Case report of co-existing keratotic balanitis and squamous cell carcinoma in a 42-year-old male

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Abstract

Although a number of premalignant and malignant lesions affect the genitalia of men, such as condyloma acuminata, erythroplasia of queyrat, squamous cell carcinoma, hyperkeratotic balanitis is rare and a patient showing both hyperkeratotic and well-differentaited squamous cell carcinoma is rarer. We report the case of a 42-year-old male, who had a hyperkeratotic plaque like lesions over the glans, with accompanied atrophic areas.

Key words: Balanitis, hyperkeratotic, malignant, plaque, squamous cell carcinoma

Introduction

hyperkeratotic balanitis is a rare condition, which mainly affects uncircumscribed elderly males.[1] Although it is usually asymptomatic, accompanied fissuring might lead to irritation and it can psychologically impact the patient. It is considered as benign condition by many but progression to invasive squamous cell carcinoma had been observed.

Case Report

A 42-year-old male patient presented to our outpatient department (OPD) with yellowish hyperkeratotic plaques over the glans penis and associated atrophic areas [Figures 1 and 2]. The atrophic lesion was glistening white in color, with slight surrounding erythema and hyperpigmented borders. Although the lesions were mostly asymptomatic, not associated with any spontaneous bleeding, slight irritation and itching were present, mainly on the atrophic areas. On examination, thick hyperkeratotic yellowish plaques were observed on the glans penis with surrounding erythematous atrophic areas, slight deformity was observed around the urethral meatus. There was no regional lymphadenopathy. Dermascopy was done which showed structureless (yellow arrow) white areas with multiple yellowish (green arrow), bluish or erythematous hues and few visible linear vessels (blue arrow). Biopsy was done from two sites, one from hyperkeratotic plaque and other from the surrounding atrophic area. Differential diagnosis of squamous cell carcinoma, lichen atrophicus, and erythroplasia of queyrat were kept in mind.

Histopathology from the hyperkeratotic plaque revealed dense lymphoplasmocytic lichenoid infiltrate with irregular psoriasiform hyperplasia of epithelium with thickening of rete ridges and a diagnosis of keratotic balanitis was made.

The biopsy from the atrophic lesion showed keratinocytes with individual cell keratinization and formation of occasional horn pearls with incompletely keratinizing centers [Figures 3 and 4]. Other features such as nuclear atypia and altered nuclear/cytoplasm ratio were present. On clinicopathological correlation, a diagnosis of well-differentiated squamous cell carcinoma was made.

Discussion

Hyperkeratotic balanitis is considered a rare condition affecting uncircumcised elderly males, but in our case, the patient was a 42-year-old male, with a history of around 10 months. It presents with a hyperkeratotic plaque with thick micaceous scaling, with slight irritation and burning sensation.[2] The plaque can become extremely thick and can resemble a penile horn. Involvement of the skin around the urethral meatus can lead to multiple micturition difficulties such as watering can appearance of penis.[3]

Its etiopathogenesis is unclear and it is sometimes considered as pseudoepitheliomatous response to an infection. Some degree of overlap with verrucous is observed. Another school of thought considers it to be a variant of lichen sclerosus. In our patient, progression to well-differentiated squamous cell carcinoma has been documented. The patient underwent three biopsies, first

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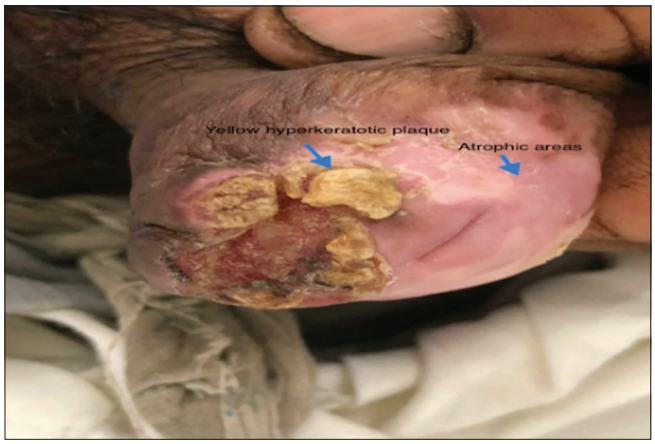

Figure 1: Thick hyperkeratotic yellowish plaques on the glans penis

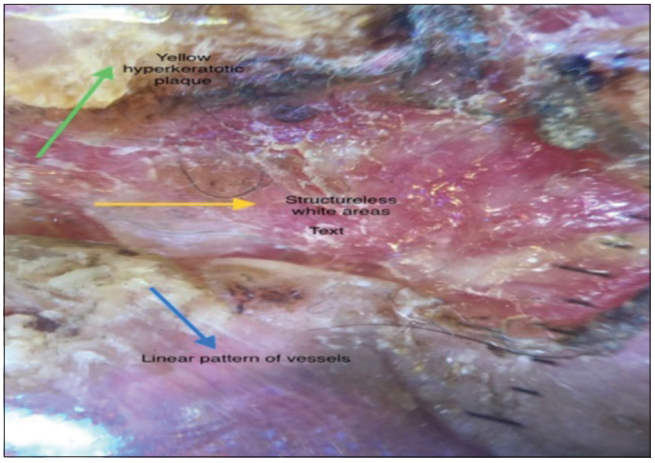

Figure 2: Dermoscopy showing structureless (yellow arrow) white areas with multiple yellowish (green arrow), bluish or erythematous hues

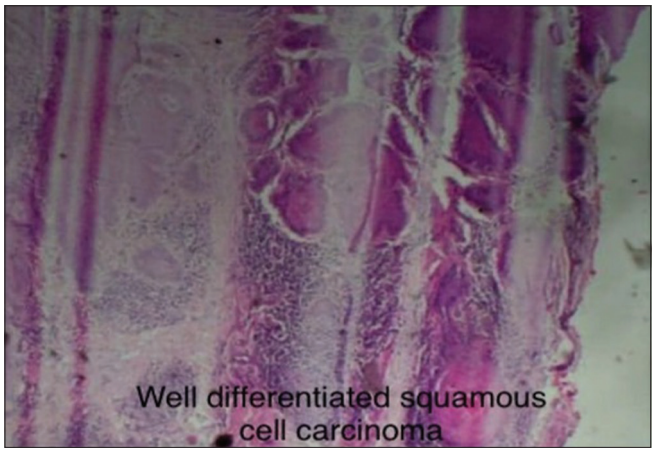

Figure 3: Histopathology from hyperkeratotic plaque showing lymphoplasmocytic infiltrate with psoriasiform hyperplasia

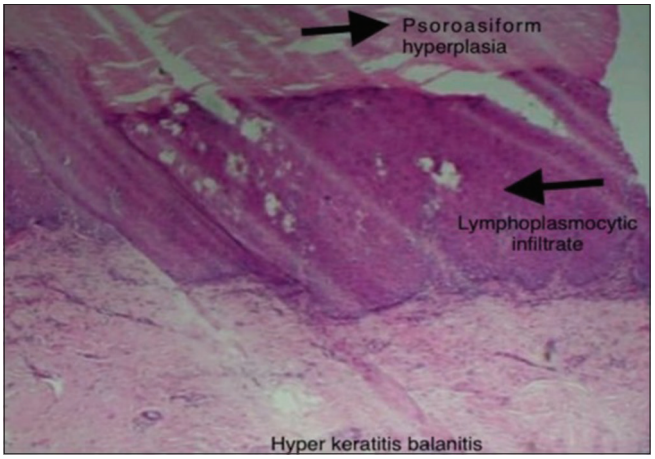

Figure 4: Histopathology from atrophic area showing horn pearls with incompletely keratinizing centre confirming the diagnosis

biopsy showed leukoplakia, while the two biopsies taken at our institute from different sites after about 4 months after the first biopsy, showed well-differentiated SCC and keratotic balanitis. Penile horn, condyloma acuminata, psoriasis, lichen planus of genitalia, keratoacanthoma, etc., are the important differential diagnosis. The patient presented to our OPD after using topical steroids and other oral as well as topical treatments from various physicians.

Treatment modalities include physical therapies such as cryotherapy, surgical excision or topical 5FU, podophyllin resin, steroids, etc.[4] Treatment of well-differentaited squamous cell carcinoma needs surgical excision. Our patient was referred to the surgery department, and the lesion was surgically excised.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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