

# Folliculitis decalvans: the use of dermatoscopy as an auxiliary tool in clinical diagnosis\*

Foliculite decalvante: o uso da dermatoscopia como ferramenta auxiliar no diagnóstico clínico

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**Abstract:** Folliculitis decalvans is an inflammatory presentation of cicatrizing alopecia characterized by inflammatory perifollicular papules and pustules. It generally occurs in adult males, predominantly involving the vertex and occipital areas of the scalp. The use of dermatoscopy in hair and scalp diseases improves diagnostic accuracy. Some trichoscopic findings, such as follicular tufts, perifollicular erythema, crusts and pustules, can be observed in folliculitis decalvans. More research on the pathogenesis and treatment options of this disfiguring disease is required for improving patient management.

Keywords: Dermoscopy; Hair diseases; Scalp dermatoses

**Resumo:** A foliculite decalvante é uma forma inflamatória de alopecia cicatricial caracterizada por pápulas e pústulas inflamatórias perifoliculares. Ocorre mais comumente em adultos do sexo masculino, envolvendo predominantemente o vértice e a região occipital do couro cabeludo. O uso da dermatoscopia nas doenças dos cabelos e do couro cabeludo melhora a precisão diagnóstica. Alguns achados tricoscópicos como tufos foliculares, eritema perifollicular, crostas e pústulas podem ser observados na foliculite decalvante. Mais pesquisas sobre patogênese e opções de tratamento desta doença desfigurante são necessárias para uma melhor gestão dos pacientes.

Palavras-chave: Dermatoses do couro cabeludo; Dermoscopia; Doenças do cabelo

## INTRODUCTION

Folliculitis decalvans (FD) is an inflammatory presentation of cicatrizing alopecia characterized by inflammatory perifollicular papules and pustules. It accounts for approximately 11% of all primary cicatrizing alopecia cases.<sup>1,2</sup> The disease was first described by Quinquaud in the 19th century. In 1905, Brocq *et al* named Quinquaud's clinical findings as *Folliculitis decalvans*.<sup>2</sup> It occurs predominantly in young and middle-aged adults, with a slight preference for the male gender, and appears to be more fre-

quent in people of Afro-American stock.<sup>3</sup> The etiology of this inflammatory process is not fully understood. However, *Staphylococcus aureus* scalp colonization has been implicated as a contributing factor. It has been suggested that the mechanism of "superantigens" or cytotoxins that bind to class II MHC can play a role in the pathogenesis of the disease.<sup>1,2</sup> The theory of genetic predisposition is supported by reports of FD familial cases.<sup>4</sup> The vertex and occipital areas of the scalp are especially involved. There is usually only one

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focus of the disease, which begins with painful follicular papules and pustules and spreads to the back. A large erythematous, thick and hardened alopecia plaque appears, with a centrifugal progression. The hallmark of FD is the development of scars and areas of follicular pustules. Follicular keratosis, erosions and hemorrhagic crusts can be observed. Some patients occasionally report spontaneous bleeding, pain, itching or a burning sensation.<sup>1,2</sup> Tufted folliculitis is a common finding in FD patients, characterized by multiple hairs emerging from one single dilated follicular orifice (polytrichia) (Figure 1).<sup>5</sup> The patient's detailed clinical history, together with a thorough examination of the entire scalp, are important for diagnosis.<sup>1,2,4</sup> Pictures of the scalp should be taken at the first clinical visit. A sketch, as well as measurements of the scarred areas, is also a useful aid for monitoring disease progression. Bacterial cultures should be performed from an intact pustule, and a nasal swab with antibiotic sensitivity tests should also be done in order to identify an occult *S. aureus* strain.<sup>2</sup> Trichoscopy is a non-invasive method that can be used in the differential diagnosis of most diseases



FIGURE 1: : A fibrotic erythematous alopecia plaque with polytrichia (dolly hair)



FIGURE 2: : A - Trichoscopic exam without interface liquid showing the crusts and scales. B - Trichoscopic exam with interface liquid showing erythema, fibrosis and vessels

affecting the hair and scalp. This method improves diagnostic accuracy and may contribute to a better understanding of the pathogenesis of these disorders.<sup>3,5,6,7,8</sup>

## DISCUSSION

The technique for performing dermatoscopy of the scalp consists of using optical devices with variable increase. For the analysis, dermatologists can use a manual dermatoscope (magnification  $\times 10$ ) or a videodermatoscope equipped with a range of magnifying lenses (from  $\times 20$  to  $\times 1000$ ).<sup>3</sup> Both the trichoscopic dry exam and the one with interface liquid are important, because they show different dermatoscopic findings (Figure 2). The trichoscopic hallmark of folliculitis decalvans is the presence of multiple hairs emerging from one single dilated follicular orifice (polytrichia). Generally, these tufts vary from 5-20 hair shafts per follicular orifice. Additional trichoscopic findings include perifollicular erythema arranged in a starburst pattern, yellowish tubular scaling, crusting and follicular pustules. In long-lasting lesions, ivory-white and milky-red areas without follicular orifices predominate in trichoscopic images. Dots are rare, present in fewer than 20% of patients, and there appears to be no characteristic vascular pattern (Figures 1, 3 and 4).<sup>3,5,7-10</sup> Undertaking dermatoscopy does not replace histopathological examination, and performing a skin biopsy of an active lesion is essential for diagnosing FD. Histopathologically, FD has been characterized as a neutrophilic primary cicatricial alopecia. Early lesions show keratin aggregation and a dilatation of the infundibulum, combined with numerous intraluminal neutrophils. Sebaceous glands are destroyed early in the process, and a predominant neutrophilic, intrafollicular and perifollicular infiltrate can be found. In advanced lesions, this infiltrate can consist of neutrophils, lymphocytes and numerous plasma cells extending into the dermis. The infil-



FIGURE 3: : Polytrichia (1), linear fibrotic bands around hair follicles (2) diffuse erythema (3) perifollicular scales (4)



FIGURE 4: : Perifollicular crusts (5, 6), diffuse erythema and Polytrichia

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trate may also be found around the blood vessels of the superficial and mid-dermis.<sup>1,2</sup> The differential diagnosis can be done with acne keloidalis nuchae, erosive pustular dermatosis of the scalp, lichen planopilaris, discoid lupus erythematosus, pseudopelade of Brocq, central centrifugal cicatricial alopecia, among others.<sup>1,2,6</sup> FD can be very therapy resistant. Therapeutic options include oral and topical antibiotics, oral and topical corticosteroids, antiseptics, oral isotretinoin and dapsone.<sup>1,2,4</sup> More research on the pathogenesis and treatment options of this disfiguring disease is needed for improving patient management. □

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