
Case Report on Congenital Penile Epidermal Cyst in a Rare Location

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ABSTRACT

We report a case of a congenital penile cyst in a old male without any history of penile surgery and injury. An epidermal cyst can appear anywhere on the body. It arises as a result of epidermal elements being implanted in the dermis during foetal development, trauma, or procedures such as penoplasty and circumcision. A 22 years old male presented with a mass over the penis since birth, which was painless and gradually increasing in size. The mass was excised and it was found to be penile epidermal cyst. Epidermal cyst is one of the most common benign tumors occurring in the body, which commonly occurs either congenitally or following trauma or surgery, where the epidermal elements get trapped within closed space. But here this case had no trauma and surgeries in the past and the mass present since birth-a case of congenital penile epidermal cyst.

Keywords: Congenital penile epidermal cyst; penoplasty; benign tumors; foetal development; trauma.

1. INTRODUCTION

Epidermal cyst can occur in any part of the body [1]. It occurs due to implantation of epidermal elements in the dermis during the fetal formation, trauma or surgeries like penoplasty, circumcision, etc. Penile epidermal cysts in children are usually congenital and are caused by abnormal embryologic closure of the median raphe; these cysts are termed median raphe cysts [2]. Penile epidermal cysts in adults commonly develop after trauma or surgery. During wound healing, when shedding of the epithelium occurs within a closed space, cysts are formed by squamous epithelium undergoing keratinization [3]. It can also result from the proliferation of epidermal cells within a circumscribed space of the dermis [4]. Penile epidermoid cysts are not very common and usually congenital [5]. The etiology in penile area is not specific, but it may be due to an abnormal embryogenic closure of the median raphe or a monolayer teratoma of germ cell origin [6]. We report a case of a congenital penile cyst in a 22 years old male without any history of penile surgery and injury. Many authors have reported that epidermal cyst in penile location is relatively rare, very rarely turns malignant and simple excision and follow-up is the line of management [7].

2. CASE REPORT

A 22 years old male presented to the outpatient department of urology, with a swelling over the penis since birth. It was painless and was gradually increasing in size. There was no past history of surgery/local trauma/infection. There were no associated urinary complaints.

On local examination, single mass measuring 3x2 centimeters, firm in consistency, globular in shape and non-tender on palpation was noted in the ventral aspect of the penis in the subcutaneous plane, arising from the penile shaft skin. There were no visible scars or punctum noted over it (Fig. 1).

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Fig. 1. Epidermal cyst of penis (preoperative image)

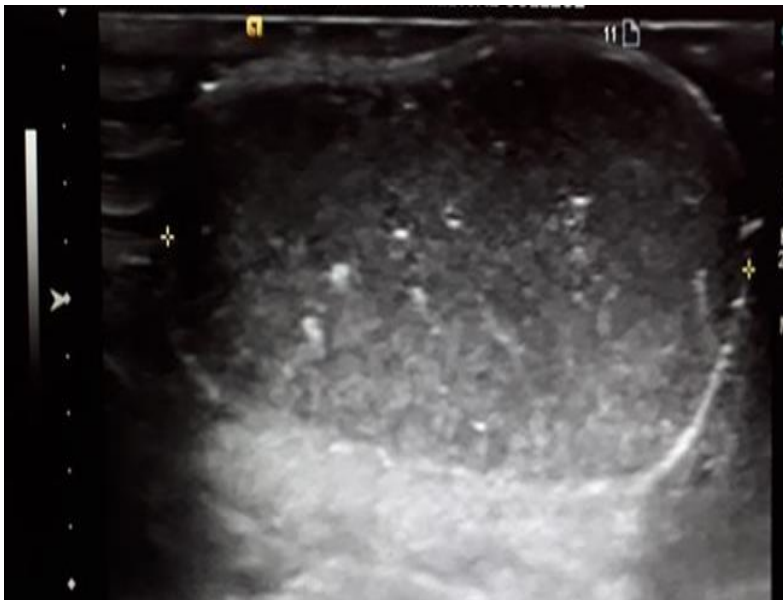


Fig. 2. Ultrasound image showing hypoechoic lesion with hyperechoic foci

Ultrasonography of the penile mass reported, a 3.2x1.6 centimeters sized well defined predominantly hypo echoic lesion with multiple hyper echoic foci showing comet tail artifact, noted in subcutaneous plane on ventral side of penis. There was evidence of vascularity in the periphery of the lesion likely arising from the frenulum. However, there was no vascularity inside the lesion. The features were suggestive of epidermal cyst of penis (Fig. 2).

Patient underwent wide local excision of the lesion. Swelling was not adherent to the underlying structures like urethra or frenulum and the post-operative period was uneventful (Fig. 3).

Histopathology of the excised specimen revealed tissue lined by stratified squamous epithelium. Sub epithelium showed cyst wall lined by stratified squamous epithelium with prominent granular layer with the lumen of the cyst showing lamellated keratin suggestive of epidermal cyst (Fig. 4).



Fig. 3. Excised specimen of congenital penile epidermal cyst

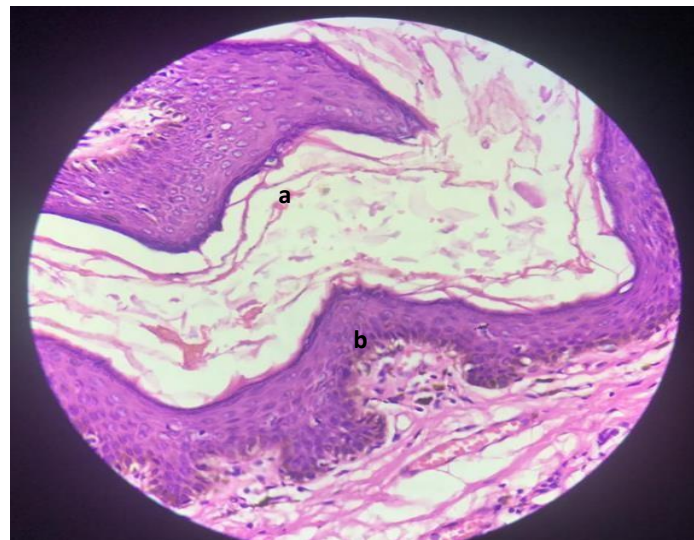


Fig. 4. Histopathology showing (a) lamellated keratin and (b) prominent granular layer

3. DISCUSSION

Epidermal cysts are benign lesions occurring in any part of the body. They are more common in men [8]. Epidermal cyst of penis is a rare entity and is either congenital or acquired. Amarnath et al in their study have reported that there were less than 200 cases of epidermal cyst of penis were reported in the past of which only ten cases were reported from India and among that only one case of congenital penile epidermal cyst was reported [9].

Various etiologies have been proposed for the formation of the cyst which includes sequestration of epidermal rests during embryonic life, traumatic or surgical implantation of epithelial elements like after circumcision [10].

They are usually asymptomatic during childhood but become symptomatic during adulthood. The usual symptoms of penile epidermal cyst are local pain, difficulty in micturition, haematuria,

haematospermia and difficulty in having sexual intercourse. The differential diagnosis of eridermoid cyst of penis includes dermoid cyst, teratoma, glomustumour, pilonidal cyst and steatocystoma [10].

Infection, dyspareunia, urine flow obstruction and cosmesis are some of the indications of treatment of epidermal cyst.³ Though malignancies arising from epidermal cysts in other parts of body are reported, there are no such reports from penile epidermal cysts so far in the literature [11].

4. CONCLUSION

Our patient most probably had developed the congenital epidermal cyst during his embryonic life. Simple excision and follow-up are the line of management as the risk of malignancy is very low. Reports of congenital penile cysts are very few in literature. Only one case of congenital penile epidermal cyst has been reported in India, till now and our case report will add up to the list of such rare case.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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