

Epidermal inclusion cyst in the penis of a young male

Abhulimen Victor ^{1,*} and Onwumelu Chukwudum ²

¹ Urology division, Surgery department, University of Port Harcourt Teaching Hospital, Nigeria.

² Anatomical Pathology Department, University of Port-Harcourt Teaching Hospital, Nigeria.

World Journal of Advanced Research and Reviews, 2023, 19(01), 1214–1218

Publication history: Received on 12 June 2023; revised on 23 July 2023; accepted on 25 July 2023

Article DOI: <https://doi.org/10.30574/wjarr.2023.19.1.1460>

Abstract

Background: An epidermal cyst is a common benign tumor occurring in any part of the body but it rarely occurs in the penis. This case report highlights the management of a penile epidermal inclusion cyst.

Case report: A young man presented with a lesion he noticed about a month after circumcision. The lesion was at the side of the frenulum and was painless. The lesion increased in size and had to be excised with a rim of normal tissue. The wound healed unremarkably and histology revealed an epidermal inclusion cyst.

Discussion: Epidermal inclusion cysts can be congenital and may also occur following surgery. Circumcision is a good trigger for the development of an epidermal cyst on this occasion. This condition is rare, so other differentials should be ruled out.

Conclusion: An epidermal inclusion cyst of the penis is rare. Before this diagnosis is made other more common differentials should be ruled out

Keywords: Epidermal inclusion Cyst; Penis; Penile Malignancy; Sexually transmitted infections; Painless mass

1. Introduction

An epidermal cyst is a common benign tumor occurring in any part of the body, which commonly occurs either congenitally or following trauma or surgery, where the epidermal elements get trapped within an enclosed space.¹ These cysts though common, appear rarely on the penis.^{2,3,4} Hence, accounts of this condition are usually in the form of case reports. Circumcision³ and surgery⁴ are known predisposing factors in the development of secondary epidermal cysts.

These cysts are important in medical practice because some sexually transmitted diseases such as molluscum contagiosum,⁵ toxoplasmoses,⁶ chlamydia, and gonorrhoea can lead to cyst formation.^{7,8} This patient was also poorly circumcised, hence the appearance of a painless penile lesion that started changing was suspicious. So, a clear distinction between these benign conditions, penile malignancy, and sexually transmitted infections is very important since sexually transmitted infections can spread but an epidermal inclusion cyst cannot. Cancers can lead to loss of life.

To the best of my knowledge, there has been no report of an epidermal inclusion cyst of the penis in Southern Nigeria and none in the Niger Delta region. This article aims to highlight the management of a patient with an epidermal inclusion cyst of the penis.

* Corresponding author: Abhulimen Victor; Email: victorabhulimen80@gmail.com

2. Case Report

A 40-year-old male presented with a lesion that he has had for as long as he can remember. His mother said she noticed it about a month after circumcision. The lesion was at the side of the frenulum at a point that appeared poorly circumcised and was painless. The lesion started increasing in size two months before the presentation and later had a purulent discharge. There was no history of trauma and no history of unprotected sexual intercourse with anyone aside from an equally faithful spouse. The lesion progressively increased in size and hence, his presentation to the hospital. He had a urinalysis and microscopy, culture, and sensitivity which were normal, a wound swab yielded no growth of an organism. He also did a Full blood count which was also within normal limits. A venereal Disease Research Laboratory (VDRL) test was also negative.

An ultrasound was requested but he could not afford it, so a scan was not carried out.

He was counseled about removing the lesion and sending the sample for histology. He gave consent for this to be done. The lesion was removed with surrounding normal tissue and the sample was sent for histology. The resulting defect was closed with Vicryl 3 0 in layers. The penile wound was dressed with povidone iodine-soaked gauze and dressing was applied.

He was given oral antibiotics, Ciprofloxacin 500mg twice daily for 5 days, of Metronidazole 400mg, three times daily for 5 days. He was also given Diclofenac 50mg twice daily for 5 days. The wound dressing was removed on the 5th postoperative day. (Figure 1)

Grossly: The specimen received in the histopathology laboratory consists of cystic tissue measuring 1.5 by 1 by 0.5cm. The cut section shows a unilocular cyst containing creamy materials. The specimen was all embedded. Microscopic examination showed a cyst containing eosinophilic keratinous materials and lined by stratified squamous epithelium. The wall is fibrocollagenous and skin adnexal structures were absent.

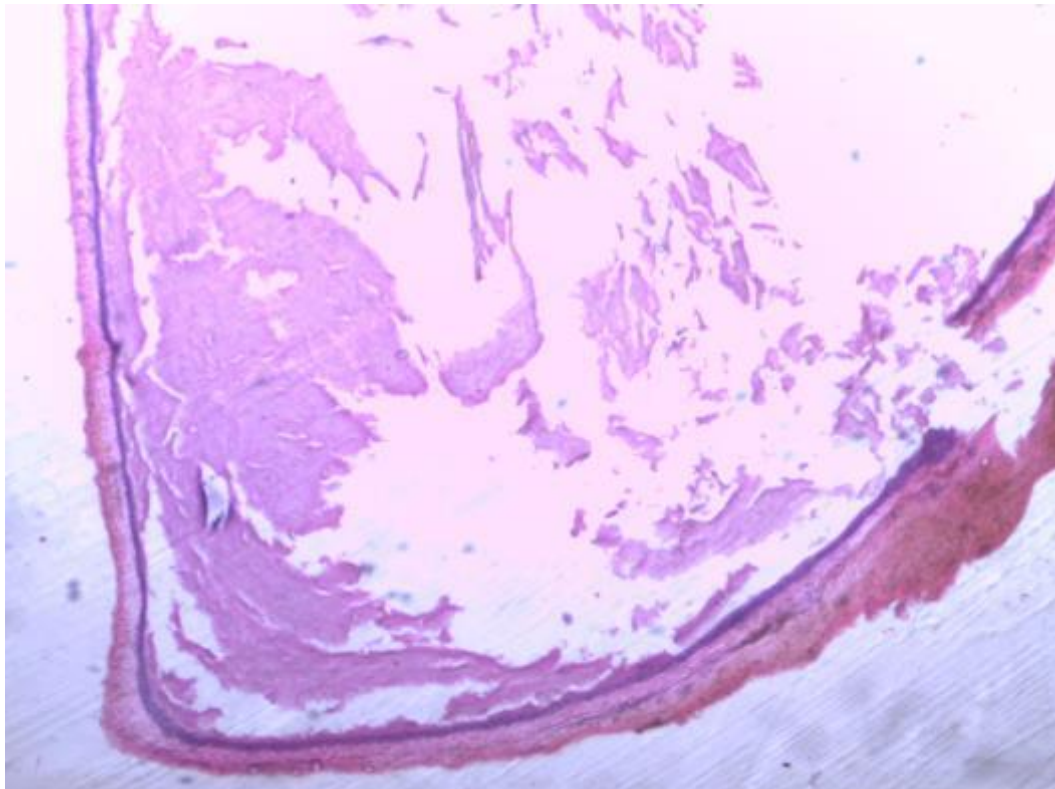


Figure 1 Photomicrograph shows a cyst lined by attenuated stratified squamous epithelium and the lumen contains eosinophilic keratinous materials. The wall is fibro collagenous and devoid of skin appendages. (Haematoxylin and Eosin, X40)



Figure 2 The 5th postoperative day after the dressing was removed



Figure 3 The 14th postoperative day

3. Discussion

Epidermal cysts or epidermoid cysts of the penis are rare. Clinically they can be the differentials of many penile lesions. In many parts of Nigeria, circumcision is an important ritual, especially among Christians. Circumcision is one of the commonest operations performed worldwide.⁹ Circumcision is believed to have numerous advantages even in the prevention of Human Immunodeficiency Virus HIV and penile cancers. Geographical locations where circumcision is not performed tend to have a higher prevalence of penile cancers.⁹ So when we noticed a lesion that started increasing in size in a poorly circumcised patient, especially at the site of that was poorly circumcised we needed to be sure. So a histologic diagnosis to be sure of the diagnosis was important.

Epidermal inclusion cyst in children is usually congenital due to abnormal embryologic closure of the median raphe and 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.¹⁰ In this case, this was not a congenital lesion.

Penile epidermal cysts can occur following trauma or surgery such as circumcision and may result from epidermal elements being trapped within a closed space. During the process of wound healing, trapped squamous epithelium, undergo keratinization and leads to cyst formation. This is probably the cause of the cyst in this case since the lesion was noticed after circumcision. There are also reports of the development of epidermal inclusion cysts after hypospadias surgery.¹¹ This explanation will also not explain the rapid increase in size 2 months before the presentation. There are records of malignant transformation of even benign lesions.

4. Conclusion

An epidermal inclusion cyst of the penis is rare. Before this diagnosis is made other more common differentials should be ruled out.

Compliance with ethical standards

Acknowledgments

We acknowledge Abhulimen Miriam (esq) and Abhulimen Amaka for their psychological support during the writing of this article.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

Source of funding

This work was self-funded by the authors, we received no grant for this publication.

Disclosure of conflict of interest

The authors declare no conflict of interest

Statement of ethical approval

Ethical approval was sought and obtained from the hospital's ethical committee.

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