Pearly Penile Papules

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A 16-year-old white adolescent boy (Fitzpatrick skin type 1) presented with a 2-year history of progressive development of multiple, asymptomatic, fleshy, tiny papules around the coronal rim of the glans penis. The patient was uncircumcised. His past health was unremarkable, and there was no history of venereal exposure. He was anxious and embarrassed by the lesions.

Physical examination revealed 2 rows of multiple, 1 to 2 mm, smooth, pearly-white to flesh-colored, dome-shaped papules located circumferentially around the corona of the glans penis. No lesions were seen elsewhere, such as on the penis or scrotum. The rest of the physical examination findings were unremarkable.

Based on the clinical appearance, a diagnosis of pearly penile papules was made. The patient was reassured of the benign and noninfectious nature of the lesions, and he opted for no treatment.

DISCUSSION

Pearly penile papules, also known as papillae coronae glandis, are benign, asymptomatic, smooth, domed-shaped papules distributed in 1 or more rows usually found on the coronal rim of the glans penis.[1,2] The condition was first described by Littre and Morgani in 1700.[3] The term "pearly penile papules" was coined by Johnson and Baxter in 1964.[4] The condition has also been described in animals including dogs, cats, and chimpanzees.[1]

Pearly penile papules usually develop in postpubertal men, with a peak incidence in the second and third decades of life.[1,5] Thereafter, the incidence decreases with age. The incidence has been estimated from 8% to 38% in adolescent

boys and young adults.[6,7] In one study, the prevalence was 38.3% in men younger than 25 years and 1.4% in men older than 50 years.[6] The incidence is higher in black and uncircumcised men.[1,6-8]

The exact etiopathogenesis is not known. Pearly penile papules are structurally related to angiofibromas.[9] They are generally considered to represent phylogenetic residua from the animal ancestry.[6] There is no association between pearly penile papules and human papillomavirus infection.[10-12]

Histologic findings include a centrally thin and peripheral acanthotic epidermis with mild orthokeratosis, and dilatation of vascular space surrounded by dense connective tissue in the hyperplastic papillary dermis.[13]

CLINICAL MANIFESTATIONS

Pearly penile papules are asymptomatic, small, smooth, soft, flesh-colored, pearly white, yellowish, pinkish, or rarely completely translucent papules.[9,14] They are often noted as an incidental finding. The papules are usually dome- or conical-shaped.[11] The lesions are closely aggregated and range from 1 to 2 mm in diameter and 1 to 4 mm in length.[9,11,15] They are usually uniform in size and shape and are symmetrically distributed.[14]

Typically, the papules occur in single, double, or multiple rows circumferentially distributed on the corona and sulcus of the glans penis.[1,14] They tend to be more prominent on the dorsum of the corona and less prominent toward the frenulum.[9] Profound proliferating papules running radially from the urethral meatus to the corona, spreading all over the glans penis, have been described.[16] Rarely, the papules are found on the penile shaft.[17]

DIAGNOSIS

The diagnosis is mainly clinical. The diagnosis can be aided by dermatoscopy, which shows whitish-pink cobblestone or grape-like appearance in a few rows with central dotted or comma-like vessel structures surrounded by whitish, crescent-shaped rims; they correspond to pathologic findings of a hyperplastic papillary dermis, dilatation of vascular spaces, and mild acanthosis with orthokeratosis, respectively.[13,18] Videodermatoscopy further enhances the diagnostic accuracy, though is seldom warranted.[18] Skin biopsy or referral to a dermatologist is warranted for atypical cases or when the diagnosis is unclear.

The differential diagnosis includes condylomata acuminata, molluscum contagiosum, lichen nitidus, Fordyce spots, and traumatic neuromas of the penis.[11] Compared with pearly penile papules, condylomata acuminata have a cauliflower-like surface, are usually less uniform in size and shape, and are unlikely to be confined to the corona of the glans penis. Typically, molluscum contagiosum presents as discrete, smooth, firm, dome-shaped, waxy papules with central umbilication from which a plug of cheesy material can be expressed. The color can also be pearly white, yellow, flesh-colored, translucent, or red (especially when irritated). Clinically, lichen nitidus presents as minute, discrete, flat-topped, shiny papules, typically less than 3 mm in diameter.[19]

The papules tend to occur on the penile shaft. Although the lesions are often flesh-colored, they may be hypopigmented in dark-skinned individuals. Fordyce spots are enlarged sebaceous glands. Clinically, Fordyce spots appear as asymptomatic, isolated or grouped, minute (pinhead-sized), creamy yellow, discrete papules.

On the penile shaft, these papules are more obvious when the foreskin is stretched or during penile erection. A thick, chalky or cheesy material can sometimes be expressed by squeezing the lesion. Traumatic neuromas of the penis, such as after circumcision, present as skin-colored or erythematous papules at the traumatic site.[20]

Pearly penile papules are benign, noninfectious, and do not affect sexual intercourse. However, the lesions can be a cause of significant anxiety or distress to the patient and his sexual partner because of their appearance or because of misdiagnosis as sexually transmitted diseases such as genital warts.[2,11,14] In a study of 95 men with pearly penile papules, 36 men (38%) had been concerned or worried by their presence, and 20 men (21%) had experienced embarassment.[21]

PROGNOSIS

The prognosis is good as the lesions tend to regress or become less noticeable in some patients at approximately 40 years of age and thereafter.[5,6]

MANAGEMENT

Apart from reassurance of the benign nature of the condition, treatment is usually not necessary.[14,15] For those who desire treatment for psychological and/or cosmetic reasons, treatment modalities include cryotherapy, electrodesiccation, shave excision, carbon dioxide laser, erbium-doped yttrium aluminum garnet (Er:YAG) laser, and nonablative fractionated 1550 nm laser resurfacing.[1,2,5,8,14,15] ■

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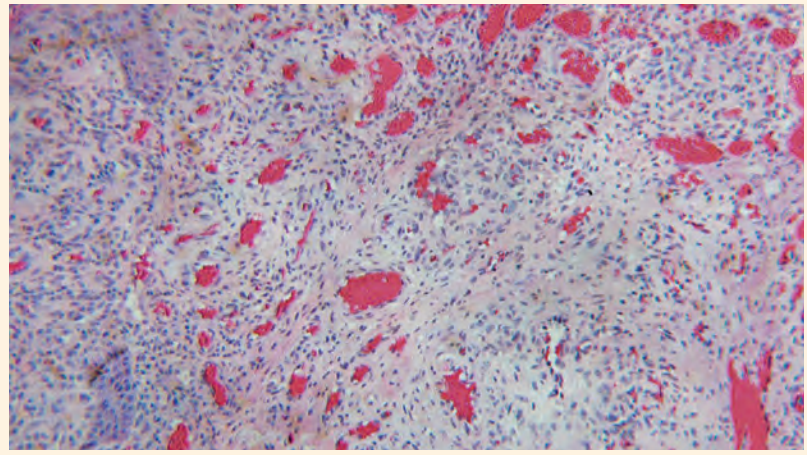

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