Giant fibroepithelial polyp of the glans penis not associated with condom-catheter use: A case report and literature review

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Abstract

Fibroepithelial polyps are rare benign tumours of the glans penis; there are only a few reported cases. The pathogenesis is unknown. However, they have been linked with chronic condom catheter use or prior penile surgery. We report a case of a 62-year-old man with a large fibroepithelial polyp of the glans penis of 11 years duration, which was not associated with condom catheter use or prior surgery. The mass was large, measuring 7 × 5 × 3 cm. Fibroepithelial polyps have been reported in a range of genitourinary sites in males and females, adults and children, and in rare cases may be associated with malignant transformation. They should be considered in the differential diagnosis of both cutaneous and mucosal genitourinary lesions.

Introduction

Fibroepithelial polyps are rare benign tumors of the glans penis; there are only a few reported cases. The pathogenesis is unknown, however, they have been linked with chronic condom catheter use[1] or prior penile surgery.[2] It is speculated that chronic venous congestion occurs secondary to extrinsic compression caused by the condom catheter, and leads to stromal proliferation.[1] Other theories implicate tumour formation secondary to chronic inflammation of the glans penis,[3] or exaggerated regeneration during postoperative healing.[2] We report a case of a 62-year-old man with a large fibroepithelial polyp of the glans penis, which was not associated with condom catheter use or prior surgery.

Case report

A 62-year-old male presented with a large verrucous "grape-like" lesion on the glans penis lasting 11 years. It had originally developed over the course of 3 months and had not changed in appearance over the course of follow-up. There was no travel history that could have predisposed him to filarial lymphedema. He had no urinary discharge and no voiding symptoms. Prior to developing the lesion, he was sexually active. He acquired a sexually transmitted infection at age 20, which resolved. He denied ever using a condom catheter. He denied ever having a constrictive device at the base of the penis, such a penile ring or vacuum device. There was no history of trauma. He had no comorbidities and was not taking medication.

On examination, a mass measuring 7 × 5 × 3 cm was present on the glans penis, extending to involve the frenulum, but sparing the urethra. There was significant redundancy and thickening of the penile shaft skin, with the brawny appearance of stasis dermatitis. The flaccid phallus was about 12-cm long. There were also several small subcentimeter verrucous lesions around the penile skin near the corona. The scrotal contents were normal (Fig. 1a, Fig. 1b).

The patient underwent excision of the glans lesion and circumcision to remove redundant shaft skin and the several smaller lesions on the penile skin near the corona. Postoperatively, he voided without difficulty and had satisfactory cosmesis.

Pathologic findings

Examination of the penile mass excision revealed a polypoid lesion with epidermal hyperkeratosis, focal parakeratosis and hyperkeratosis. Hemosiderin-laden macrophages, stellate and multi-nucleated stromal cells and extensive edema were observed in the dermis. Areas of fibrosis were also identified. There was no evidence of dysplasia or malignancy (Fig. 2, Fig. 3). DNA was extracted from the paraffin embedded tissue and subjected to testing for 37 human papillomavirus (HPV) DNA genotypes. No evidence of HPV was detected by linear array analysis using genotype specific

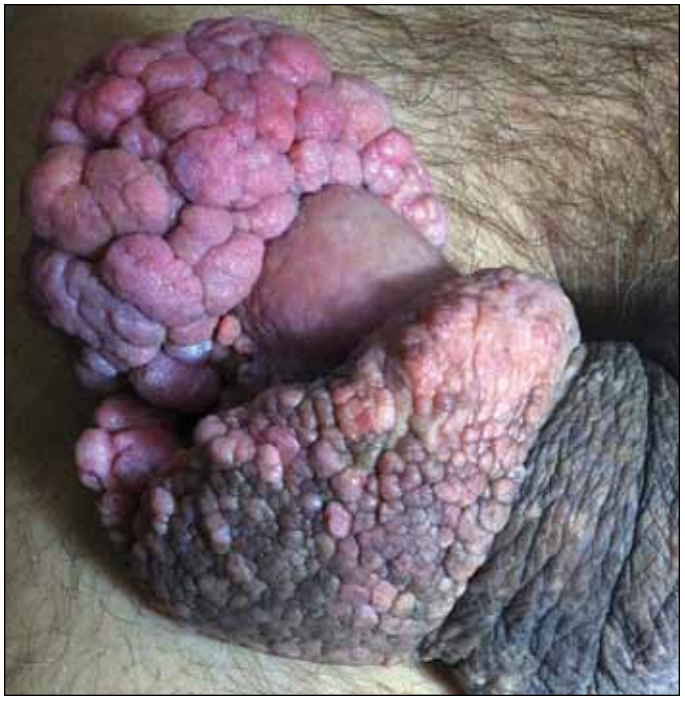

Fig. 1a. Macroscopic photograph of penile fibroepithelial polyp.

oligonucleotide probes. The histological features along with the negative HPV analysis were most in keeping with a giant fibroepithelial polyp of the penis.

Discussion

Fibroepithelial polyps (FEPs) are benign mesodermal tumours, which are composed of a core of fibro-vascular stroma with overlying epithelium. They are often referred to as skin tags or acrochordons and are found in multiple cutaneous locations measuring usually less than 10 mm. Common sites for FEP include the groin, axilla and eyelids. There are also multiple reports of unusual presentations and sites of origin in the respiratory tract[4] and orophyarynx.[5] They are associated with diabetes and hyperlipidemia[6] and not associated with colonic polyps as previously thought.[7] Although the penis is not a common site of presentation, FEPs have been documented elsewhere in the genitourinary tract.[8] In contrast to the squamous lining seen in cutaneous cases, FEPs of the genitourinary tract have a urothelial lining.[8,9] In children they have been documented antenatally,[10] and in many cases are thought to be congenital;[11] however, they may occur in multiple sites in the lower urinary tract in children post-pyeloplasty.[12,13]

These polypoid or cauliflower-like masses have a median size of 2.5 cm (maximal size reported is 8 cm[14]), and usually involve the ventral glans penis.[1,15,16] Clinically, the differential diagnosis includes condyloma acuminatum, giant condylomas (called Buschke–Löwenstein tumors), verrucous

Fig. 1b. Macroscopic photograph of penile fibroepithelial polyp.

carcinoma, squamous cell carcinoma, urethral carcinoma and angiomyxoma.[1]

The pathologic diagnosis is aimed primarily at ruling out malignancy, a condyloma or a giant condyloma (Buschke–Löwenstein tumor). If urethral carcinoma is suspected, urethroscopy may be indicated. Giant condylomas are HPV-driven lesions and are known to undergo malignant transformation to squamous cell carcinoma.[17] A tissue biopsy would identify typical features of squamous cell carcinoma.

A single report detailing development of squamous cell carcinoma of a penile FEP has been published,[9] consistent with reports of malignant transformation in cutaneous FEPs.[18] Similarly, a case of urothelial carcinoma has been reported in a ureteral FEP.[19] Although our case showed no evidence of dysplasia or malignancy, we would advise careful sampling and examination of these lesions to exclude a primary malignancy or malignancy arising in the setting of a FEP.

Treatment with local excision is usually successful;[9] however, in 1 case, wide excision with suprapubic cystotomy was required.[3] Recurrence has been reported at varying intervals and is amendable to repeat excision.[1,9]

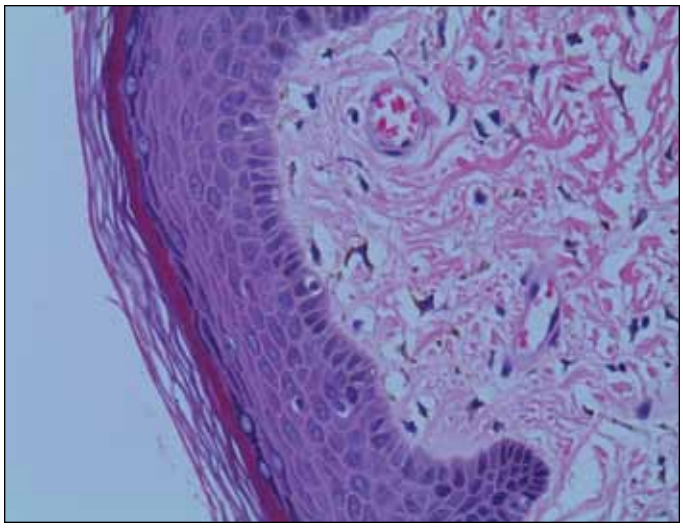

Fig. 2. Microscopic photograph (10×) hematoxylin and eosin stain showing normal appearing epidermis and stellate fibroblasts in the superficial dermis with hemosiderin pigment.

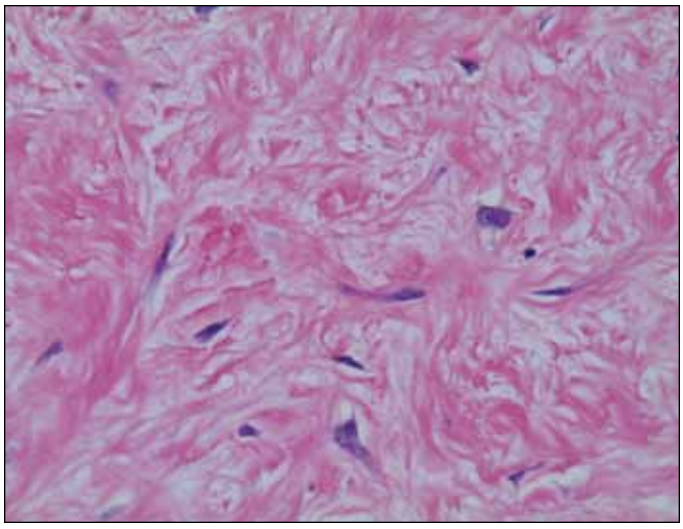

Fig. 3. Microscopic photograph (20×) Hematoxylin and eosin stain showing dermal edema and stellate fibroblasts.

In 2012, Kampantais and colleagues summarized the literature and detailed 20 patients with penile FEPs; nine of these patients had a history of chronic condom catheter use,[9] a finding echoed by Mason and colleagues in an earlier publication.[15] Tsai and colleagues reported a penile FEP in a 50-year-old a man practicing genital-hanging Kung Fu, which involves hanging heavy weights on the penis with the intention of achieving health benefits.[20] Pediatric cases are often associated with prior penile surgery.[21] There are other cases reported similar to our own, where no specific etiology can be identified.[2,16]

Conclusion

We report a fibroepithelial polyp of the glans penis. Unlike most reported cases, our case was not associated with chronic condom catheter use. As more cases of fibroepithelial polyps are documented, we suspect that the etiology will become more apparent. We speculate that some patients may withhold details of the true etiology of their penile lesions.

Competing interests: None declared.

This paper has been peer-reviewed.

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