

Short Communication

Pseudoepitheliomatous micaceous and keratotic balanitis - a rare case

Sir, pseudoepitheliomatous micaceous and keratotic balanitis (PEMKB), a rare condition, presents as solitary, well-demarcated, hyperkeratotic plaque with mica-like crust on the glans penis of an elderly male.¹ This condition is considered as a lesion of low-grade malignant potential and has been associated with progression to verrucous carcinoma and squamous cell carcinoma.² Here, we present a classical case of PEMKB in a relatively young patient.

A 33-year-old male presented with asymptomatic silvery white, thick keratotic plaque on glans penis for 18 years. He noticed it first as a small keratotic lesion after circumcision, done at 15 years of his age for pre-existing phimosis. The lesion had been increasing in size since then albeit very slowly. He had been treated by many doctors without any result. Despite being asymptomatic, this condition was a great concern for our patient. His marriage was getting delayed, as he wanted to get lesion free before getting married. Then he presented to us. On examination, thick silvery keratotic plaque of diameter 1.5 cm was found on glans penis (**Figure 1**). There was no underlying induration. Rest of the mucocutaneous and systemic examination, including inguinal lymph nodes, did not reveal any abnormality. Histopathological examination showed extreme hyperkeratosis, irregular acanthosis and sparse inflammation in dermis. There was no evidence of malignancy, but epidermis was notable for hypergranulosis without any koilocytes (**Figure 2**).



Figure 1 Single silvery white hyperkeratotic plaque over glans penis

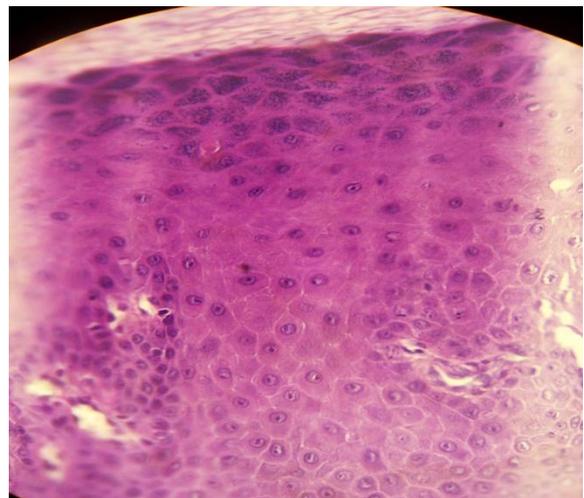


Figure 2 Acanthotic epidermis with hypergranulosis. No evidence of malignancy.

A diagnosis of PEMKB was made based on classical presentation and consistent histopathology. Treatment options were discussed with the patient. Single daily application of 5-fluorouracil (5%) (5-FU) cream was advised as patient did not want to get operated. On first follow up after 1 month, the lesion was somewhat thinner, but not much. We decided on paring the lesion as thick keratotic layer may have been responsible for poor response with 5-FU. Paring was done to reduce

the bulk and 5-FU was continued as before. On 2nd follow up after another 1 month, lesion showed significant decrease in thickness. The response was satisfactory and hence, we decided to continue the same treatment.

Pseudoepitheliomatous micaceous and keratotic balanitis (PEMKB), a rare penile condition, was first described by Lortat-Jacob and Civatte in 1966 in French literature¹ and by Bart and Kopf in 1977 in English literature.² Since then around 14 cases have been reported in English literature.² The exact etiology is not known. Pre-existing phimosis had been reported in many such patients.¹ Earlier, it was considered a benign condition - a variant of lichen sclerosus.³ Most recent literature considers it a low-grade malignant condition.² In general, verrucous carcinoma on genitalia is synonymous with Buschke-Loewenstein tumor, although not all authors agree. Some authors consider PEMKB a verrucous carcinoma as there is considerable overlap between the two.^{2,4,5} This issue is not settled yet; however, progression to verrucous carcinoma and squamous cell carcinoma is well known.³

It is clinically characterized by thick micaceous scaly plaque over the glans penis in an elderly male, over 50 years.^{1,2,3} It is usually solitary and mostly asymptomatic. It usually starts with coronal balanitis then gradually evolves into silvery white scaly plaque covered with mica-like scales.⁶ Keratotic scales resemble the scaling of psoriasis that is why it is termed as micaceous scaling.¹ Often, verrucous excrescences with scaling, ulceration, cracking and fissuring on the surface of the glans are present. Sometimes it may present as cutaneous horn over glans penis.⁶ At times, perimeatal involvement may cause multiple urinary streams on micturition, known as watering-can penis.³

Histopathologically, there is parakeratosis, acathosis, prolongation of rete ridges, and a non-specific dermal inflammatory infiltrate of eosinophils and lymphocytes.^{2,3}

Differential diagnoses include verruca vulgaris, cutaneous horn, erythroplasia of Queyrat, squamous cell carcinoma, and verrucous carcinoma.^{3,6}

Treatment is usually surgical removal by Mohs microsurgical procedure.¹ Radiotherapy and topical 5-FU have been useful. If topical chemotherapy is utilized, post-treatment biopsies are recommended.¹ Extensive surgical excision should be considered, if malignant potential is suspected.³ Recurrence is known.³

PEMKB has been largely reported in elderly patients over 60 years. However, few relatively younger patients in their 30s too (including our case) are described. Interestingly, all such patients had pre-existing phimosis. Based on such observation, we hypothesize that chronic irritation or inflammation might be responsible for this condition. However, further confirmation is required.

Regarding management, 5-FU alone may not be very effective, as thick keratotic layer will impair penetration of the drug. This was evident in our patient on first visit. However, debulking the keratotic layer, done by paring in our case, makes 5-FU an effective treatment modality. Therefore, we recommend debulking the keratotic layer (e.g. by paring) prior to topical treatment with 5-FU.

References

1. James WD, Berger TG, Elston DM, eds. *Andrew's Diseases of the Skin: Clinical dermatology, 10th edition*. Canada: Saunders Elsevier Publications; 2009. P. 657-8.

2. Perry D, Lynch PJ, Fazel N. Pseudoepitheliomatous, keratotic, and micaceous balanitis: Case report and review of the literature. Available at <http://www.medscape.com/viewarticle/575393>. Accessed on 16.01.11.
3. Bunker CB, Neill SM. The genital, perineal and umbilical regions. In: Burns T, Breathnach S, Cox N, Griffiths C, eds. *Rook's Textbook of Dermatology, 8th edition*. West Sussex: Wiley Blackwell Publishers; 2010. p. 71.37-8.
4. Schwartz RA. Buschke-Loewenstein tumor: verrucous carcinoma of the penis. *J Am Acad Dermatol* 1990; **23**: 723-7.
5. McKee PH, Lowe D, Haigh RJ. Penile verrucous carcinoma. *Histopathology* 1983; **7**: 897-906.
6. Pai VV, Hanumanthayaa K, Naveen KN, Rao R, Dinesh U. Pseudoepitheliomatous, keratotic, and micaceous balanitis presenting

as cutaneous horn in an adult male. *Indian J Dermatol Venereol Leprol* 2010; **76**: 547-9.

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