JACOBS PUBLISHERS

OPEN ACCESS

Jacobs Journal of Experimental Dermatology

Case Report

Granular Parakeratosis–Case Report

Rogério Nabor Kondo[1*], Rubens Pontello Junior [2],Renata Maria Pontello [3], Rodrigo Almeida de Medeiros [4]

[1,2] *MD, associate professor, Division of Dermatology, State University of Londrina, Paraná, Brazil*

[3]*MD , private clinic, Londrina, Paraná, Brazil.*

[4]*MD, Dermatopathologist, private clinic, Londrina, Paraná, Brazil*

**Corresponding author: Rogério Nabor Kondo, Associate Professor, Department of Dermatology, State University of Londrina, Paraná, Brazil.*

Received: 07-21-2014

Accepted: 08-28-2014

Published: 08-30-2014

Abstract

A 28-year old woman is having 4 months of hyper pigmented and hyper keratotic plaques associated with discrete pruritus, in the inguinal folds. Histological examination displayed parakeratosis and retention of multiple basophilic granules in the stratum corneum. Diagnosis of granular parakeratosis was confirmed after clinic-histological correlation

Keywords: Keratinocytes; Epidermis; Pathology

Introduction

Granular parakeratosis is a change of keratinization first described in armpits and subsequently in other intertriginous areas [1,2]. The lesions are papules or hyper chronic plaques asymptomatic or mild local pruritus, which are evidenced by histopathological examination with parakeratosis and accumulations of basophilic granule in the stratum corneum [2].

The authors report a case of a woman with inguinal lesions with granular parakeratosis , still not often reported in dermatology .

Case report

A female patient (white) of 28 years old had hyperkeratotic and hypertrophic plaques, with slight itching in groin fold for 4 months (Figures 1 and 2). There is no family history of this disease that is neither having involvement of genital area nor other body areas. The plaque associated with discrete pruritus, but there was no burning sensation. There was no improvement even though she has used Oral fluconazole and Ketoconazole cream and other topical medications. The patient has no history of other drugs for continuous treatment.

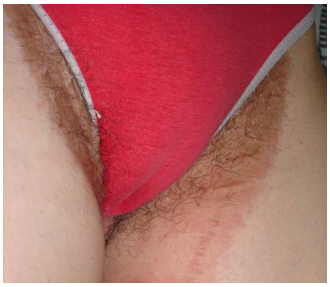

Figure 1. Hiperchromic plaque in the bilateral inguinal.

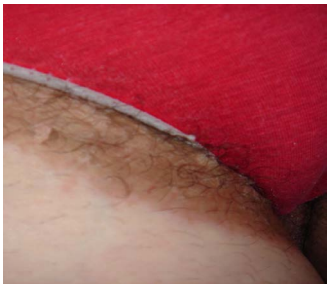

Figure 2. Detail of the plaque.

Histopathological examination of the lesion showed parakeratosis associated with numerous basophilic granules in the stratum corneum (Figure 3).

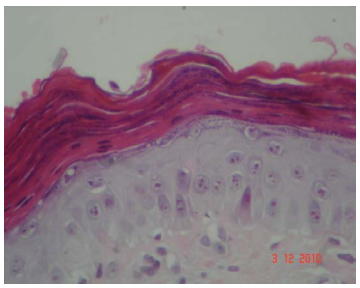

Figure 3. Histopathological exam showed hyperkeratosis, parakeratosis and accumulations of basofilic granule in the stratum corneum (Hematoxylin-eosin 400 x).

After pathological correlation is confirmed, the diagnosis of granular parakeratosis with calcipotriol cream showed improvement in skin color and reduced the itching sensation (Figure 4). There is no reoccurrence after undergoing this treatment.

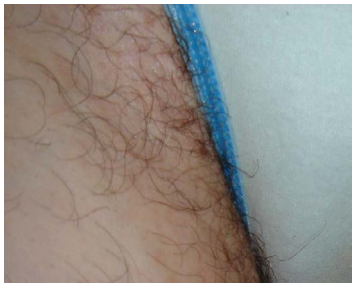

Figure 4. Three weeks after be used topical calcipotriol.

Discussion

The granular parakeratosis (GP) was first described by Northcutt and coworkers in 1991. Four cases of plaque lesions, hypertrophic or erythematous, pruritic, unilateral or bilateral, located in the armpits were reported. Histology shows that existence of hyperkeratosis and persistence of cerato - hyaline granules in the stratum corneum, is called "axillary granular parakeratosis " [1].

After the first report, other reports have been developed. Apart from axillary folds, the lesions were seen in submammary, intermammary, groin fold and perianal regions [2,3]. The term "intertriginous granular parakeratosis ", seems to be more appropriate since the GP may occur on any skin fold [2].

The etiology of GP is still unknown. It has been hypothesized that the failure of degradation of cerato-hyaline granules would be due to defective processing of profilagrin into filagrin. Hyperkeratosis could have resulted from several reasons, such as hyperhidrosis, obesity and friction, which by mechanical irritation, triggers a protective response, determining epidermal proliferation. The antiperspirant, shampoo, ointments and skin creams could have a local irritant action and contribute to PG [2].

Histologically, the stratum corneum being thick and parakeratotic in basophils, and large amount of kerato hyaline granules can be better observed in electron microscopy [2].

The differential diagnosis of GP should be done with keratotic dermatitis affecting skin folds, such as inverse psoriasis, acanthosis nigricans, fungal infections, erythrasma Hailey - Hailey disease, Darier's disease and contact dermatitis [2,3]. Everyone of this hypothesis was thought by authors initially, but granular parakeratosis was done just after the histopathological examination.

As for treatment, calcipotriol, corticosteroids and pimecrolimus and topical tretinoin and oral isotretinoin creams were used [2,4].

In this case, the author expects that the granular parakeratosis resulted due to the usage of creams and ointments. The granular parakeratosis, showed improvement by the usage of calcipotriol cream (Figure 3).

References

1. Northcutt A D, Nelson D M, Tschen J A. Axillary granular parakeratosis. J Am Acad Dermatol. 1991, 24: 541-544.

2. Giraldi S, Abagge K T, Carvalho V O, Muller S, Marinoni LP et al. Paraqueratose granular: relato de seis casos em crianças. An Bras Dermatol. 2006, 81(1): 59-64.

3. Scheinfeld N S, Mones J. Granular parakeratosis: Pathologic and clinical correlation of 18 cases of granular parakeratosis. J Am Acad Dermatol. 2005, 52: 863-867.

4. Webster C G, Resnik K S, Webster G F. Axillary granular parakeratosis: Response to isotretinoin. J Am Acad Dermatol. 1997, 37:789-790.