Clinical Image

Therapeutic Intervention in Lichen Planus Pilar (LPP): Synergy of Low-Level Laser Therapy and Topical Corticosteroid

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Figure 1. A. Image of the top of the head showing LPP plates before treatment begins. B. Trichoscopic image of one of the LPP plaques prior to treatment with inflammation in alopecia (arrow 1) and erythema and perifollicular keratosis (arrow 2). C. Trichoscopic image after treatment with LPP and topical CE with absence of inflammation (arrow 1) on the scalp and erythema and perifollicular keratosis (arrow 2).

Lichen Planopilaris (LPP) is a scarring form of primary lymphocytic alopecia that leads to the destruction of hair follicles. Few treatments are effective for LPP, making the disease a clinical challenge [1]. Figure 1 illustrates the presentation of lichen planopilaris when diagnosed, with the disease affecting the scalp (Figure 1A), and, through trichoscopy analysis (Figure 1B), erythema and perifollicular keratosis are evident, corresponding to clinical signs of disease activity, located at the edge of one of the alopecia patches. Due to the patient's comorbidities of renal and hepatic disease, which hindered systemic treatment for LPP, daily topical treatment with a corticosteroid tonic (methylprednisolone aceponate 1mg/ml in a vehicle composed of 1 mg of methylprednisolone aceponate in isopropyl myristate and 93.5% alcohol), combined with weekly sessions of low-level laser therapy (LLLT) with a red wavelength (Ecco Hair from Ecco Fibras), using a cluster with 5 laser cannons dispersed over an area of 10cm² and delivering 4 joules per treated area, was suggested for 2 months, totaling 8 sessions lasting 30 minutes each. The choice of therapy was also based on the fact that LLLT has regenerative and anti-inflammatory effects on the skin [2, 3], and topical corticosteroid therapy is widely used for inflammatory dermatoses, including LPP [1, 4]. Trichoscopy analysis before and after treatment (Figure 1B and 1C) revealed improvement in erythema of the affected plaque, as well as a reduction in perifollicular erythema and scaling, indicative of a decrease in active inflammatory processes towards disease control. The patient also...
reported the disappearance of itching and local burning, symptoms associated with disease activity.

As the disease is challenging to manage [1], after the two months of combining LLLT with corticosteroid therapy, treatment continued with the use of an anti-inflammatory tonic containing desonide 0.1% in a vehicle with isopropyl alcohol for another two weeks. After this period, the patient was advised to use an anti-inflammatory hair tonic without corticosteroids, composed of hydroxyresveratrol, lavender and rosemary essential oils, and copaiba vegetable oil. Considering the results obtained during the two months of treatment, it is evident that the patient benefited from the combination of LLLT with corticosteroid therapy. The risk of recurrence calls for ongoing care. Finally, it was observed that even 6 months after using LLLT with corticosteroid therapy, despite the therapeutic change, the patient remained in remission from the disease.

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**References**