

## Epidermoid Cyst of Glans Penis a Rare Case Report

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### ABSTRACT

Epidermoid cysts are the commonest type of cutaneous cysts. They can occur anywhere on the external surface of the body. They are common on scrotum but rarely occur in the glans penis. Here, we report such a case of epidermoid cyst of the glans penis in a 10 year old boy. Excision of the swelling was done and histopathology confirms it as a epidermoid cyst

**Keywords:** epidermoid cyst, glans penis.

### INTRODUCTION

#### Case presentation

A 10-year-old Hindu male patient presented to our outpatient department with a small, painless swelling in his redundant part of the prepuce on the ventral aspect for the last 2 years. On examination, it was found that the swelling was 1 × 1 cm in size, smooth, rounded and non-tender. It was situated just outside the external urinary meatus and no obvious punctum was found [Figure – 1,2,3]. The external urethral meatus was normal in shape and size. The skin over the cyst was intact and not adherent to the cyst. There were no signs of inflammation and regional lymph nodes were not involved. Patient was taken up for surgery and excision of the mass was performed under local anaesthesia. There was no communication with the urethra. Excised specimen is shown in [Fig-4]. Histopathology report was suggestive of epidermal cyst.

#### DISCUSSION

Epidermal cyst in the penis is very rare<sup>1</sup>. Penile epidermal cysts are broadly classified into congenital cysts and secondary cysts caused by trauma or surgery. Congenital cysts may arise from the accumulation of the epidermal secretions during embryonic life, whereas secondary cysts may arise from traumatic implantation of epithelial elements or the occlusion of the pilosebaceous unit. Congenital cysts, such as median raphe cysts, can arise from an abnormal embryological closure defect of the median raphe or a monolayer germ cell teratoma, as proposed for intratesticular epidermoid cysts<sup>2</sup>.

This condition in children is usually congenital due to abnormal embryologic closure of the median raphe; hence, it is termed as median raphe cysts (MRCs). Penile epidermal cysts may occur in adults following trauma or surgery due to epidermal elements being trapped within closed space. During wound healing, trapped squamous epithelium, undergoing keratinisation leads to cyst formation.<sup>3</sup>

The criteria proposed for diagnosis of epidermoid cysts of the glans penis are the following: It should be surrounded by penile tissue, filled with keratin material only, with an inner lining of stratified squamous epithelium, without any dermal appendages.<sup>4</sup>

This condition in children is usually congenital due to abnormal embryologic closure of the median raphe; hence it is termed as MRC, which can develop at any site along the midline of the ventral side of the male genital area, from the urethral meatus to the anus and the perineum i.e. along the median raphe of the male external genitalia<sup>3</sup>. Anomalous developmental rest of the periurethral glands of Littre or blockage of the paraurethral ducts could also cause the MRCs because intraepithelial mucus cells and glandular structures were found within the cyst in some cases.<sup>3</sup> During normal development, the paired genital

folds are positioned at the base of the genital tubercle, and gradually envelop the urethral plate and merge in the midline to create the bulbar and pendulous segments of the urethra. The glandular urethra is created by the coring action of an ectodermal ingrowth.<sup>5</sup>

Some differential diagnoses include dermoid cyst, teratoma, urethral diverticulum, glomus tumour, pilonidal cyst and epidermal inclusion cyst, and steatocystoma.<sup>6</sup> Contents of these cysts may be keratin as in posttraumatic cysts, skin and its appendages as in dermoid cysts, and germ cell derivatives as in teratoma. Neoplastic transformation of the epithelium of epidermoid cysts turning malignant has been reported rarely but such transformation is not reported so far in penile cysts.<sup>3</sup> Most of the patients may remain asymptomatic during childhood and become symptomatic during adolescence or adulthood the symptoms being pain (may be due to infection or trauma), difficulty during micturition, haematuria, haemospermia and difficulty in having sexual intercourse. The indications for treatment of this cyst are secondary infection, pain on intercourse, obstruction of urinary flow or cosmetic concerns.<sup>1</sup>

Penile epidermoid cysts are uncommon and usually congenital. These cysts may occur because of obstructed eccrine ducts of buried hair follicles.<sup>3</sup> Urethral diverticulum with its complications has to be differentiated in which case the wall of the cyst will be urothelium not penile skin. Mucoïd cyst is yet another differential diagnosis.<sup>3</sup> Neoplastic transformation of epidermoid cysts is rare, and it has never been reported in penile cases<sup>3</sup>.

## Conclusion

Epidermal cyst in the penis is very rare. The best treatment option is complete excision, but the surgeon should carefully excise the entire cyst to avoid recurrence. Though malignant changes are reported in epidermoid cyst at other sites, there are no reports of malignant changes in penile or glandular epidermoid cyst till date. Patient is under regular follow up.

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**Figure-1**



**Figure-2**





**Figure-3**



**Figure-4**

