Facial Papules in Frontal Fibrosing Alopecia

Evidence of Vellus Follicle Involvement

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Background: Frontal fibrosing alopecia is considered a particular clinical form of lichen planopilaris that primarily involves the scalp hair over the frontal hairline. Concomitant involvement of vellus at different body sites has recently been reported. To our knowledge, this is the first report on the involvement of facial vellus by effects of the inflammatory process. Unlike the usual non-inflammatory clinical presentation of vellus involvement over other body areas, facial vellus involvement can lead to surface changes that may be recognized both by patients and dermatologists.

Observations: Four patients with typical clinical features of frontal fibrosing alopecia presented with non-inflammatory follicular papules over the face, most often inside the temporal area, and described as “roughness” by the patients. Histologic samples showed lichen planopilaris features involving the facial vellus.

Conclusions: The new concept of frontal fibrosing alopecia as a generalized disease is important for treatment planning and research. Dermatologists must learn to recognize facial surface changes and discuss these with the patients, who may attribute this roughness to aging or hormonal changes associated with menopause. Further studies are needed to determine the prevalence of this involvement in patients with frontal fibrosing alopecia.

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follicular epithelium at the isthmus level, and foreign body reaction to the hair shaft inside the dermis. Testing of pre-auricular specimens showed lichenoid reaction around the follicular infundibulum and isthmus and perifollicular fibrosis (Figure 2B). Both histologic patterns suggested LPP. Direct immunofluorescence of the scalp specimen showed moderate continuous and granulose anti-IgM fluorescence over the basement membrane and cytoid bodies in the papillary dermis. Over the face, DIF highlighted globular cytoid deposits of IgM and IgA in the dermis.

**CASE 3**

A 46-year-old black perimenopausal woman described loss of eyebrows and hair over the frontal hairline during the past year. A few months after the alopecic process started, she noticed progressive roughening of her facial skin (Figure 1D). Hair on her limbs had not been present for 5 years. Biopsies were performed in 3 different sites (frontal hairline, preauricular region, and right forearm). Histologic testing of scalp specimens showed decreased follicular density, chronic perifolliculitis, and perifollicular fibrosis. Skin from her face and arm showed similar findings, also characterizing an LPP alopecic process. Direct immunofluorescence was performed on the scalp and face specimens, and the results showed no abnormalities.

**CASE 4**

A 50-year-old white woman reported hair loss over her frontal hairline for 3 years, as well as decreased density of her eyebrows and eyelashes for 10 years. One year before this consultation, she noticed changes of her facial skin surface and loss of hair on her arms. She attributed both of these effects to hormonal changes (menopause 5 years before the visit to our clinic). Biopsies were per-

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**Table. Demographic and Clinical Features**

<table>
<thead>
<tr>
<th>Patient No./ Race/Age, y</th>
<th>DM</th>
<th>Time Since Menopause, y</th>
<th>Time Since Onset of Frontal Recession</th>
<th>Time Since Onset of Face Changes, y</th>
<th>Eyebrow Involvement</th>
<th>Body Vellus Involvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/White/50</td>
<td>+</td>
<td>1</td>
<td>3 mo</td>
<td>5</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>2/Black/53</td>
<td>−</td>
<td>3</td>
<td>3 y</td>
<td>5</td>
<td>−</td>
<td>+</td>
</tr>
<tr>
<td>3/Black/46</td>
<td>−</td>
<td>&lt;1</td>
<td>1 y</td>
<td>&lt;1</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>4/White/50</td>
<td>−</td>
<td>5</td>
<td>3 y</td>
<td>1</td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>

Abbreviations: DM, diabetes mellitus; +, present; −, absent.
formed on samples taken from her scalp, face, and arm. Histologic evaluation of scalp tissue detected chronic peri-
folliculitis with perifollicular fibrosis. The facial skin speci-
men showed intense lymphoplasmocytic infiltrate with complete destruction of the follicle and only remnants of the piloerector muscle and sebaceous gland (Figure 2C). A similar infiltrate surrounding a fibrous tract could be observed in the skin specimen from the arm. Negative results of DIF testing were observed in all specimens.

**COMMENT**

Frontal fibrosing alopecia is a specific form of scarring alopecia that affects the frontal hairline, most often in post-

tenopausal women. Histologic characteristics of the af-

fected area of the scalp include a follicle-centered lichen-

od inflammatory process similar to that of LPP, and FFA is con-

sidered a clinical variant of LPP. Preferential in-

volvement of vellus and intermediate hair follicles is sup-

ported by some authors.

Eyebrows are affected in 50% to 75% of patients with FFA. Less frequently, eyelashes and hairs in the axilla or pubic area can also be affected. Body vellus involvement has been recognized since 1997,6 manifested almost always as noninflammatory diffuse hair loss. Localized involvement and follicular inflammatory signs, such as patchy alopecia, have been rarely described, and keratotic papules, with minimal pruritus, have been reported only once.

The incidence of nonscalp vellus involvement is not known, with published data showing great vari-

ation. Involvement of facial vellus would be expected from the new concept of FFA as a more general-

ized disease, but that hypothesis has not yet been studied. The only publication10 to report on a patient with FFA and a clinical presentation similar to that of our patients described “keratosis pilaris–like papules” over the forehead and cheeks, but the lesions were not biopsied and no histologic correlation with LPP was established.

To our knowledge, ours is the first report on the in-

volvement of facial vellus of patients with FFA. Unlike the usual “silent” clinical presentation of the vellus in-

volvement over other body areas, facial vellus LPP in-

volvement can lead to surface changes that may be rec-

ognized both by patients and dermatologists.

The clinical picture of FFA involves follicular micro-

papules randomly distributed over the facial skin but readily more visible over the temporal regions. No particu-

lar inflammatory sign (ie, erythema or desquamation) is present, and facial vellus are decreased or absent. Prox-

imities, such as inframandibular and retroauricular areas, may also be affected; this may help differentiate FFA from photodamage. Our patients referred to it as roughening of the facial skin but did not correlate it with their hair problem, usually attributing it to aging or menopause. Histologic testing of facial vellus in these patients showed LLP features similar to scalp FFA and to the body vellus involvement shown in previous studies and in 2 of our patients (patients 3 and 4). Correlation of clini-

cal and pathological findings suggests that follicular pap-

ules correspond to inflamed vellus follicles; we recom-

mend that this be the site of a biopsy in suspected cases of FFA.

No topical treatments were prescribed for the face area despite histologic findings of disease activity, but all patients received therapy with oral medications, such as prednisone, 0.5 mg/kg, which was then tapered to discontinuation, and antimalarials (hydroxychloroquine, 400 mg/d, or chloro-

quine diphosphate, 250 mg/d). After at least 6 months of this treatment, all patients reported improvement of their facial skin surface and the regrowth of vellus.

Similar to other FFA clinical features, the relationship between the change in facial skin and menopause varied greatly in our patients (4 years before or after meno-

pause). The prevalence of this association is not known; however, because 4 patients with generalized FFA were seen in our hair clinic within a relatively short period, we believe it is underdiagnosed.

In conclusion, the concept of FFA as a generalized dis-

ease is important for treatment planning and research. Dermatologists must learn to recognize the subtle changes in facial skin surface of patients with FFA and discuss them with the patients, who may attribute this rough-

ness to aging or hormonal changes of menopause. Further studies are needed to determine the prevalence of skin involvement in patients with FFA.

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**Author Contributions:** Drs Donati and Romiti had full access to all the data in the study and take responsibility for the integrity of the data and the accuracy of the data analysis. Study concept and design: Donati. Acquisition of data: Donati, Molina, and Doche. Analysis and interpretation of data: Donati, Valente, and Romiti. Drafting of the manuscript: Donati, Molina, Doche, and Romiti. Critical revision of the manuscript for important intellectual content: Valente and Romiti. Administrative, technical, and material support: Donati. Study supervision: Valente and Romiti.

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**REFERENCES**


**Tools of the Trade**

This little birdie is completely made from items that I use in my daily practice as a dermatologist (Figure). It was originally supposed to be a peacock, but as it evolved (and given the season), I think that it’s become more turkeylike. Whatever! Happy Holidays!

**Figure.** Head and neck, liquid nitrogen pressure gauge; eyes, liquid nitrogen nozzles; beak, needle holder; hair, hypercator electrodessicator tips; body, stainless steel canister for holding odds and ends; chest, large cotton-tipped applicators; wings, disposable scalpels; tail feathers, disposable biopsy punches; legs, reusable punches; and feet, forceps.

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