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LETTER TO THE EDITOR

Male Health

A case of giant epidermoid cyst on the penis

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Dear Editor,

Epidermal inclusion cyst is a benign lesion that can develop in any part of the body. Although cutaneous epidermoid cyst is common lesion, penile localization of them is quite rare.[1–3] We encountered a case of giant penile epidermoid cyst.

A 59-year-old patient presented with a swelling on the penis for 4 years. The swelling was initially small and gradually increased in size. He didn't have history of trauma, inflammation, urinary tract infection, hematuria, dysuria, and surgery. The local examination revealed a giant swelling over the back of the shaft of the penis from corona glandis to penile base (**Figure 1**). The swelling was subcutaneous, nontender, firm, unmovable and about 8 cm × 3 cm × 3 cm. Magnetic resonance imaging (MRI) examination was performed (**Figure 2**). Excision of the cyst was performed under general anesthesia. Macroscopically, the cut surface of the mass appeared to be full of a cheesy material (**Figure 3**), and both cytology and culture gave negative results. Histologic examination revealed that capsule wall had stratified squamous epithelium, and there was a lot of red dye cornification in the cavity (**Figure 4**). Finally, the swelling is diagnosed to be a penile epidermoid cyst.

Penile epidermoid cyst is usually small, soft, freely movable and solitary masses, and only rarely multifocal. In the present case, size of cyst is giant and about 8 cm × 3 cm × 3 cm, which has not been reported in previous literature. In general, penile epidermal cyst is asymptomatic, unless when it is complicated by infection or difficult coitus.[3]

Epidermal inclusion cyst may be formed by several mechanisms. They may result from implantation and proliferation of epidermal element in the dermis[4] and surgical implantation of epidermal tissue; they may also arise from the sequestration of epidermal rests during embryonic life, occlusion of the pilosebaceous unit, or traumatic implantation of epithelial elements.[5]

In the previous literature, some authors thought that the penile epidermoid cyst can be diagnosed by a careful examination combined by ultrasonography and/or computed tomography.[6] In the present case, we performed MRI examination. A cystic abnormal

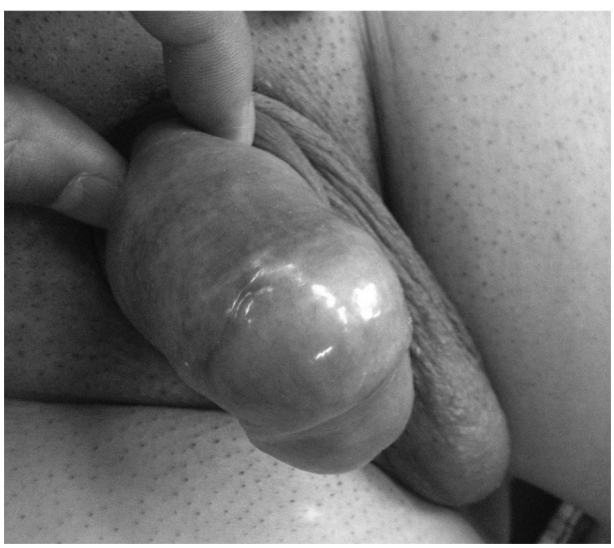

Figure 1: Swelling located at the back surface of the penis from corona glandis to penile base.

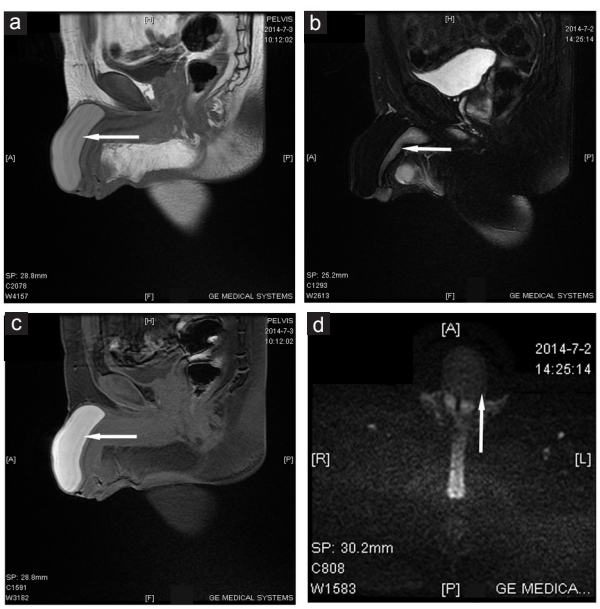

Figure 2: MRI of the penis. (a) Isointense or slight hypointensity on T1WI. (b) Hypointense on T2WI + FS. (c) Hypointensity on T1WI + FS. (d) Isointense or slight hypointensity on DWI. MRI: magnetic resonance imaging; T1WI: T1 weighted imaging; T2WI: T2 weighted imaging; FS: fat suppression; DWI: diffusion weighted imaging.

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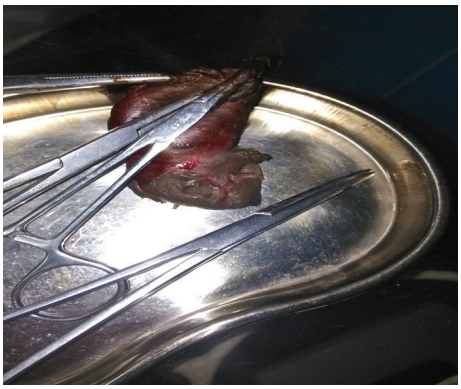

Figure 3: Excised epidermal cyst of penis. The mass size is about 8 cm × 3 cm × 3 cm, with flexible, membrane integrity. There are a brown sticky paste and no clear organizational structure in mass.

signal appeared in penile dorsal. Isointense or slight hypointensity on T1 weighted imaging (T1WI), hypointense on T2 weighted imaging + fat suppression (T2WI + FS), slight hypointensity on T1WI + FS, isointense or slight hypointensity on diffusion-weighted imaging (DWI) were observed in MRI. DWI is specific to epidermoid cysts that show hypointensity. In this case, we think that bleeding in the cyst may lead to a decrease of signal. MRI is the most useful tool for depicting the anatomical boundaries of the lesion, but not necessary for all of this disease.

Surgical excision is still the best option in the rare chance of a malignant transformation of such swellings. The indications for complete excision of the cyst are its fairly large size, tendency to grow, the risk of urethral obstruction, the risk of future difficulty with sexual intercourse, and cosmetic considerations. Although the size of this mass is relatively huge, it is benign disease. It is obviously not reasonable for partial penectomy. Total mass excision and careful follow-up were enough according to the previous publications.[6,7] Aspiration and simple drainage may carry the risk of recurrence. It has been reported that re-excision was required when residual tissue was left after treatment.[8]

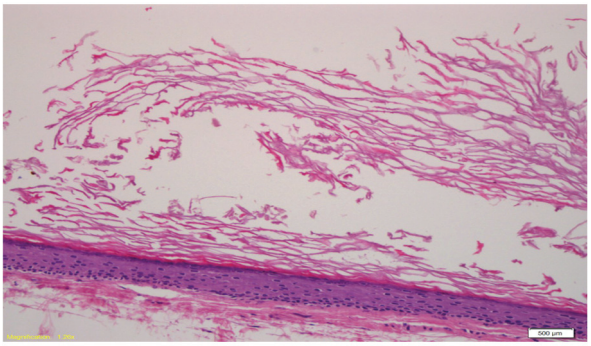

Figure 4: Epidermoid cyst of the penis Capsule wall has stratified squamous epithelium, and there is a lot of red dye cornification in the cavity. Scale bar = 500 μm.

AUTHOR CONTRIBUTIONS

CHJ and HYM cared for the patient and collected clinical information, CHJ drafted the manuscript. LW and CKY performed the MRI. All authors have read and approved the final manuscript.

COMPETING INTERESTS

The authors declare no competing interests.

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