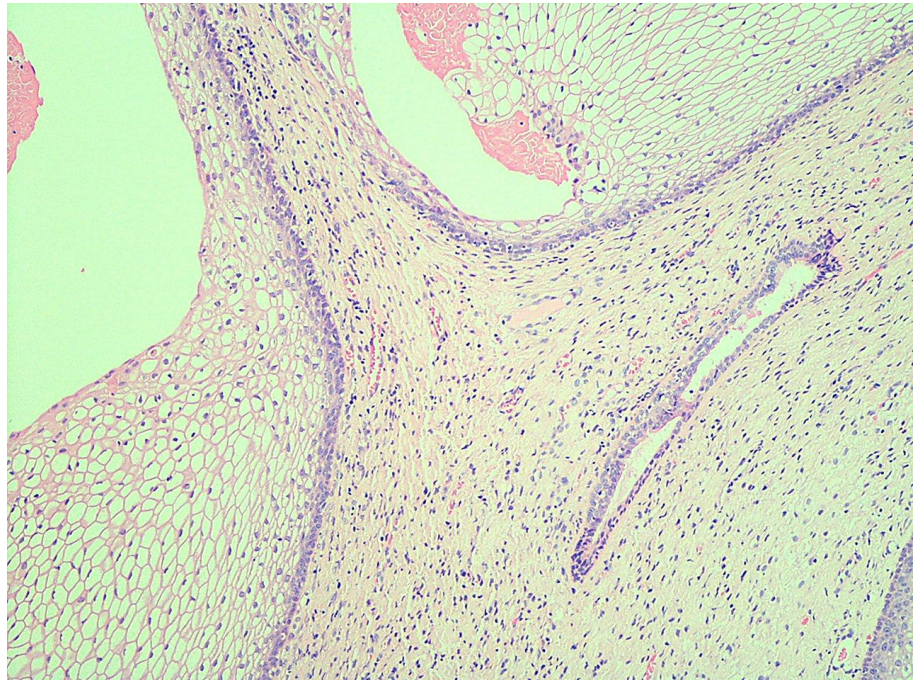


Fig 2 a

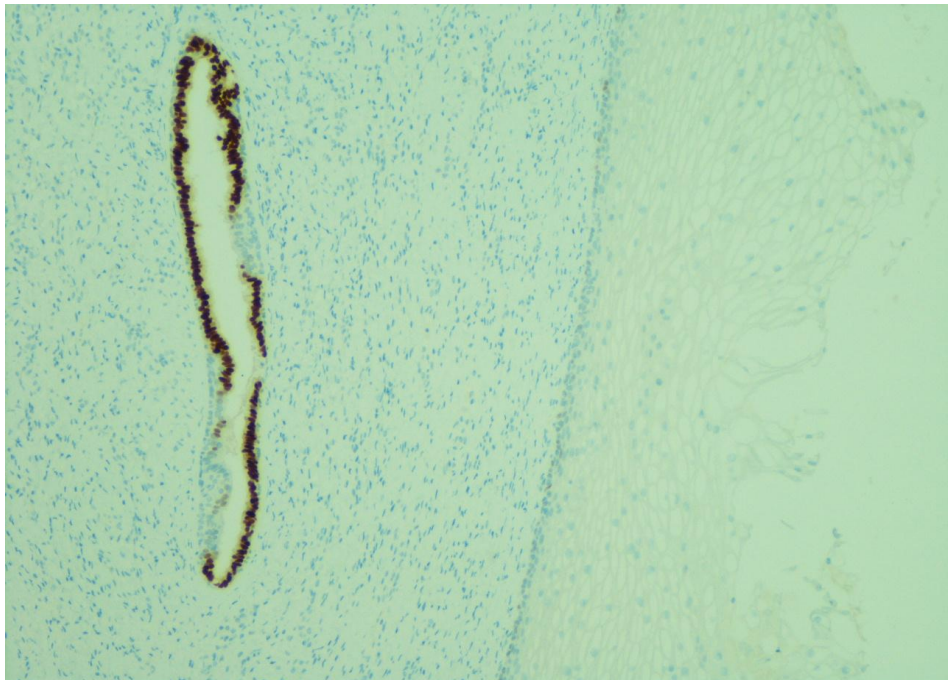


Fig 2 b

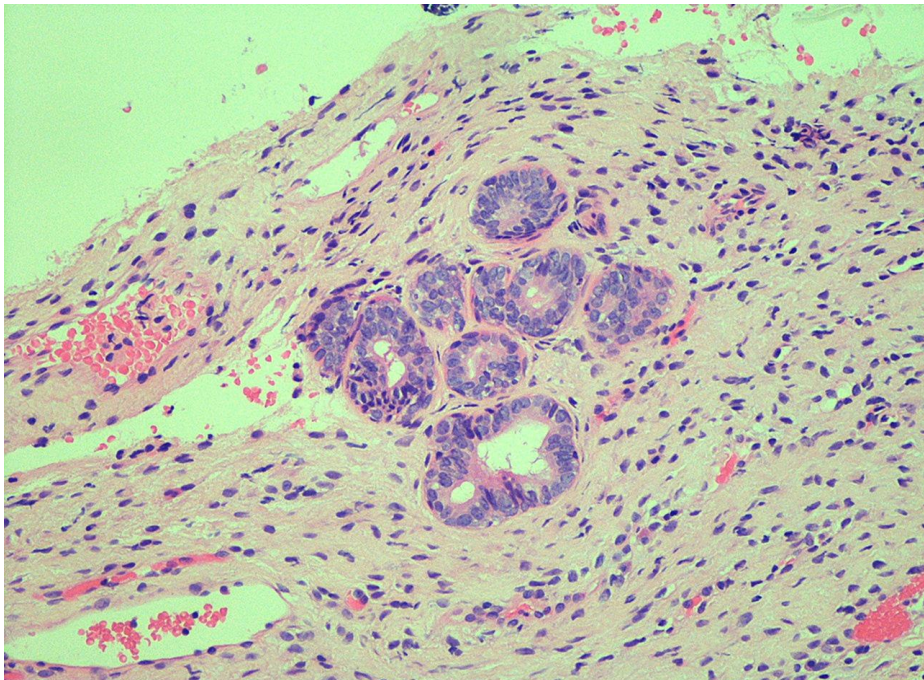


Fig 2 c

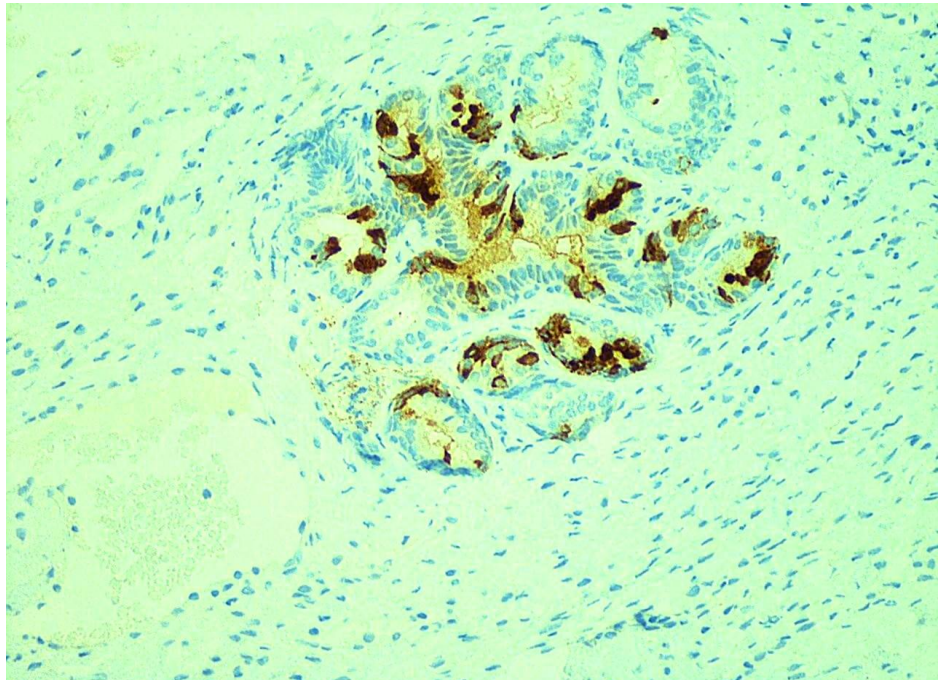


Fig 2 d

Figure 1a -1c: Polyp showing expansile spaces lined by squamous epithelium with central necrotic debris HE . **Figure 1d:** ER immunostain positivity within nests and stroma of polyp **Figure 2a:** Tubules and stroma within polyp HE 10X **Figure 2b:** NKX3.1 immunostain highlighting tubule within polyp **Figure 2c:** Tubules and glands within stroma of polyp **Figure 2d:** Patchy PSA positivity within glands of polyp

DISCUSSION

The histogenesis and origin of tubulo-squamous polyps is likely related to specialized urogenital sinus remnants such as the Skene's glands or the female analogue of prostatic tissue.^{2,3,4,5} This is reflected in positivity of NKX3.1 and patchy PSA positivity in the tubular component . Furthermore, the strong ER expression in both the squamous nests and stroma supports a hormonal role in the development of these lesions, correlating with their typical occurrence in postmenopausal patients.

The differential diagnosis of tubulosquamous polyps includes malignant neoplasms like squamous cell carcinoma and the mixed tumour of vagina⁶. The presence of "dirty" central necrosis within epithelial nests can superficially mimic the comedo-necrosis seen in high-grade malignancies such as squamous cell carcinoma. However, the bland cytologic features and lack of significant mitotic activity in these polyps favour a benign diagnosis. While both TSPs and the mixed tumour of vagina exhibit a biphasic spindle and epithelial growth pattern, the TSPs do not show a predominantly spindle cell background as seen in the mixed tumour and show a distinct IHC profile (PSA+/ER+). TSP is a benign lesion which carries an excellent prognosis with no documented malignant transformation following full excision.^{2,5}

CONCLUSION

Tubulosquamous vaginal Polyps (TSP) represent a diagnostic challenge and likely represent an underdiagnosed entity. Failure to recognize these polyps as a benign entity can lead to significant diagnostic error, potentially resulting in aggressive, unnecessary surgical interventions for what is ultimately an indolent lesion.

References

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