Pseudoepitheliomatous keratotic and micaceous balanitis with malignant transformation

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Abstract

Pseudoepitheliomatous, keratotic and micaceous balanitis (PKMB) is a non-venereal and extremely rare pre-malignant condition characterized by silvery white plaque with micaceous scaling on glans seen in elderly uncircumcised men. Symptoms include phimosis, pain, and interference with sexual activity. Herein we present a young, 40-year-old male with PKMB of 5 years duration with deviation of urinary stream and histology showing acanthosis, hyperkeratosis with features of cellular atypia and abnormal mitosis suggestive of malignant transformation.

Key words: Keratotic and micaceous balanitis, malignant transformation, meatal involvement, Pseudoepitheliomatous

INTRODUCTION

Pseudoepitheliomatous, keratotic and micaceous balanitis (PKMB) is a non-venereal and extremely rare penile disease characterized by slow growing, thick, well demarcated plaques with micaceous scaling on the glans. This condition is mostly seen in uncircumcised elderly male more than 60 years of age. The most common presenting symptoms are phimosis, pain and sexual inactivity. This condition is considered pseudo malignant, premalignant or as low-grade squamous malignancy. This case is rare and unique, often diagnosed as a wart and treated accordingly. Less than 20 cases have been reported until date, very few of them from India.

CASE REPORT

A 40-year-old male presented with thick, hard lesions over the penis of 5 years duration, which were progressive in nature and associated with deviation of urinary stream. In some areas, yellowish white scales were seen with free edges. The scales were easily removable after rubbing, however, the scales recurred. He later developed phimosis for which he underwent circumcision. There was no history of sexually transmitted infection and diabetes mellitus. The patient gave history of use of anti-bacterial and keratolytic creams with no improvement.

Examination revealed thick, non-tender, hard, keratotic yellowish plaques localized on the glans and partially obstructing the external urinary meatus, measuring about 2 cm × 1.5 cm in size with micaceous scaling and fissures at places [Figure 1]. The penile shaft and scrotum were normal. There was no inguinal or femoral lymphadenopathy. General and systemic examination revealed no abnormality.

Blood counts and blood sugar levels were within normal limits. Tests for HIV antibodies, hepatitis B...
surface antigen were negative and Venereal Disease Research Laboratory test was non-reactive. Wedge biopsy from the glans revealed features of acanthosis, hyperkeratosis, parakeratosis with cellular atypia and abnormal mitosis suggestive of malignant transformation [Figure 2].

A diagnosis of PKMB of Civatte with carcinoma in situ was made and the patient underwent a partial penectomy [Figure 3]. He has been asked to follow-up every month to check for any new growths and lymphadenopathy.

**DISCUSSION**

PKMB was first named and described by Lortat-Jacob and Civatte in 1961.[1] The exact etiology is unknown. Later on cases were described in the English literature and until date there are less than 20 cases reported.[2] Only a few cases have been reported since then in India.

It is mainly seen in elderly over 60 years of age,[3] unlike our patient who presented at the age of 40. Though, originally considered to be a benign entity, it has been shown to be capable of invasive growth by Bart and Kopf who considered the lesion to be in intermediate stage between benign hyperplasia and squamous cell carcinoma.[4] It has been regarded as a form of pyodermatitis or pseudoepitheliomatous response to infection.[5]

The pathogenesis of PKMB occurs in four stages
- Initial plaque stage
- Late tumor stage
- Verrucous carcinoma, and
- Transformation to squamous cell carcinoma and metastasis.[6]

Clinically, it presents as a coronal balanitis, which gradually takes on a silvery white appearance, and mica-like and keratotic horny masses formed on the glans. Sometimes ulcerations, cracking and fissuring crusts on the surface of the glans are present. The keratotic scaling is usually micaceous and resembles psoriasis.[7]

Classically, histological examination of these lesions reveals acanthosis, hyperkeratosis, and pseudoepitheliomatous hyperplasia with no cytological atypia.[6] However, in our case there was cellular atypia and abnormal mitosis in addition to the above features.

The treatment of PKMB should be conservative when there is no histological evidence of malignancy.[8] Whenever, there is cellular atypia, local surgical excision produces excellent cosmetic and functional results.[9] When frank malignancy is seen excision with wide margin is the rule.[8]
The case is being reported as a rare non-venereal penile disorder with malignant transformation and having meatal involvement.

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