

Penile epidermal inclusion cyst: a rare location

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DESCRIPTION

A 12-year-old boy presented with painless, slowly progressive swelling over the dorsum of the penis, evolving over 6 years. The swelling was present just underneath the penile skin. It was mildly compressible without any signs of inflammation. There were no other systemic symptoms. The only remarkable history was of circumcision 9 years prior. The patient was referred for ultrasound and Doppler evaluation of the swelling with the suspicion of a vascular malformation. Ultrasound scan revealed a well-defined lesion beneath the dermis, with fine internal echoes within it. No vascularity was noted on Doppler interrogation (*figure 1*). A provisional diagnosis of epidermal inclusion cyst was made based on surgical history and typical ultrasound appearance.

Intraoperatively, the lesion was found underneath the dartos fascia and adherent to urethra. Histopathology was suggestive of epidermal inclusion cyst (*figure 2*). It revealed a fibrocollagenous cyst lined by stratified squamous epithelium with keratin inside. Adjacent stroma was infiltrated by lymphocytes and foreign body giant cells.

Various theories for formation of cysts include sequestration of epidermal rests during embryonic life, occlusion of pilosebaceous units and traumatic or surgical implantation of epithelial elements. The condition is rare in the penis and can occur after an apparently minor procedure such as circumcision.¹ In our case, an ultrasound scan showed homogenous internal echoes with absence of vascularity. Posterior acoustic enhancement with attachment to dermis are other ultrasound features.² The only

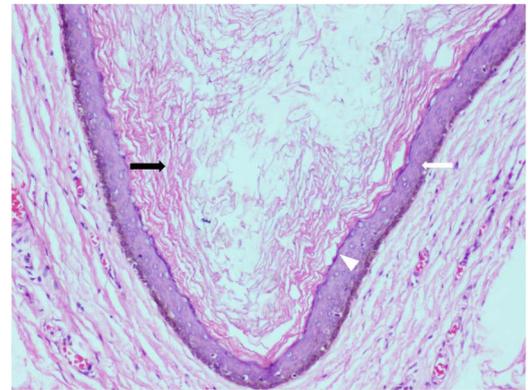


Figure 2 Histopathology section of the cyst wall with lumen. The cyst wall is lined with stratified squamous epithelium (white arrow) with the inner wall showing a granular layer (arrowhead). Central lumen showing keratin accumulation (black arrow).

definitive treatment is complete surgical excision without rupturing the cyst, to avoid recurrence.³

Learning points

- ▶ Epidermal inclusion cyst must be considered in the differential diagnoses of painless swelling over the penis in the proper clinical setting, especially in the paediatric age group with a history of circumcision.
- ▶ Characteristic ultrasound appearance of cystic lesion with homogenous internal echoes, posterior acoustic enhancement with attachment to dermis and absence of vascularity should help diagnosing this entity.
- ▶ Delayed complication of epidermal inclusion cyst must be borne in mind in any postoperative site.

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Competing interests None declared.

Patient consent Obtained.

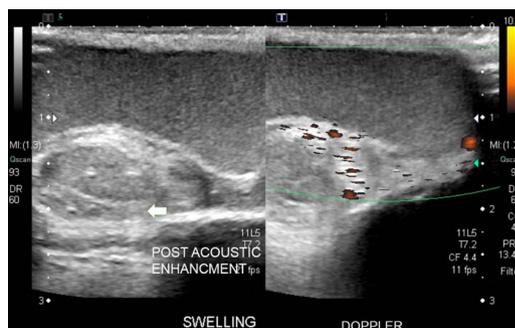


Figure 1 Well-defined lesion over the dorsum of the penis underneath the dermis, with fine internal echoes and posterior acoustic enhancement (white arrow on the left). No vascularity is seen within the lesion on Doppler (right side).



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