

# Follicular plugging: A new dermoscopic feature in porokeratosis

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**Abstract** Porokeratosis is a keratinization disorder characterized by keratotic papule or plaque, which can have an annular appearance due to its thread-like elevated border which expands centrifugally. It has various clinical variants like disseminated superficial porokeratosis, porokeratosis of mibelli, linear porokeratosis, punctate porokeratosis and porokeratosis palmaris et plantaris et disseminata, amongst few others. Cornoid lamella is the most peculiar feature of porokeratosis on histopathology. It is the thin column of tightly packed parakeratotic cells extending from an invagination in the epidermis. Well established dermoscopy features of porokeratosis include white track structure (corresponding to cornoid lamella), red dots and globules, pink white scar like areas and white homogenous areas in centre. We hereby report 2 cases of porokeratosis in whom we observed a new dermoscopic feature- follicular plugging. This could be due to follicular involvement, which is an uncommonly discussed entity of porokeratosis.

**Key words**

Dermoscopy, follicular plugging, porokeratosis.

## Introduction

Porokeratosis (PK) is an epidermal keratinization disorder characterized by papules and annular plaques with a thin white raised border.<sup>1</sup> Common differentials include annular lesions like tinea, annular psoriasis, annular lichen planus, pityriasis rosea and granuloma annulare.<sup>1</sup> Cornoid lamella, on histopathology is the hallmark for its diagnosis. Dermoscopy, a non-invasive tool helps differentiate PK from other disorders. Here, we report a new dermoscopy feature of PK observed in two cases.

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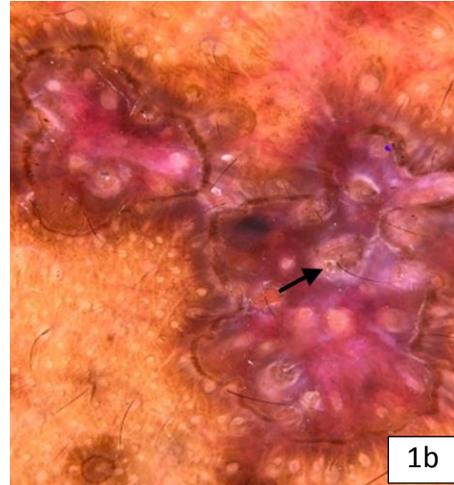
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## Case report

**Case 1:** A 25-year-old female, case of abdominal tuberculosis presented with itchy lesions on face for 8 years which increased in size to form circular configuration, with photoaggravation. Dermatological examination revealed flesh colored to reddish brown papules over centofacial region coalescing to form plaques with central atrophy and thin rim of white raised border (**Figure 1a**). Differential diagnosis of actinic porokeratosis and lupus vulgaris was made. Biopsy for histopathology revealed cornoid lamella composed of thin columns of parakeratotic cells within a keratin-filled epidermal invagination with lymphocytic exocytosis and papillary dermis showing interstitial and perivascular infiltrate. Dermoscopy showed central white to red atrophic area with red dots and a well-defined peripheral brown to white rim around it and



**Figure 1a** Multiple pink to reddish brown papules coalescing to form annular plaques with central atrophy and peripheral raised border.



**Figure 1b** Polarized dermoscopic image (10X Dermlite DL4) showing brown and white peripheral rim with red and white atrophic areas in centre and keratotic follicular plugs.



**Figure 2a** Well demarcated atrophic plaque with erythematous and hyperpigmented areas in between and a peripheral white ridge.



**Figure 2b** Polarized dermoscopic image (10X Dermlite DL4) showed white to red areas, red dots at its periphery and surrounding well defined white rim at its periphery with prominent keratinaceous follicular plugging.

there was marked keratinaceous follicular plugging (**Figure 1b**). Considering the clinical, histopathological and dermoscopic findings, a diagnosis of prokeratosis was made.

**Case 2:** A 27-year-old male patient was concerned about white to red lesions on his nose of 3 years' duration with history of photoaggravation. On clinical examination, there

was a depigmented to erythematous atrophic plaque with some areas of hyperpigmentation with well demarcated fine white scaly ridge on the nose (**Figure 2a**). Differential diagnosis of prokeratosis and discoid lupus erythematosus (DLE) was made. Dermoscopic examination showed white to red areas with red dots at its periphery and surrounding well defined white rim at its periphery. Keratinaceous follicular

plugging was noted (**Figure 2b**). Biopsy for direct immunofluorescence (DIF) and histopathology was performed for confirmation. Based on negative DIF findings, cornoid lamella on histopathology and dermoscopy features a diagnosis of porokeratosis was made.

## Discussion

Porokeratosis presents as keratotic papules and plaques with an annular appearance due to its thread like elevated border which expands centrifugally. This elevated border on histopathology corresponds to a column of parakeratotic cells extending from the epidermis as an invagination which is known as cornoid lamella.<sup>1,2</sup> Cornoid lamella is the hallmark feature of PK. Dermoscopy aids in confirming diagnosis of various diseases. “White track” or “lines of volcanic crater” on dermoscopy corresponds to cornoid lamella on histopathology and is the most striking feature of PK on dermoscopy.<sup>1,2,3,4</sup> Other features like have been described.<sup>2,3,4</sup>

A new dermoscopic feature – keratotic follicular plugging was observed in both our cases which has not been reported, to the best of our knowledge. This could be due to follicular involvement in porokeratosis which is rarely described. Follicular involvement has been noticed with follicular cornoid lamella on histopathology apart from the regular cornoid lamella.<sup>5</sup>

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