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PhotoDermDiagnosis
An Enlarging cyst of the penis: Unusual presentation of a cystic disorder

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A 38-year-old man presented with complaints of two asymptomatic, nodulocystic lesions over dorsum of penis since last 6 years which enlarge gradually. There was no history of discharge or bleeding. There was no other significant history.

On examination, the lesions appeared as dome shaped soft, skin-coloured, smoothed surface, nontender nodulocystic lesions over dorsum of the anterior aspect of penis. One large nodule like swelling was around 1cm in size and another was around 0.5 cm (**Figure 1**). During surgical excision, it was found those both were cysts and were interconnected (**Figure 2**). After removal of one of the cysts spontaneous remission of other ensued. Physical examination and laboratory investigations were otherwise unremarkable.

Histopathological examination (HPE) of cystic lesions revealed a normal epidermis and the dermis showed a large cystic space with papillary projections. The cyst was single composed of interconnecting cavities and was free from the overlying epidermis (**Figure 3**).

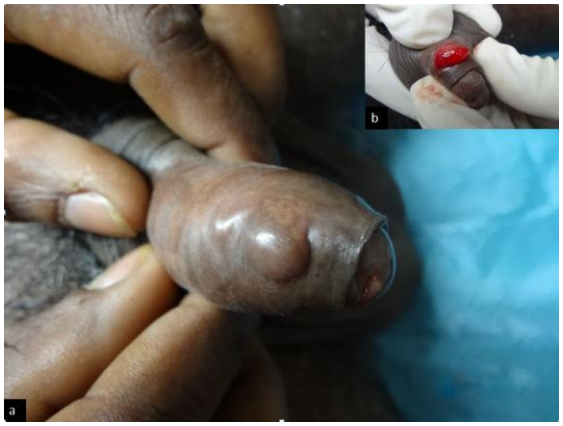

Figure 1 (a) Cystic swelling over the penis. (b) Cyst being excised: single cyst.

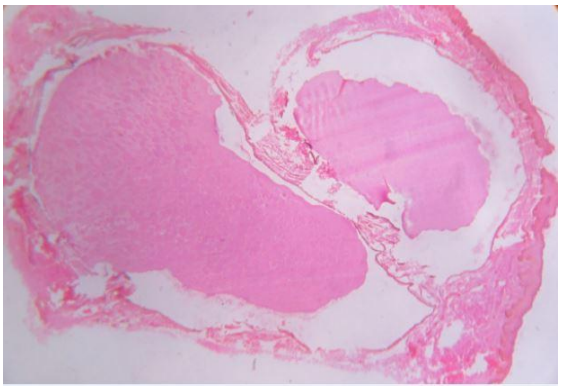

Figure 2 Photomicrograph showing interconnecting cyst (H & E X100).

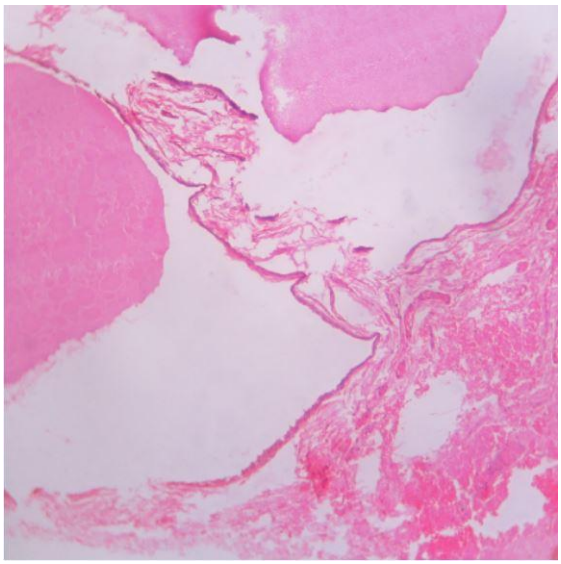

Figure 3 The cystic wall is lined one or two layers of columnar epithelium cells with decapitation in places. (H & E X400)

The inner surface of the cyst and the papillary projections were lined by a row of columnar secretory cells of variable height which showed decapitation secretion. Peripheral to the layer of secretory cells were elongated myoepithelial cells and their long axes were running parallel to the cyst wall.

What is your diagnosis?

Diagnosis

Penile apocrine hidrocystoma

Discussion

Apocrine hidrocystomas (AHC) or cystadenomas are benign cystic lesions of the secretory portion of apocrine sweat glands. Robinson was the first to describe AHC in 1893. [1] AHC occurs commonly on the face, but it is occasionally seen on the ears, scalp, chest, shoulders, or vulva. [2] This condition has been noted over the penis in only three instances in Pubmed. [3, 4, 5]

Hidrocystomas (HCs) are conventionally divided into apocrine and eccrine HC by histologic features, and as solitary (Smith type) or multiple (Robinson type). AHCs are cystic lesions that arise from the apocrine secretory coil, while eccrine -HCs represent retention cysts of the eccrine duct. [6]

AHC is not uncommon, often seen in ophthalmological or surgical clinics. It is found in adult life with no predilection for age and gender. The lesions are solitary or occasionally multiple, well-defined, dome-shaped, translucent nodules. The surface of the cyst is smooth and the colour varies from a skin colour to greyish or blue-black, often affecting only part of the cyst. It is commonly seen around the eye, particularly lateral to the outer canthus. It has also been rarely reported over the penis, fingers and as multiple lesions bilaterally in both axillae. The lesions are not associated with any symptoms. The cyst increases slowly in size, and may become 1cm or more in diameter. Multiple lesions may be seen in Schöpf–Schulz–Passarge syndrome (a form of ectodermal dysplasia syndrome characterized by hypotrichosis, hypodontia, nail dystrophy, palmoplantar keratoderma and periocular apocrine hidrocystomas). [7] Our case showed typical lesional presentation with involvement of an unusual site- penis.

On HPE, epidermis is unremarkable. The dermis contains one or several large cystic spaces into which papillary projections often extend. The cavity walls are lined by cuboidal or high-columnar apocrine secretory cells with decapitation secretion and a peripheral layer of myoepithelial cells. The secretory cells may contain pigment which is neither melanin nor haemosiderin. The secretions in the cysts may be coagulated and stained using the PAS technique. There is a well-organized fibrous stroma. [2, 7] In our case, HPE showed characteristic features of Hidrocystoma and there was no feature of malignancy.

Median raphe cyst (MRC) is the closest differential diagnosis of AHC. We excluded by the following points. Clinically, MRC develops anywhere along the midline of the ventral side of the male genital area, from the meatus to the scrotum and perineum. Histopathologically, it is lined by pseudostratified columnar epithelium (one to four cell layers thick), mimicking the transitional epithelium of the urethra. [7] In our case, cysts over the dorsum of penis and HPE were suggestive of APH.

The tumour is cured by surgical removal. Multiple lesions have been treated successfully with trichloroacetic acid. [8] Topical atropine or scopolamine, electrodesiccation, carbon dioxide laser and pulse dye laser have been used with good results. We excised the lesion

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