Lichen planopilaris developed during childhood*

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DOI: http://dx.doi.org/10.1590/abd1806-4841.20174890

Abstract: Lichen planopilaris is a disease that appears with lymphocytic cicatricial alopecia. It is considered a follicular variant of lichen planus. The examination of affected areas shows alopecia with perifollicular erythema and scaling, revealing a predilection for hair follicles. The involvement of children is uncommon, with few reports in this population in the literature. This study presents a clinical case of a male patient of 15 years of age with characteristic lesions of lichen planopilaris.

Keywords: Alopecia; Lichen planus; Pediatrics

INTRODUCTION

Lichen planopilaris (LPP) is a clinical variant of lichen planus (LP) that exhibits lymphocytic scarring alopecia.[1] It may occur in its classic form or as one of its two variants: frontal fibrosing alopecia or Graham-Little-Piccardi-Lassueur syndrome. Frontal fibrosing alopecia is slowly progressive and scarring, and exhibits symmetrical recess of the frontal and temporal hairline.[2] The Graham-Little-Piccardi-Lassueur syndrome is characterized by the triad of multifocal scarring scalp alopecia, lichenoid follicular eruption, and non-scarring alopecia of the axilla and pubic areas.[3]

In LPP, dermatological examination of the affected areas reveals plaques of alopecia with erythema and perifollicular scaling, demonstrating predilection for the hair follicle. Plaques are usually located in the parietal or occipital region of the scalp and grow centrifugally, leaving shiny scarring areas, where follicular ostia are not detected. They are different from chronic erythematous lupus discoid lesions, as they do not exhibit atrophy or hypochromia of the scarring area, nor do they affect the epidermis significantly.[4] Occurrence during childhood is uncommon, as few cases have been reported in the literature.[5,6]

CASE REPORT

A male patient, 15 years of age, presented scarring alopecia that had evolved for one year. Clinical examination revealed two atrophic alopecia plaques on the scalp: the largest one of 4cm in diameter on the parietal region, and the smallest one of 3cm in diameter in the occipital region (Figure 1).

Trichoscopy evidenced erythema and perifollicular scaling on the plaques' periphery (Figure 2). Central areas were slightly erythematous, shiny, and did not exhibit scaling, with an absence of follicular ostia – aspect compatible with scarring alopecia with a predilection for hair follicles.

The biopsy was guided by a dermatoscope in an intense erythema area with scaling around the follicles, where there was probable intense disease activity. The histopathological study of the longitudinal section revealed slight acanthosis on the epidermis and perifollicular lymphocytic inflammatory infiltrate in the dermis, sparing the epidermis, follicular hyperkeratosis and melanin

Received on 29.06.2015
Approved by the Advisory Board and accepted for publication on 20.02.2016
* Work conducted at Hospital Universitário Antonio Pedro, Universidade Federal Fluminense (HUAP-UFF), Niterói, RJ, Brazil.

Financial support: none.
Conflict of interest: none.

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incontinence, in addition to concentric perifollicular fibrosis — findings compatible with LPP (Figures 3 and 4). Topical treatment with clobetasol propionate (0.5 mg/g in gel) on the affected areas, twice a day for three months, was selected. Scalp lesions on the patient improved significantly, with reduction in the alopecia plaque, illustrated by clinical and trichoscopic examination, which revealed regression of erythema and perifollicular frosting (Figure 5).

DISCUSSION

LPP is uncommon in children. Chieregato *et al.* analyzed 30 LPP cases and identified only two cases in children, 9 and 16 years of age, both male.[7] *et al.*, however, in a recent retrospective study of 80 LPP cases, detected that adult women constituted the majority of patients.[8] No cases of the disease during childhood have been reported. Lencastri and Tosti reiterated that cases of scarring alopecia in children reported in literature are scarce, and they consider LPP to be a rare condition in this age group.[6]

In children, it is important to establish the differential diagnostic in relation to keratosis follicularis spinulosa decalvans (KFSD). KFSD is a rare genetic condition, with onset during childhood, which develops with keratotic follicular papules that progress to scarring alopecia on the scalp, eyebrows and eyelashes. Dermatoscopy is similar to that of LPP, although it exhibits follicular pustules.[9]

Pandhi *et al.*, reviewing 316 patients with LP during childhood, detected that 26 exhibited LP lesions on the scalp and 20 exhibited LPP.[5] The authors considered scalp LP to be a different entity from LPP. They reported four cases in which the palpebral area was

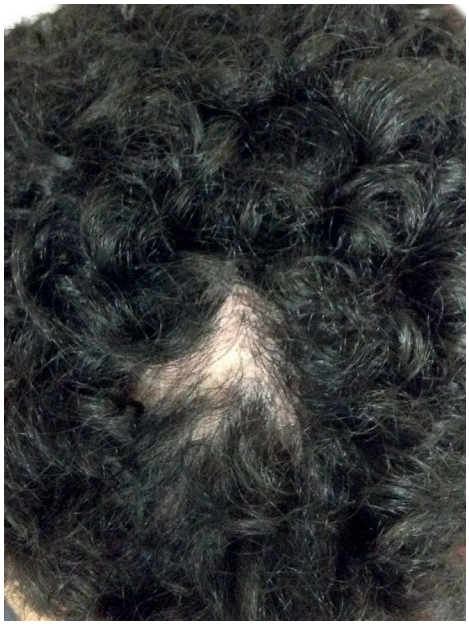

Figure 1: Plaque of alopecia in the interparietal area

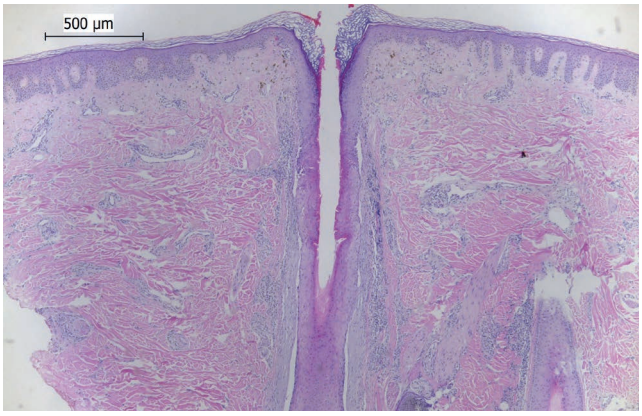

Figure 3: Histological aspect of the scalp biopsy: follicular hyperkeratosis, lichenoid inflammatory infiltrate, and concentric fibrosis affecting the follicular isthmus (Hematoxylin & eosin, X40 — original increase).

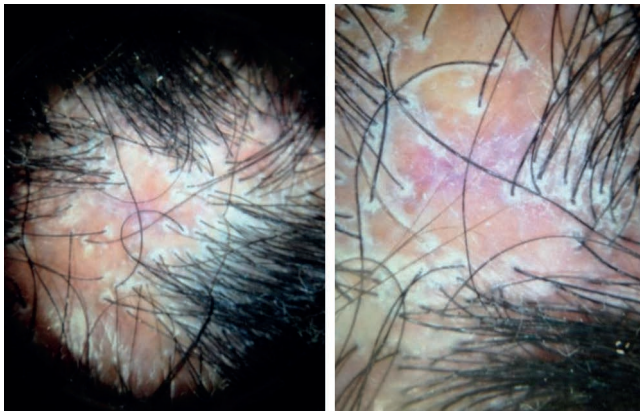

Figure 2: Trichoscopy revealed erythema, reduced follicular ostia, and perifollicular scaling. (X10 - dermatoscope)

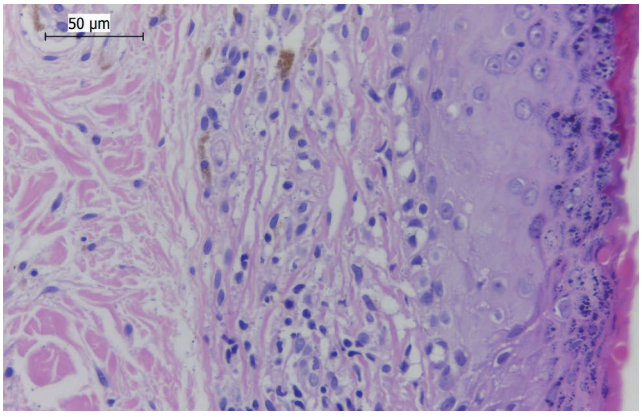

Figure 4: In the detail, vacuolization of the basal layer and melanophages permeable to the inflammatory infiltrate (Hematoxylin & eosin, X40 — original increase)

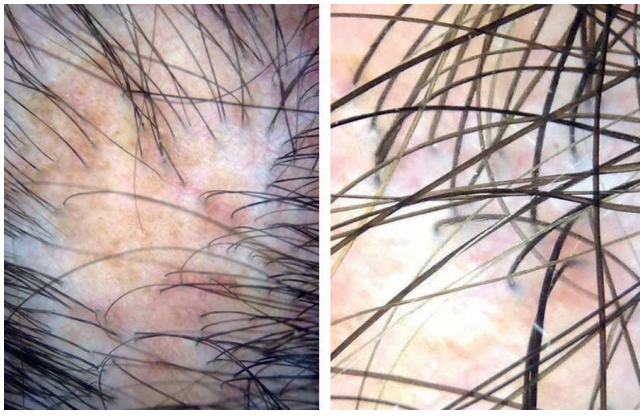

Figure 5: After treatment, improvement in the lichen planopiloris alterations upon trichoscopy (X10 - dermatoscope).

affected, without involving the eyebrows, eyelashes, or armpits. In one of the cases, scalp and palpebral lesions were concomitant of annular lesions on the face.

There is no consensus or defined protocol for treating LPP in children. Systemic drugs used in LPP treatment, such as hydroxycholorquine, corticosteroids, doxycycline, and immunosuppressants in general, should be avoided at first for this age group due to their side effects. Topical treatment with high or medium power corticosteroids and calcineurin inhibitors, such as tacrolimus and pimecrolimus should be preferred.[5,7]

Age is a factor to be taken into account when a more aggressive systemic treatment is chosen; however, the fact that alopecia is scarring and definitive requires the disease be controlled quickly. The use of triamcinolone in intralesional infiltration may be an option to systemic corticotherapy.[5] The patient in question was instructed to apply clobetasol propionate on the lesions, which led to significant improvement.

LPP, therefore, is not common among children. The case presented here is that of scalp LPP in a 15-year-old male patient, with dermatoscopic examination exhibiting typical LPP alterations. The diagnosis was confirmed by the histopathological examination of the lesion's active area. Topical treatment with clobetasol propionate was chosen. LPP cases in children should be reported so that the disease may be better known and a protocol for treatment during childhood be established.❑

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How to cite this article: Góes HFO, Dias MFRG, Salles SAN, Lima CS, Vieira MS, Pantaleão L. Lichen planopilaris developed during childhood. An Bras Dermatol. 2017;92(4):543-5.