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CONFLICTS OF INTEREST

The authors have nothing to disclose.

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Porokeratosis Ptychotropica Coexisting with Tinea Corporis

Solam Lee, Sung Jay Choe, Sung Ku Ahn

Department of Dermatology, Wonju Severance Christian Hospital, Yonsei University Wonju College of Medicine, Wonju, Korea

Dear Editor:

A 58-year-old man with no specific medical comorbidities presented with an 8-year history of pruritic oozing plaques on the buttocks and perianal area. Clinical inspection of the buttocks and perianal region showed symmetric, irregular but sharply demarcated, red- to brown-colored verrucous and hyperkeratotic plaques with marginal induration and scales (Fig. 1A). Because the clinical features were suspicious for tinea corporis, a direct fungal smear was performed; it was positive for fungal hyphae. Oral terbinafine and topical sertaconazole were used to control the superficial fungal infection for 4 weeks. However, the response to treatment was poor, so treatment was switched to oral itraconazole, fluconazole and topical flutrimazole cream. After 8 weeks of treatment, the plaque showed slight decrease in scaling and pruritus was improved, but the overall response for the treatment was unsatisfactory. Alternative diagnoses such as psoriasis or porokeratosis were suspected, so punch biopsy of the lesions was performed. H&E staining revealed slight acanthosis and multiple parakeratotic column with disappearance of the granular layer underneath (the cornoid lamella), characteristic histologic findings of porokeratosis ptychotropica (Fig. 2). On the basis of these clinical and histologic fea-

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Corresponding author: Sung Ku Ahn, Department of Dermatology, Yonsei University Wonju College of Medicine, 20 Ilsan-ro, Wonju 26426, Korea. Tel: 82-33-741-0621, Fax: 82-33-748-2650, E-mail: ahnsk@yonsei.ac.kr

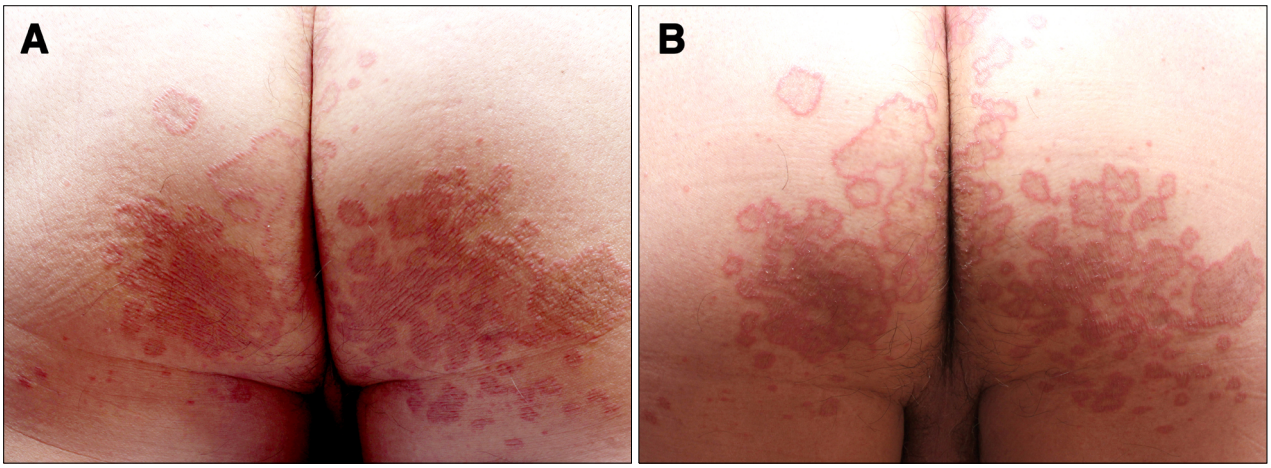

Fig. 1. Confluent and verrucous hyperkeratotic plaques and plaques with marginal induration and scales on the perianal and gluteal region. (A) Pretreatment, (B) after 6 weeks of treatment.

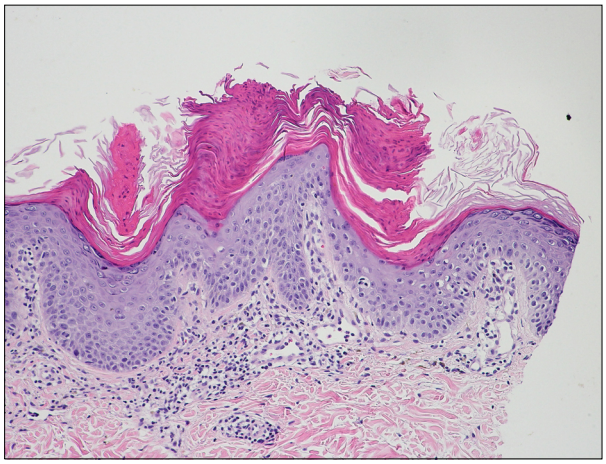

Fig. 2. Multiple parakeratotic columns and disappearance of the granular layer underneath (multiple cornoid lamella). H&E, ×100.

tures, a diagnosis of porokeratosis ptychotropica was established, and topical calcipotriol was administered. The verrucous lesions slightly improved with an appearance resembling typical porokeratosis of Mibelli with a prominent porokeratotic border after 6 weeks of treatment (Fig. 1B).

Porokeratosis represents a heterogeneous group of disorders of keratinization characterized by atrophic lesions with a prominent ridge-like border and histological features of colloid lamella. Several variants of porokeratosis have been described. When the perianal and gluteal regions are involved, this localized form is referred to as porokeratosis ptychotropica, a rare variant of porokeratosis[1,2]. Multiple cornoid lamellae, as seen in this case, are a characteristic finding of this unique form. Various treatment options have been used in previous publications[3-5]. Topical steroids provided symptom relief, but various treatments including systemic, topical agent and physical modalities showed minimal or variable effects. Pitney et al.[5] reported similar post-treatment changes to those seen in this case, including a Mibelli-like appearance, and hypothesized that porokeratosis ptychotropica is the end stage of a local proliferation of Mibelli-like lesions associated with koebnerization and/or lichenification.

In conclusion, this case involved a rare entity, porokeratosis ptychotropica. Although diagnosis in this case was delayed due to the coexistence of a superficial fungal infection, this condition is often misdiagnosed, especially in its early stages due to its rarity. To the best of our knowledge, this is only the second report of porokeratosis ptychotropica in the Republic of Korea. We would like to raise awareness of this disease entity so that it is included in the clinical differential diagnosis of perianal and gluteal skin diseases, especially when tinea corporis and psoriasis are suspected.

CONFLICTS OF INTEREST

The authors have nothing to disclose.

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Glyceraldehyde-Derived Advanced Glycation End Products Accumulate Faster Than N^{ε}-(Carboxymethyl) Lysine

Mami Yokota, Marie Sekita, Yuri Okano[1], Hitoshi Masaki[1], Masayoshi Takeuchi[2], Yoshihiro Tokudome

Laboratory of Dermatological Physiology, Faculty of Pharmaceutical Sciences, Josai University, Saitama, [1]School of Bioscience and Biotechnology, Tokyo University of Technology, Tokyo, [2]Department of Advanced Medicine, Medical Research Institute, Kanazawa Medical University, Ishikawa, Japan

Dear Editor:

Advanced glycation end products (AGEs) are generated by the Maillard reaction between an aldehyde group and an amino group of a protein. The resulting protein degeneration and inflammation are linked to both aging and hyperglycemia[1,2]. Numerous carbonyl compounds are present *in vivo*, including reducing sugars such as glucose or fructose and intermediates of glucose metabolism. Glyceraldehyde (GA), which is an intermediate product of both glycolysis and polyol metabolism, plays an important role in the pathogenesis of lifestyle-related diseases through the formation of glyceraldehyde-derived AGEs (Glycer-AGEs). For example, Glycer-AGEs contribute to microvascular complications of diabetes, i.e., retinopathy and nephropathy and the malignancy of cancer via receptor for AGEs (RAGE) signal transduction followed by enhancement of intercellular ROS production[3-5]. It is thus expected that the presence of Glycer-AGEs is highly related to intracellular metabolism in normal skin cells. However, the presence of Glycer-AGEs in epidermal cells, 95% of which are keratinocytes, has not been shown. We report an immunohistochemical detection of Glycer-AGEs in skin using a Glycer–AGE-specific antibody and the rates of AGE formation with GA and glyoxal (GO).

Skin samples were purchased from Biopredic International (Saint-Grégoire, France), fixed in 4% buffered paraformaldehyde, and embedded in paraffin. After deparaffinization and antigen retrieval by heating in a microwave in 10 mM sodium citrate buffer (pH 6), sections were washed in 0.1% phosphate-buffered saline (PBS) with Tween-20 for 30 min and prepared for immunohistochemistry[6]. Nonspecific staining was blocked by preincubation with 1% bovine serum albumin (BSA) in PBS for 1 h at room temperature. Skin sections were incubated with the anti-Glycer–AGE

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Corresponding author: Yoshihiro Tokudome, Laboratory of Dermatological Physiology, Faculty of Pharmaceutical Sciences, Josai University, 1-1 Keyakidai, Sakado, Saitama 350-0295, Japan. Tel: 81-49-271-8140, Fax: 81-49-271-8140, E-mail: tokudome@ josai.ac.jp