

Porokeratosis of the scrotum

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ABSTRACT

Porokeratosis (PK) is disorder of keratinization characterized by annular lesions surrounded by raised sharply marginated keratotic borders with a characteristic histopathological finding named cornoid lamella. PK of genitalia is very rare condition and mostly reported among Asian population. The aim of present report is to document a new patient with localized scrotal PK with his father suffering from the same disease in the scrotum.

Key words: Porokeratosis; Cornoid lamella; Genitalia; Neurodermatitis

INTRODUCTION

PK is disorder of keratinization characterized by annular lesions surrounded by raised sharply marginated keratotic borders with a characteristic histopathological finding named cornoid lamella. It consists of a heterogeneous group of disorders inherited in an autosomal dominant fashion. PK has a wide variety of manifestations including classical plaque-type porokeratosis of mibelli, disseminated superficial actinic porokeratosis, linear porokeratosis, porokeratosis palmaris, plantaris, et disseminata and punctate porokeratosis [1].

In Iraq, a special variety of PK has been reported affecting the face only called solar facial porokeratosis [2]. Localized PK of the genitalia is a rare occurrence with 24 cases reported in the literature [3]. The aim of present report is to document a new patient with his father suffering from localized scrotal PK.

CASE REPORT

55-year-old male patient presented to Department of Dermatology, Baghdad Teaching Hospital in 20-8-2012 suffering from severely itchy genital lesions. Since 1982 the patient described a rash on the scrotum which was gradually enlarging in size and increasing in number. Also he mentioned the occurrence of exactly the similar

disease of his father (dead) in genital area and this in favor of autosomal dominant inheritance. All the lesions are persistent with no history of spontaneous resolutions of any them. On examination, numerous papules, nodules and plaques distributed over the scrotum (>40 lesions) with none of them on the shaft of penis (Fig. 1). Those lesions were indurated skin colored while others were dark with typical annular configurations as the borders seemed more active while the center had the tendency towards atrophy. Some of the lesions showed thickened surface with pigmentation



Figure 1: Numerous papules, nodules and plaques distributed over the scrotum.

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without the typical annular ring of the most of the lesions and looked like neurodermatitis (Fig. 2).

The histopathology of the disease as follow: the epidermis was acanthotic with basket weave hyperkeratosis. There was invagination of epidermis by column of keratin reaching the basal layer of epidermis. At the site of invagination there was absence of granular layer. This column consisted of parakeratotic cells, forming a typical feature of cornoid lamella. Many individual dyskeratotic cells were seen under the base of lamella reaching almost the basal layer of epidermis. While the



Figure 2: Some of the lesions showed thickened surface with pigmentation without the typical annular ring of the most of the lesions and looked like neurodermatitis.

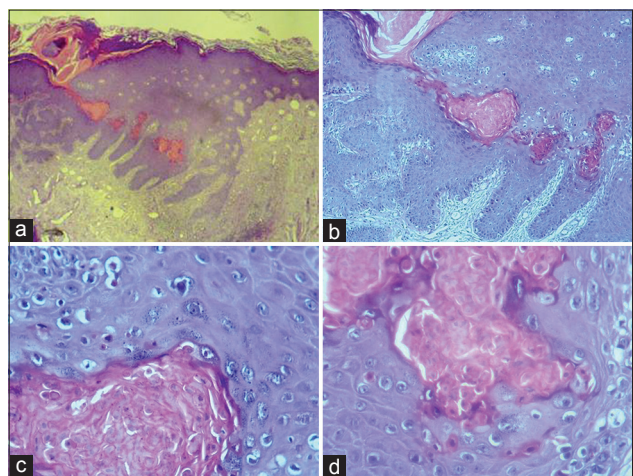


Figure 3: Histopathology showing epidermal acanthosis with basket weave hyperkeratosis. Invagination of epidermis by column of keratin reaching the basal layer of epidermis consisted of parakeratotic cells, forming a typical feature of cornoid lamella. Many individual dyskeratotic cells were seen under the base of lamella reaching almost the basal layer of epidermis. The dermis consisted of many dilated blood vessels with severe inflammatory reaction at the base of cornoid lamella, consisting of many lymphoid cells. [Hematoxylin and eosin stain; original magnification (a) x4, (b) x10, (c) x40, (d) x40.

dermis consisted of many dilated blood vessels with severe inflammatory reaction at the base of cornoid lamella, consisting of many lymphoid cells. In addition pieces of many dartos muscles were observed in the dermis (Fig. 3).

Prior to the study, patient gave written consent to the examination and biopsy after having been informed about the procedure.

DISCUSSION

Porokeratosis of genitalia is very rare condition and mostly reported among Asian population [3-5]. The present report is the first case study that is being reported in Arab region. Family history of the present case was positive as his father had the similar condition and this might support the autosomal dominant inheritance like other types of pk. Itching is a prominent feature of present case and this was similarly reported [4]. There are many dermatosis involving the genital area like psoriasis, lichen planus and dermatitis and these are usually associated with itching. Lichen simplex is commonly superimposed on the top of these skin diseases [6]. Accordingly the present case was diagnosed and treated for 30 years by most of dermatologists as case of lichen simplex chronicus. In most of reported genital pk, the lesions were scanty (1-3) while in our patient, numerous lesions were seen that widely distributed over the scrotum. Malignant transformation of pk had been reported [7], but fortunately no malignant changes were observed in present case.

There are no effective therapies of pk but many treatment had been suggested like topical steroid, cryotherapy, electrocautery, CO₂ laser and others. We recommend CO₂ laser removal as one of most effective modality [8,9], in order to relieve the patient complaint and to prevent the possibility of malignant changes.

Consent

The examination of the patient was conducted according to the Declaration of Helsinki principles.

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