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Could baricitinib treat frontal fibrosing alopecia and facial papules?

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Abstract

Frontal Fibrosing Alopecia (FFA) has been considered a variant of Lichen planopilaris (LPP) in which characterized by gradual and progressive hair loss in frontal area of the scalp and facial papules.

Barcitinib, which is known as a less potent inhibitor for both JAK1 and JAK2, has been introduced as an effective option for treating FFA hair loss. However, the data about the influence of baricitinib on the facial papules are limited. Here, we are reporting a case of FFA, whose disease went into remission and her facial papules disappeared by baricitinib within 5 months.

Introduction

Frontal Fibrosing Alopecia (FFA) has been considered a variant of Lichen planopilaris (LPP) which is classified as a lymphocytic cicatricial alopecia [1]. Perifollicular inflammation, due to lymphocytic aggregation, on the dermal-epidermal junction could cause irreversible hair loss in involved areas [2]. The disease mainly involves the frontotemporal hairline and eyebrows among post-menopause women [1].

Recently, several studies have investigated the impact of Janus Kinase(JAK) inhibitors on this disease [2]. Barcitinib, which is known as a less potent inhibitor for both JAK1 and JAK2, has been introduced as an effective option for treating FFA [3]. However, the data about the influence of baricitinib on the facial papules are limited.

Here, we are reporting a case ofFFA, whose disease went into remission and her facial papules disappearedbybaricitinibwithin 5 months.

Case presentation

A 63-year-old woman was referred to our dermatologic clinic with biopsy-proven FFA. Besides her progressive hair loss,she also complained of the eruptions of facial papules on her upper face.

Her past medical history was negative for any disease and she had not received any treatment for her lichen planopilaris formerly.

Alopecia was mostly significant on her frontotemporal area and the skin on her forehead was atrophic (Figure 1A, 1B).

In her scalp examination, the erythema, perifollicular scale, and folliculitis scale were +2, +2, and +1, respectively. The essential investigations were done and oral tofacitinib (Rhofanib®) was prescribed (5 mg twice daily) for her. After 8 months severe hair loss stopped and the scalp scores developed. Thus, the tofacitinib was stopped even though her facial papules had been persistent. Later she was started on isotretinoin 20 mg daily especially for the disappearing of these papules. Four months

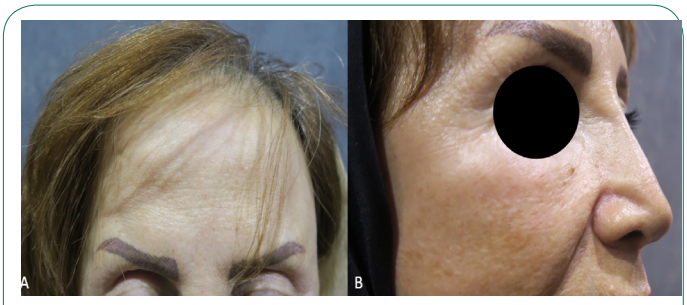

Figure 1: Alopecia in frontal hairline and atrophic skin (A) plus scattered fibrosing papules before starting the treatment (B).

Figure 2: Hairline image (A) and fibrosing facial papules (B) after 5 months treatment with baricitinib 4 mg daily.

later, she came back to our clinic with hair loss complaints and her examination confirmed the disease recurring.

Subsequently, isotretinoin was discontinued and she was started on baricitinib(Intima®) (4 mg daily). After 5 months, significant improvement was found in both scalp and facial papules (Figures 2A, 2B).

Discussion

A 63-year-old woman was referred to our dermatologic clinic with biopsy-proven FFA. Besides her progressive hair loss, she also complained of the eruptions of facial papules on her upper face.

Her past medical history was negative for any disease and she had not received any treatment for her lichen planopilaris formerly.

In this study, we report a case of FFA in which baricitinib had therapeutic effects on both facial papules and scalp involvement after 5 months.

The mechanism of FFA is still unknown; however, it is thought that the follicular destruction in this disease could be the result of the T helper1/JAK-STAT mediated pathway. Thus, targeting this pathway via JAK inhibitors such as tofacitinib and baricitinib could be help to halt the hair loss in FFA [4]. Moreover, in some cases when the treatment failure occurs with one of the drugs, better results could be achieved by switching to the other JAK inhibitor [5]. Recently, a few studies haveconfirmed the impact of baricitinibon FFA hair loss until now [5,6]. However,these studies didn't mention the effect of the drug on the facial papules specifically.

Generally, facial fibrosing papules appear in 14% of patients with FFA and the pathogenesis could be related to either hair follicle inflammation, sebaceous glands enlargement, or both [7].

According to this explanation, if the papules are the result of the enlargement of sebaceous glands, isotretinoin could be an efficient treatment for them as was confirmed by the previous studies. In addition, a recent review studyshowed that oral isotretinoin or alitretinoin significantly (92%) reduces the facial papules of the patients [8].

Further, if the pathogenesis is due to vellus hair involvement, baricitinib could disappear those similar to our case report. Taken together, baricitinib could be considered an efficient treatment for the patient with FFA associated with facial papules. However more studies are required in this field.

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