

Follicular vitiligo: dermatoscopic features of a new subtype of vitiligo*

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Dear Editor,

Follicular vitiligo (FV), a new vitiligo subtype – initially proposed by Ezzedine *et al.* – has a distinctive pathogenesis. It affects the melanocytic reservoir of the hair follicle (HF), producing a primary depigmentation of the HF without initial involvement of the surrounding skin. This is supported by clinical and histopathological findings.¹

Vitiligo is an autoimmune disease that progressively destroys skin melanocytes and involves CD8+ T cell immune response that shares physiopathological similarities with alopecia areata, suggesting that FV is a new and distinct linked entity.¹

The leukotrichia that accompanies skin vitiligo is extensively reported (8.9– 45% of vitiligo cases)² but in contrast with FV, it represents a secondary involvement of the hair (usually vellus hairs) following primary skin involvement. Leukotrichia can be present in any vitiligo subtype although the majority of cases are associated with segmental vitiligo (SV) and related to a poor prognosis.²

Few studies have reported the dermatoscopy of leukotrichia in SV describing white villous hairs.^{2,3} Herein, we report the first case of FV with high magnification dermatoscopic findings.

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A twenty-seven-year-old female, with a six-month history of primary leukotrichia on the upper left eyelashes. Physical examination revealed white eyelashes without adjacent depigmented skin (Figure 1). Dermatoscopy with FotoFinder 2007R2 dermoscope STUDIO (FotoFinder systems GmbH, Germany) shows a complete depigmentation of the eyelashes including the cortex and the medulla of the hair, without any surrounding skin involvement nor affection of distant sites (Figure 2-3).

Vitiligo – the most frequent acquired leukoderma – produces substantial psychological distress. Its prevalence ranges from 0.5 to 2%, without race or sex predilection. Vitiligo is classified into three major forms: Non-segmental vitiligo (NSV), SV and mixed vitiligo. Other uncommon subtypes are: Mucosal vitiligo, with restricted involvement of oral or genital mucosa and FV, where leukotrichia precedes leukoderma. All present with progressive depigmentation of the skin, mucosa or hair respectively.²

To date, only nine cases of FV have been reported.^{1,4} The first case in 2012 was a native African boy with primary involvement of the scalp HF, progressing to a marked generalized hair whitening and depigmented skin patches.¹



FIGURE 1: Clinical image of follicular vitiligo. Leukotrichia in a focal zone of the upper left eyelid. No skin vitiligo is present



FIGURE 2: Digital dermatoscopic features of follicular vitiligo of the upper left eyelid. Under magnification (x20), focal leukotrichia of the eyelashes without skin vitiligo



FIGURE 3: Digital dermatoscopic features of follicular vitiligo of the upper left eyelid. Under dermatoscopy with magnification (x60) we found homogeneous depigmentation of the hair shaft including the medulla and cortex. Perifollicular skin vitiligo is absent

Later in 2016 seven additional cases were described by the same work group with a mean age of 48 years and an average age of 35 years at vitiligo onset. All were males and later presented white skin patches. The majority of FV analyzed cases affected terminal hairs, mainly located on the scalp and eyelashes.¹

In 2017, Gopinath *et al.* reported the first female FV case: A 32-year-old Indian woman with localized short white hair on the scalp (for three months) that later developed scalp skin depigmentation. The leukotrichia on the scalp was confirmed by persistent short white vellus hairs.⁴

We believe that our patient is the second reported case of female FV and the first dermatoscopic description of this new entity showing complete homogeneous depigmentation of the hair. During the entire upper eyelid examination, no dermatoscopic signs of adjacent skin vitiligo were found. In our patient, the vitiligo was only confined to the HF. Moreover, after twenty months of follow up the patient has remained with stable FV, unlike other cases. This confirms that FV by definition is a primary depigmentation of the HF.





Recently, it has been discovered that Treg cells have a central role in HF cycling, promoting stem cell function and HF immune tolerance.⁵ A dysfunction of Treg could clarify FV pathogenesis due to loss of immune tolerance to the stem cell population located in HF and perifollicular homeostasis, explaining the short white hairs reported by Gopinath *et al.*⁴

Dermatoscopy is useful for recognition, assessing the stage of evolution and the status of disease activity in vitiligo.^{2,3} In our case, the high magnification using dermatoscopy allowed us to confirm the specific depigmentation of the hair without compromise of the surrounding skin, supporting the diagnosis of FV. □

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