A 25-year-old man with a dome-shaped translucent nodule on the glans penis

Yi-Shan Liu¹, Jyh-Seng Wang², Tzong-Shiun Li³*

¹Department of Dermatology, E-Da Hospital, I-Shou University, Kaohsiung, Taiwan
²Department of Pathology, Kaohsiung Veterans General Hospital, Kaohsiung, Taiwan
³Department of Plastic Surgery, E-Da Hospital, I-Shou University, Kaohsiung, Taiwan

*Corresponding author. Department of Plastic Surgery, E-Da Hospital, I-Shou University, 1 E-Da Road, Jian-shu Tsuen, Yan-chau Shiang, Kaohsiung County, Taiwan.
E-mail: drjulialiu@yahoo.com.tw

Received: Jul 14, 2009 • Revised: Aug 21, 2009 • Accepted: Oct 5, 2009 Copyright © 2010, Taiwanese Dermatological Association. Published by Elsevier Taiwan LLC. All rights reserved.

Case report

A 25-year-old uncircumcised man presented with a 2-year history of an asymptomatic erythematous papule on the ventral aspect of the penile shaft. The lesion had become a larger translucent nodule 3 days previously. The patient stated that he recently had frequent and vigorous sexual activity with his steady partner. No additional genitourinary symptoms were mentioned. On physical examination, a solitary 1.2-cm dome-shaped translucent and elastic nodule was observed on the ventral shaft of the glans penis (Figure 1). Excision surgery was performed and no recurrence was noted. The histopathology of the specimen is shown in Figure 2.

Figure 1 A single 1.2-cm asymptomatic dome-shaped translucent nodule can be seen on the glans penis.

Figure 2  (A) The dermis contains a cystic lesion lined by epithelial cells (H&E 2×). (B) Cystic spaces in the dermis are lined by several layers of cells with an abundant eosinophilic cytoplasm (H&E, 20×). (C) Decapitation of the cells lining the lumen (H&E, 200×). (D) Immunohistochemical analysis of P63 expression in the nuclei of myoepithelial cells (P63, 200×).
Diagnosis

Apocrine hidrocystoma (AH) on glans penis.

Discussion

Apocrine hidrocystoma (AH), a benign cystic tumor, is most often found on the head and neck, especially at the external canthus of the eye.\textsuperscript{1,2} Although the apocrine glands in humans are mostly distributed in the region of the eyelids, external auditory canal, axilla and on the nipple, AH has also been reported at other sites, such as the shoulder, fingers, and perianal and periumbilical regions. However, it rarely occurs on the genitalia. To our knowledge, only six cases of AH have been reported on the penis, scrotum and major labium.\textsuperscript{3}

AH occurs in any age group and in both sexes.\textsuperscript{1,3} The tumors can have various colors from translucent to skin-colored, erythematous, brown, blue or purple. The size ranges from a few millimeters to more than a centimeter in diameter. Tumors greater than 2 cm in diameter are called giant AH.\textsuperscript{1} Multiple AH is uncommon. The presence of multiple AH has been recognized as a sign of two rare inherited ectodermal dysplasias—Goltz-Gorlin syndrome and Schopf-Schultz-Passarge syndrome.\textsuperscript{3,4} Goltz-Gorlin syndrome, which mostly occurs in males, is characterized by microcephaly, midfacial hypoplasia, malformed ears, microphthalmia, mental retardation, skeletal abnormalities and multiple hidrocystomas.\textsuperscript{3} Schopf-Schultz-Passarge syndrome is an autosomal recessive syndrome associated with multiple eyelid AH, hypodontia, hypotrichosis, palmar-plantar hyperkeratosis, and onychodystrophy.\textsuperscript{4}

AH differs from eccrine hidrocystoma by the presence of decapitation secretion and myoepithelial cells. AH is currently considered an adenomatous cystic proliferation of the apocrine glands,\textsuperscript{1,2} whereas eccrine hidrocystoma is considered a true retention cyst that presents as unilobular cysts that are covered by two layers of cuboidal or flattened cells.\textsuperscript{2} Additionally, eccrine hidrocystoma has a seasonal variation that is absent in AH.\textsuperscript{3}

In the genital area, the differential diagnosis should include median raphe cyst of the penis, acquired lymphangioma, sclerosing lymphangitis,\textsuperscript{2,3} and hidradenoma papilliferum.\textsuperscript{3} Median raphe cyst of the penis, a cyst derived from the endoderm, is a rare disease. It remains asymptomatic until after puberty and appears when infected or traumatized. Histological examination shows that the cyst wall is lined by a typical pseudostratified columnar epithelium varying from one to four cells in thickness with mucous cells and tubuloalveolar mucous glands, but without decapitation secretion and without a row of myoepithelial cells.\textsuperscript{3,5} Acquired lymphangioma tends to occur after alteration of deep lymphatic drainage, especially after an operation. Histologically, multiple dilated lymphatic channels filled with lymphatic fluid or blood are seen in the upper dermis.\textsuperscript{2,3} Sclerosing lymphangitis of the penis usually presents as a serpiginous mass near the coronal sulcus after vigorous sexual activity, and histologically shows hypertrophy of lymphatic vessels.\textsuperscript{2} Hidradenoma papilliferum, occurring in female anogenital regions, is a benign apocrine tumor. It has numerous papillary projections into the cystic spaces and is lined with a single layer of columnar cells with decapitation secretion of the apocrine glands.\textsuperscript{3}

The common treatment for AH is surgical excision of solitary lesions, or incision and drainage followed by destruction of the cyst wall with cauterization.\textsuperscript{2,3} Multiple facial AH can be treated with daily topical 1% atropine ointment.\textsuperscript{3} Carbon dioxide laser vaporization and radical excision of the anterior lamella have been successfully used to remove multiple AH around the eyes.\textsuperscript{3,4} We present a rare case of AH located on the genitalia. Management mainly involves simple excision. However, this case is a reminder that AH should be considered in the differential diagnosis of genital tumors.

References