Epidermoid cyst on frenulum of the penis: A case report

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\section*{ABSTRACT}

Epidermoid cyst in the penis is uncommon and only a small number of cases have been reported. We presented a thirty-two-year-old male patient with a case of slow growing, mobilized, non-tender frenulum of the penis mass that developed in 10 years period. Surgery treatment was taken under local anesthesia. Pathological examination was revealed as epidermoid cyst. Care must be given during examination of these lesions to rule out another entity. If there is any indication, complete excision is the best treatment as another treatment may lead to the risk of recurrence.

\section*{Introduction}

Epidermoid cysts are the most common cutaneous cysts and may develop from any parts of the human body. However, epidermoid cyst in the penis is uncommon and only a small number of cases have been reported. These lesions generally do not show any symptoms and the cause of these lesions is unknown but may arise from either acquired or congenital.\textsuperscript{1} We presented a case of a slow growing penile epidermoid cyst located on frenulum of the penis that developed in 10 years period. From our knowledge, this is the first documented case of penile epidermoid cyst from Indonesia.

\section*{Case presentation}

A 32-year-old man came to the surgery clinic with a ten-year symptom of a slow-growing penile nodule. A mobile, elastic and painless mass was found on the right ventral of frenulum of the penis (Fig. 1). The medical history including urinary tract infection, dysuria, hematuria, trauma was otherwise unremarkable. Further thorough physical examination was normal except for the penile nodule. Blood examination for liver and kidney function was otherwise normal, as well as urinalysis and urine culture. Penile ultrasound revealed the existence of well-defined cystic appearance around 3 cm in diameter. Moreover, the cyst was showed to be separated from the erectile tissue as well as urethra. Complete excision of the cyst was performed under regional anesthesia and was continued with circumcision under pa-

\textbf{Fig. 1.} Clinical appearance of penile epidermoid cyst in the frenulum of the penis (A & B).

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tient’s agreement. Physically, the cyst showed a clear jelly-like material and was reported negative both in cytology and culture. The pathology report of the specimen revealed the diagnosis of penile epidermoid cyst. Microscopically, the specimen lined with keratinized stratified squamous epithelial cells. In addition, sub-epithelial revealed fibro-collagen connective-tissue stromal which full of lymphocyte (Fig. 2).

Discussion

Epidermoid cyst has been used interchangeably with epidermal cyst and epidermal inclusion cyst. Even though the cause of penile epidermoid cyst is still unknown, previous studies have reported that this cyst may emerge from abnormal closure of the median raphe during embryo or could be acquired following implantation of external entity, such as injection of epidermal fragments. Some articles reported that median raphe cyst is different existence from epidermoid cyst. Moreover, they believe that median raphe cysts are the sequelae of a fault during embryologic development, particularly in male genitalia. Considering the location, the lesion in our report did not come from the median raphe. Previous literature proposed the criteria for a penile epidermoid cyst, whereby our case fulfilled all criteria they proposed.

Epidermoid cysts in penis may occur in different size and diameter. They are usually appeared solitary; however, they could be multifocal appearance also. The differential diagnosis of penile epidermoid cyst includes steatocystoma, dermoid cyst, teratoma, urethrocutaneous fistula, and urethral diverticula. Although rare, the extension of cyst into the pelvis has been reported. No malignancy has been reported that involving penile epidermoid cyst. Thorough physical examination as well as radiologic examination are necessary to establish the diagnosis and eliminate other entities. The indications of treatment for this lesion include urinary tract obstruction, secondary infection, pain during intercourse, or cosmetic consideration. The best treatment for this lesion is by complete excision as aspiration, simple drainage, or even partial excision may lead to the risk of recurrence.

Conclusion

Epidermoid cyst of the penis is uncommon and may occur in different size. They may appear solitary or multifocal. Care must be given during examination to rule out another entity. If there is any indication to treat these lesions, complete excision is the best treatment as another treatment may lead to the risk of recurrence.

Appendix A. Supplementary data

Supplementary data related to this article can be found at https://doi.org/10.1016/j.eucr.2018.08.021.

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