An unusual case report of porokeratosis ptychotropica on the buttocks

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1. Introduction
Porokeratosis is a spectrum of clinical disorders characterized by the histological features of a cornoid lamella. Several variants have been described, including linear porokeratosis, classical porokeratosis of Mibelli, disseminated superficial actinic porokeratosis, and prokeratosis plantaris and palmaris. Interestingly, another rare variant, porokeratosis ptychotropica, localized to the gluteal cleft and the buttocks, was first reported by the Lucker et al in 1995. Herein, we present the case report of a patient with porokeratosis ptychotropica, an unusual diagnosis, and describe the findings of clinical routine, dermoscopy and histology.

2. Case report
A 33-year-old Chinese male presented with a 7-year history of itching papules and plaques on the gluteal cleft and the buttocks. The lesion began as a small brown scaly papule and increasingly coalesced to form larger plaques. There was no discernable history or underlying cutaneous diseases. He did not respond to treatment with topical glucocorticoid and antihistamine drugs. Physical examination revealed a large well-defined reddish brown verrucous plaque located on both buttocks, and satellite papules were found at the inner thigh (Figs. 1 and 2). Demoscopy showed a sharply demarcated annular lesion with a thick, peripheral light brown rim, limiting an erythematous non-atrophic center with regular dotted vessels (Fig. 3). Skin biopsy showed psoriasiform hyperplasia, multiple cornoid lamellae, and an absence of amyloid deposition (Fig. 4). A diagnosis of porokeratosis ptychotropica was considered based on the clinical findings and typical histological features. Treatment with the administration of oral acitretin and application of topical retinoid creams daily was prescribed, but the rash showed no significant improvement during 4-month follow up. We obtained written informed consent from the patient for publication of their data and accompanying images.

3. Discussion
Porokeratosis ptychotropica was previously referred to as verrucous porokeratosis or genitogluteal porokeratosis is rare. Porokeratosis ptychotropica the preferred term, is localized to the gluteal folds, buttocks and genitalia with a butterfly morphology. It increasingly progresses through satellite lesions that develop and coalesce, accompanied by mild-to-severe itching. Moreover, this disease is more likely to occur in males, as in the present case.

To date, several scholars have suggested that numerous factors are associated with porokeratosis ptychotropica, including repeated trauma, organ transplantation, HIV infection and other diseases related to immunosuppression, but its pathogenesis remains unclear. Interestingly, none of these factors were implicated in the present case.
in our case. The prevalence of malignant transformation of the porokeratotic rash is 7.5%, especially the linear and large-sized lesions. Previously, a case of a 6-year-porokeratosis ptychotropica transforming into invasive squamous cell carcinoma has been reported.\[6\] Periodic follow up plays a vital role in the early diagnosis of potential transformation, especially to malignant basal cell carcinoma, squamous cell carcinomas or malignant melanoma.\[7\]

Dermoscopic findings revealed a sharply demarcated annular lesion with a thick, peripheral light brown rim, limiting an erythematous non-atrophic center with regular dotted vessels, which were vital clues suggesting a subtype of porokeratosis.\[8\] but not a specific manifestations of porokeratosis ptychotropica.

Among histological features, the differences between porokeratosis ptychotropica and other variants are in the number and distribution of the cornoid lamellae.\[9\] Cornoid lamellae are present throughout the lesion in porokeratosis ptychotropica, while in the other variants, these are localized to the periphery. Multiple of cornoid lamellae were present in our patient.

Differential diagnosis includes psoriasis, tuberculosis verrucosa cutis, and lichen planus verrucosum. Numerous conventional treatments, including acitretin, corticosteroids, 5-fluorouracil, cryotherapy, and laser therapy are available but their efficacy is limited for porokeratosis ptychotropica.\[10,11\] Surgical excision may be a good option for early-stage lesions.\[10,11\]
In summary, dermoscopic findings are helpful, but the clinical characteristics and histological examinations have significant roles in the definite diagnosis of porokeratosis ptychotropica. This case report is expected to raise awareness of porokeratosis ptychotropica, an identified diagnosis variant of porokeratosis. We also hope to improve diagnostic accuracy and prevent the long-term complications related to the disease.

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The patients in this case have given written informed consent to publication of her case details.

Author contributions
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