Perifollicular Erythema as a Trichoscopy Sign of Progression in Frontal Fibrosing Alopecia

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Abstract

Introduction:
Frontal fibrosing alopecia (FFA) in an entity characterized by the recession of the frontotemporal hairline (FTHL) with alopecic scarring change. In recent years there are numerous articles discussing the usefulness of dermoscopy for the clinical diagnosis of different types of scarring alopecia.

Materials and Methods:
We value 79 patients diagnosed with FFA, evaluating some trichoscopic findings described as typical for FFA: Absence of follicular opening, follicular hyperkeratosis, follicular plugs and erythema.

Results:
In a population of 79 women, 100% showed no follicular opening, 72.1% follicular hyperkeratosis, 66.3% perifollicular erythema and 44.8% follicular plugs. Thus, 100% of patients had at least one of the dermoscopic elements described as suggestive of FFA, 53% two of them, 45% three and 27%, all those elements. Perifollicular erythema was present in 95% of cases in which the disease was active.

Conclusions:
We consider that the presence of perifollicular erythema will be a direct marker of FFA activity.

Keywords: Dermoscopy, diagnosis, frontal fibrosing alopecia, pattern

INTRODUCTION

Frontal fibrosing alopecia (FFA) in an entity characterized by the recession of the frontotemporal hairline (FTHL) with alopecic scarring changes, usually accompanied by alopecia in other non-scalp locations. Initially defined as a disease appearing only in postmenopausal women, no hormonal status association was later proven.[1] However, the rest of FFA clinical manifestations such as axillar or eyebrow alopecia, lichen planopilaris, or pruritus appear in a variable frequency, except for the mentioned recession of the hairline present in all patients.[2]

In recent years, there are numerous articles discussing the usefulness of trichoscopy for the clinical...
diagnosis of different types of scarring alopecia,[3] having found this technique as useful in the
differential diagnosis of certain diseases, such as alopecia areata (AA). The presence of scarring
changes, perifollicular papules, yellow and black points and vascular loops as the absence of follicular
opening describe a pattern that could be defined as characteristic for that disease.[4]

Founded on that appreciation, we consider that it would be useful to describe some constant
dermoscopic findings in FFA and if the presence of those findings defines a diagnostic pattern.

MATERIALS AND METHODS

We value 79 patients diagnosed with FFA in the Department of Dermatology of the Virgen Macarena
University Hospital in Seville, Spain, from March 2010 to May 2012. All of them carried a minimum
follow-up period of 12 months, with three monitoring visits every 3 months, where a dermoscopic
photographic control was taken using a canon 450D camera connected to a DermLite® handheld II
hybrid dermatoscope, (3Gen, LLC, San Juan Capistrano, CA, USA, magnification ×10).

Furthermore, all patients performed the same treatment, consisting of a monthly intraleSIONal infiltration
of 10 mg/1 ml triamcinolone acetonide (1 ml/injection) plus twice daily topical application of 5%
minoxidil alcoholic solution and 0.025% clobetasol propionate cream plus 1 mg/day of finasteride per
os. The treatment was maintained for 12 months.

A descriptive observational study was performed considering as variables sex, age and dermoscopic
findings described in the literature as typical for FFA: Absence of follicular opening, follicular
hyperkeratosis, follicular plugs and erythema. It was also determined if the disease was on an active or
inactive phase for each patient in every visit, measuring the receding of the FTHL in centimeters. The
qualitative variables were analyzed using the Chi-square test, with application of the Student t-test for
quantitative variables, after confirming normal distribution with the Shapiro-Wilk test.

We did not consider the presence of other dermoscopic elements as dystrophic hairs, as these are a
common finding in any scarring alopecia.

All data were analyzed using SPSS 15.0 version (SPSS Inc., Chicago, IL, USA).

RESULTS

In a population of 79 women with a mean age of 56.8 years (range: 42.6-71.3), 100% showed no
follicular opening, 72.1% follicular hyperkeratosis, 66.3% perifollicular erythema and 44.8% follicular
plugs. Thus, 100% of patients had at least one of the dermoscopic elements described as suggestive of
FFA, 53% two of them, 45% three and 27%, all those elements.

We also appreciated that perifollicular erythema was present in 95% of cases in which the disease was
active, being this the only element of the pattern that reached statistically significant differences
between the two groups (active vs. inactive disease), (P < 0.01). Patients with erythema also showed
greater recession of FTHL than those who did not have erythema (5.1 cm vs. 3.6 cm, P < 0.05) [Table 1].

| Table 1 |
| FFA trichoscopy signs |

DISCUSSION

Trichoscopy has been shown helpful for the diagnosis of FFA in our series, primarily to establish
differential diagnosis between different types of scarring alopecia.[5] As already was pointed by other
authors, the presence of certain dermoscopic findings can settle a characteristic diagnostic pattern
versus other alopecic disorders, such as AA.[5] this situation does not occur in FFA, basically because
the diagnosis is based on clinical appreciations, mainly on the presence of a receding FTHL.[6]

However, the presence of typical dermoscopic findings would describe a typical diagnostic pattern, as
some authors have recently referred,[7,8,9] but can be also useful to assess if the disease is active or not or if the prescribed treatment is being advantageous.[10,11] In our series, the trichoscopy findings in FFA include absence of follicular openings, follicular hyperkeratosis, perifollicular scaling and perifollicular erythema.[12,13] Perifollicular scaling is better appreciated with the use of polarized dry trichoscopy.[14] [Figure 1]. Broken hair shafts and pili torti can be seen occasionally too. Perifollicular erythema is a characteristic feature of FFA [Figure 2], but not always evident on trichoscopy for being an evolutive sign that is followed by interfollicular erythema [Figure 3]. We also found not visible vellus hairs between lonely hairs.[15] We have appreciated that in those patients whose FFA was in a progression phase, perifollicular erythema was more evident than in those the disease remained stationary, with statistical significance.

Thus, despite the diagnosis of FFA remains primarily clinical, we think that trichoscopy is a useful tool not only for differential diagnosis between FFA and other scarring alopecia, but also as an element to assess disease progression and response to treatment. From the present study, we conclude that the presence of perifollicular erythema will be a direct marker of disease activity.

Footnotes
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