

Trichoscopy Findings of Frontal Fibrosing Alopecia on the Eyebrows

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Abstract

Background: Frontal fibrosing alopecia (FFA) is a scarring alopecia with lymphocytic immunomodulated immune-mediated scarring alopecia characterized by progressing perifollicular inflammation and receding of the hair frontotemporal hairline 1. It is frequently preceded by lateral eyebrow loss.

Objective: The aim was to describe and characterize dermoscopic features of eyebrow Frontal fibrosing alopecia.

Methods: We performed a descriptive retro-prospective observational study that included all patients diagnosed with DM in dermatology department over 2 years from 2019 to 2021.

Results: The mean age of our patients was 47 years. Most commons trichoscopic features were Hair regrowth in different directions 82%, peripilar erythema 15%, dystrophic hair 71%, perifollicular pigmentation 15%, red dots 13%, white areas 11%, annular granular appearance 6%, Follicular plugs 66%, Fluffy hair 55%, Pili Torti 2%.

Conclusion: Recognition of dermoscopic features of eyebrow FFA is very important and could help in early diagnosis.

Keywords: FFA; Trichoscopy; Eyebrow; Alopecia

Introduction

Frontal fibrosing alopecia (FFA) is a scarring alopecia with lymphocytic immunomodulated immune-mediated scarring alopecia characterized by progressing perifollicular inflammation and receding of the hair frontotemporal hairline 1. It is frequently preceded by lateral eyebrow loss (39%), 2 The loss of eyebrows has a negative effect on quality of life Various conditions ranging from local dermatological disorders to systemic diseases including scarring and non-scarring alopecia trichoscopy appeared as a rapid and non-invasive tool to complete the physical examination in capillary disorders like AFF, rare series reports trichoscopic signs of eyebrow loss in this pathology.

Our objective is to describe the different trichoscopic characteristics of eyebrow loss in FFA, in order to establish an early diagnosis and start treatment of a pathology that can cause scarring alopecia.

Materials and Methods

The objective of our study is to describe the clinical and trichoscopic characteristics of eyebrow loss in AFF in our population. This is a retro-prospective study, conducted in 45 patients of the hair consultation for a period of 3 years. The included

patients had fibrosing frontal alopecia, clinically suspected and histologically confirmed, associated with eyebrow loss. We analyzed dermoscopic images of 45 patients with a diagnosis of FFA, Patients were examined in our outpatient departments. All included patients were women with eyebrow and scalp hair loss. Patients with a history of eyebrow hair removal within the last month or with eyebrow tattooing/ microblading were excluded. All patients had clinical and dermoscopic images obtained with the portable DermLite IV connected to an iPhone. Although the instruments are different, they have comparable image resolution, and both provide high quality images.

Results

The mean age of our patients was 47 years. All patients were female and 66% were menopausal. The duration of the disease varied from 1 to 4 years.

According to clinical history, eyebrow loss preceded scalp hair loss frontal hair loss in 37 patients (82%). Severity of eyebrow loss was estimated to exceed 90% in 8 patients progressing for more than 3 years, 20 patients had loss eyebrow between 50% and 90% and 17 patients had localised loss at the tails of the eyebrows.

Trichoscopy images were taken at different sites on both eye-



Figure 1: Trichoscopy of the eyebrow.

- ▲ torti
- ★ Hair regrowth in different directions
- ★ Red dots
- ▲ Dystrophic hair
- ★ white areas
- Annular granular

Table 1: Trichoscopic findings of eyebrow loss in patients with frontal fibrosing alopecia.

Trichoscopy results	not (%)
Hair regrowth in different directions	37 (82.2 %)
peripilar erythema	20 (44,4%)
dystrophic hair	32 (71,1%)
perifollicular pigmentation	7 (15,5%)
red dots	6 (13.3%)
white areas	5 (11,1%)
annular granular appearance	3 (6,6%)
Follicular plugs.	30 (66,6%)
Fluffy hair	25 (55,5%)
Pili Torti	1 (2,2%)

brows and the trichoscopic signs, which have been objectified (Table 1, Figure 1). Hair regrowth in different directions 82.2%, peripilar erythema 44.4%, dystrophic hair 44.4%, perifollicular pigmentation 15.5, red dots 13.3, white areas (11,1%), annular granular appearance (6.6%), Follicular plugs 66.6, Fluffy hair 55.5 % pilis tortis 2.2%.

Discussion

Frontal Fibrosing Alopecia (FFA) was described by Kossarden in 1994. It is characterised by band-shaped scarring alopecia in the fronto temporal region of the scalp. The incidence of Frontal Alopecia Fibrosa is increasing worldwide and FFA is considered an emerging epidemic. Madarosis (partial or complete eyebrow loss) is observed in most patients with FFA and

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may precede scalp alopecia in more than a third of the cases [1-3]. The classic clinical presentation is recession of the frontal hairline with madarosis, making clinical diagnosis easy, but in the early stages of the disease there may be only have eyebrow loss, which may make the diagnosis of FFA challenging and difficult to differentiate from other conditions. Clinically, eyebrow involvement in AFF is repo be nonscarring [4].

In common with the study by Dr Alessandra Anzai and Dr Rodrigo [4]. Pirmez, in the majority of patients the loss started at the tails of the eyebrows, and the loss of more than 90% of the eyebrows was associated with a disease duration of more than 1 year. Recently, Wa-skiel-Burnat et al [3]. Compared trichoscopic signs of eyebrow loss in AA and FFA with findings in healthy controls. They concluded that dystrophic hairs, white areas and eyebrow regrowth in different directions are the most characteristic signs of FFA.

In, dystrophic hairs in histology of the eyebrows showed lichenoid inflammation or interface changes on the perifollicular epithelium¹⁵. Alessandra Anzai, MD, ⁴ was a frequent sign, present in 92 (60.9%) of patients. They were absent in patients with AA and in healthy controls.⁹ Further studies will clarify whether they are a distinctive marker of FFA on the eyebrows. Recently, Waškiel-Burnat et al [5] reported hair growing in different directions as a sign of FFA in the eyebrows. They hypothesized that it reflects a fibrosing process [5]. In our series eyebrow regrowth in different direction was observed in 37 patients (82.2 %)

Although it is statistically significantly more common in FFA patients (32%) [3], it was also found in 8% of AA patients and 4% of healthy controls.

Therefore, it cannot be a marker for FFA FFA on the eyebrows. Recently, Waškiel-Burnat et al [5].

Ivory-white area corresponding to loss of hair follicles, it is correlated histological with fibrosis of the follicular orifice, this sign has been found in 5 patients have a development duration of the pathology more than 1 year. Nevertheless, in this disease, follicular openings tend to be more reddish correspond more visible vascularization,

Peripillary hyperpigmentation was observed in 20 patients, possibly corresponding to pigmentary incontinence. peri-pilar skin flakes, were present in 5 patients and are histologically consistent with orthokeratotic hyperkeratosis. Other signs have also been found, in particular follicular plugging in 66,6% and were observed in 45% of the studies Alessandra Anzai, MD. ⁴ due to an accumulation of keratin, This is an indication of non-scarring alopecia.

The annular granular appearance was observed in only 3 patients. It corresponds to an extension of the pigmentogenic lichen to the eyebrows, which is often associated with AFF. other signs have been reported, including other signs have been reported in the literature, in particular Blackheads, dystrophic hair, short/thin hair. Trichoscopy of the eyebrow remains a challenge. The limitation of the study is the lack of histological correlation with trichoscopy results and all patients in the study were women.

Pili torti this sign, which was recently described as flattened hair shafts which are twisted at irregular intervals along its long

axis [1, 5]. It may be inherited or acquired, and it could affect scalp hair, eyelashes, eyebrows, and axillary hair. This sign has been reported in one observation as a sign, this is another sign of fibrosis, and, possibly, it explains the poor response showed to treatment with intralesional steroids [6].

Trichoscopy of the eyebrow remains a challenge. The limitation of the study is the lack of histological correlation with trichoscopy results and, all patients in the study were women.

Conclusion

The most common trichoscopic signs of FFA on the eyebrows, which we have to objective in our study are hair regrowth in different directions, hair dystrophy, yellow dots, The peculiarity of our study is to report the trichoscopic signs of madarosis associated with FFA, these signs are different from the involvement of the frontal. on the other hand, the most described sign of frontotemporal hair is characterised by loss of follicular openings, erythema and perifollicular scales and absence of vellus hair. In most cases, trichoscopy of the eyebrows does not resemble trichoscopy of FFA on the scalp. The limitation of our study is that there is no correlation between the trichoscopic sign and histology.

References

1. Olsen EA, Bergfeld WF, Cotsarelis G, et al. Résumé de la North American Hair Research Society (NAHRS) eAtelier parrainé sur l'alopecie cicatricielle, Duke University Medical Center, 10 et 11 février 2001. *J Am Acad Dermatol*, 2003; 48(1): 103-110.
2. Van--o- Galv-an S, Molina-Ruiz AM, Serrano Falco nC, et al. Avant- Tal alopecie fibrosante: une revue mul-ticentrique de 355 patients. *J Am Acad Dermatol*, 2014; 70(4): 670-678.
3. Waškiel-Burnat A, Rakowska A, Kurzeja M, Czuwara J, Sikora M, Olszewska M, et al. The value of dermos-copy in diagnosing eyebrow loss in patients with alopecia areata and fron- tal fibrosing alopecia. *J Eur Acad Dermatol Venereol*, 2019; 33(1): 213-219.
4. Anzai A, Pirmez R, Vincenzi C, Fabbrocini G, Romiti R, Tosti A. Trichoscopic findings of frontal fibrosing alopecia on the eyebrows: study of 151 cases. *Journal of the American Academy of Dermatology*, 2019. doi:10.1016/j.jaad.2019.12.02.
5. Rudnicka L, Olszewska M, Waškiel A, Ra- kowska A. Trichoscopy in Hair Shaft Disor- ders. *Dermatol Clin*, 2018; 36(4): 421-430.
6. Ferrari Bruno, Vincenzi Colombina, Tosti Antonella. Pili Torti as a Sign of Eyebrow Involvement in Frontal Fibrosing Alopecia. *Skin Appendage Disorders*, 2019; 5(6): 393-395. doi:10.1159/000502059.