An asymptomatic scaly plaque over the glans penis in an elderly male

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CASE HISTORY

A 68-year-old man complained of a two-year history of an asymptomatic, slow-growing lesion over his glans penis. The physical examination revealed a single, well-defined, non-tender, dry, rough, hyperkeratotic, mica-like scaly plaque measuring 3.8 cm × 2.8 cm over the dorsal aspect of the glans penis (Figure 1). There were no other skin lesions or regional lymphadenopathy. The patient had undergone circumcision for phimosis ten years ago. There was no history suggestive of any previous sexually transmitted infections. Serological studies for HIV and syphilis were negative.

Microscopic description

A 4-mm punch biopsy was taken from the lesion. The histopathological examination revealed a hyperkeratotic epidermis with parakeratosis, acanthosis, papillomatosis, spongiosis, and neutrophilic exocytosis. Mild focal atypia was observed. The papillary dermis showed chronic inflammatory infiltrates composed predominantly of lymphocytes and plasma cells admixed with few eosinophils (Figure 2).

What is your diagnosis?

Pseudoepitheliomatous keratotic micaceous balanitis

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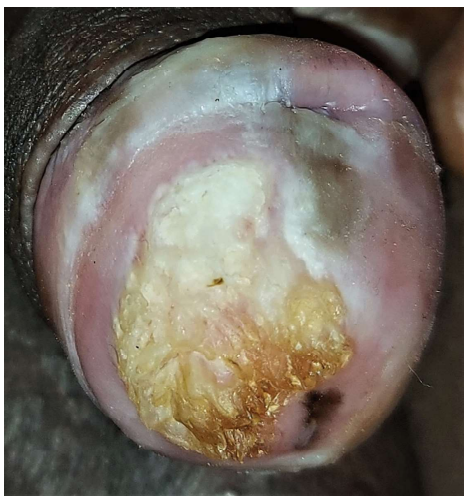

Figure 1. A solitary, yellow, mica-like scaly lesion over the glans penis

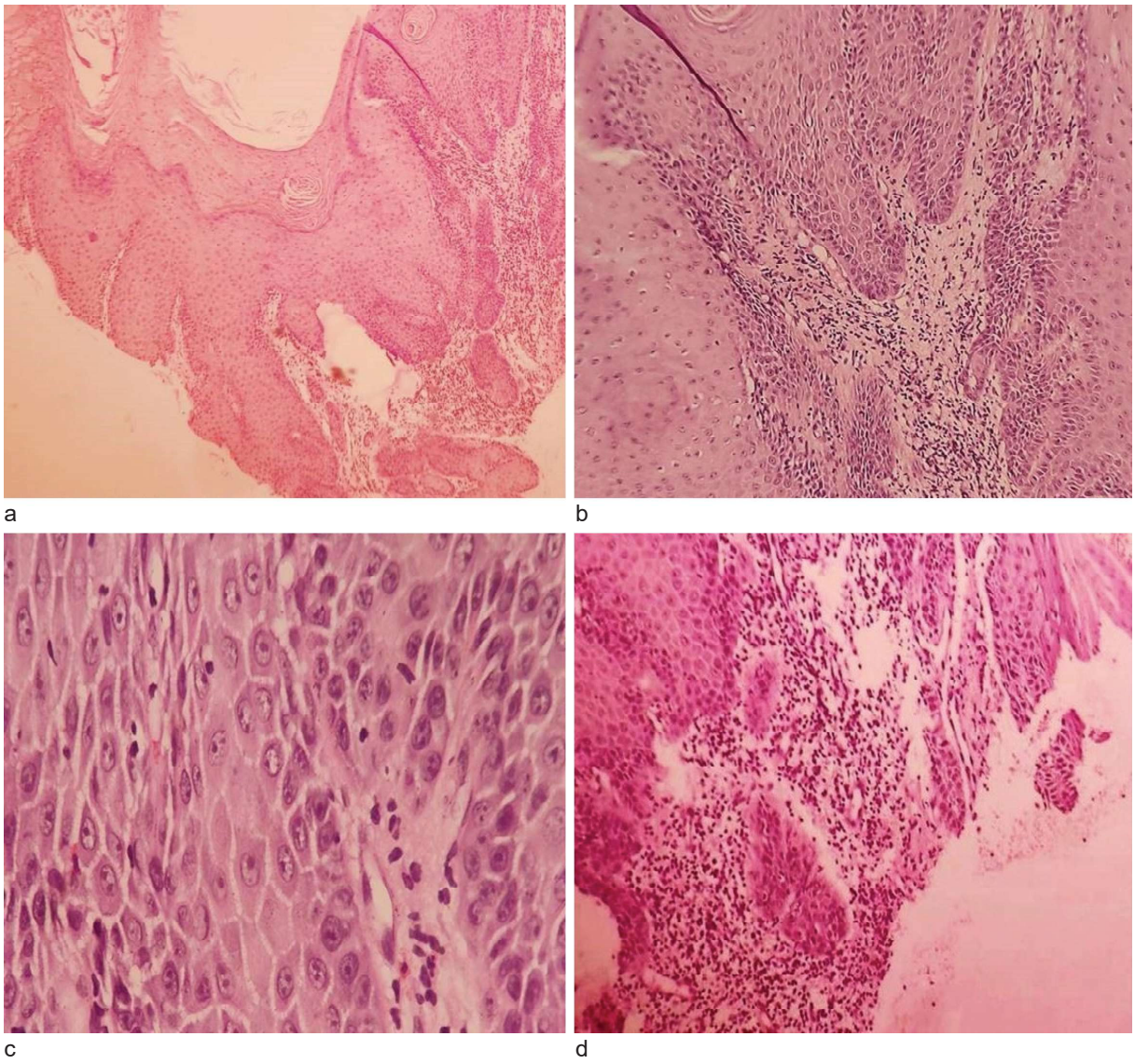

Figure 2. (a) Parakeratotic, hyperkeratotic, acanthotic epidermis showing features of papillomatosis (H&E ×4). (b) Spongiosis with focal neutrophilic exocytosis (H&E ×40). (c) Papillary dermis showing capillary-sized blood vessels and inflammatory infiltrates (H&E ×4). (d) Fragment of tissue showing focal atypia (H&E ×10)

DISCUSSION

Pseudoepitheliomatous keratotic micaceous balanitis (PKMB) was originally described in 1961 by LortatJacob and Civatte [1]. It is an extremely rare penile disease, with few cases reported in the literature. The exact etiopathogenesis of this condition remains elusive, though it is considered a form of pyodermatitis or a pseudoepitheliomatous response to an infection [2]. It commonly affects men above 50 years, particularly those who have been circumcised for their phimosis in their adult life [3]. Chronic irritation and inflammation secondary to long-standing phimosis may predispose to this condition [4].

As a generally asymptomatic and chronic form of balanitis, PKMB gradually develops a silvery-white appearance. The distinct clinical findings are mica-like crusts and a keratotic horny mass over the glans penis. It may be occasionally associated with irritation, burning sensation, maceration, or fissuring [2,5]. Rare clinical presentations include a

nail-like lesion over the glans or a penile horn [2]. The peri-meatal involvement can lead to multiple urinary streams upon micturition, thereby giving a "watering-can penis" appearance [5]. Krunic *et al.* described four stages of the evolution of PKMB; i) initial plaque stage, ii) late tumor stage, iii) verrucous carcinoma, and iv) squamous cell carcinoma and invasion [6].

The condition can also arise from a previously treated squamous cell carcinoma [2]. The differential diagnoses of PKMB include giant condyloma, penile horn, penile psoriasis (early plaque stage), hypertrophic lichen sclerosis, keratoacanthoma, erythroplasia of Queyrat, Buschke-Lowenstein tumor, squamous cell carcinoma, and verrucous carcinoma [2,7]. For an accurate diagnosis, a deep biopsy including the sub-epithelial tissues is required [7].

The chronic clinical course of PKMB is associated with frequent recurrence [2]. Treatment depends on the stage of the disease. During the early stages when there is no histological evidence of malignancy, topical 5-fluorouracil, imiquimod, and cryotherapy can be used. In the malignancy stage, local surgical excision or a partial penectomy is performed depending on the degree of involvement. Alternative therapeutic options include CO_2 laser, shave biopsy plus electrocoagulation, X-ray radiation, and photodynamic therapy [1,4]. Post-treatment biopsies are warranted if topical chemotherapy is utilized [3].

Our case is of interest since the occurrence of PKMB is rare. Physicians should consider the diagnosis of PKMB in the differentials of a hyperkeratotic, scaly plaque over the glans penis in elderly circumcised patients.

Conflic of Interest: None declared.

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