

Lichen Nitidus: Favorable Response of 2 Cases to Narrow-Band UV-B Phototherapy

Liquen *Nitidus*: Respuesta Favorable a Fototerapia UVB de Banda Estrecha. Presentación de Dos Casos

To the Editor:

Lichen nitidus (LN) is a rare, chronic, and usually asymptomatic inflammatory disease characterized by numerous small, well-defined, flesh-colored papules.¹ The lesions tend to be localized, and most commonly affect the abdomen, chest, genitalia, flexor areas of the arms, or backs of the hands, but can become generalized in rare cases.

As LN is usually asymptomatic and tends to resolve spontaneously in 1 or more years, it rarely requires treatment. However, generalized LN presents a much more unpredictable clinical course and is more frequently associated with itching²; it therefore requires treatment.

We describe 2 patients with generalized LN whose lesions responded rapidly to phototherapy with narrow-band UV-B.

Two women aged 48 and 22 presented a pruritic rash from 7 years and 10 months previously, respectively, consisting of small, shiny, flesh-colored papules with a generalized distribution affecting the breasts, neck, trunk, back, upper limbs, and thighs (Figure 1). The patients had been clinically diagnosed with eczema and unsuccessfully treated with topical corticosteroids. In both cases, the biopsies showed identical findings consisting of a well-circumscribed subepidermal granulomatous infiltrate composed of lymphocytes and epithelioid cells, delimited by 2 elongated papillary ridges (Figure 2). Once lichen nitidus was diagnosed, narrow-band UV-B phototherapy consisting of 3 sessions per week was initiated. In both patients, the initial dose was 0.15 J/cm², and a favorable response was observed after only 4 and 5 sessions, respectively. The lesions resolved almost entirely after 18 and 12 sessions (Figure 3) and a cumulative dose of 4.41 J/cm² and 3.59 J/cm², respectively. Both patients remained lesion-free after a follow-up of 6 months and 1 year, respectively.

Treatment for LN is indicated in persistent, generalized cases when the lesions are cosmetically unacceptable or accompanied by symptoms, such as itching.³ Various treatments have been used for the condition: topical and oral corticosteroids, antihistamines (astemizole),⁴ acitretin,⁵ low-dose ciclosporin,⁶ itraconazole,⁷ isoniazid,⁸ dinitrochlorobenzene immunotherapy,⁹ and ultraviolet phototherapy.

In the case of LN treatment with ultraviolet radiation, there are isolated case reports of a favorable response to oral psoralen-UV-A (PUVA),³ UV-B/UV-A phototherapy associated with low-dose corticosteroids,¹⁰ and intense exposure to solar UV radiation.²



Figure 1 Patient 1: Typical lichen nitidus lesions (small fleshy papules on the abdomen) before treatment.

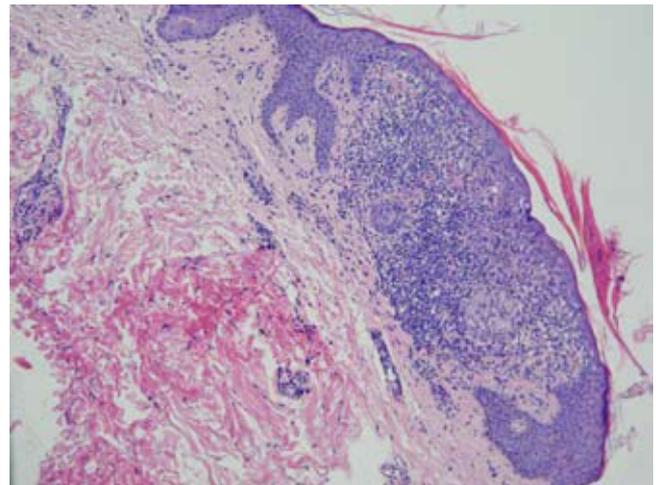


Figure 2 Patient 1: Well-circumscribed subepidermal granulomatous infiltrate, delimited by 2 elongated papillary ridges and composed of lymphocytes and epithelioid cells (hematoxylin-eosin, $\times 20$).



Figure 3 Patient 1: Lesion resolution after 18 sessions of narrow-band UV-B phototherapy.

Narrow-band UV-B phototherapy (311 nm, TL-01) appears to have fewer side effects, less carcinogenic potential, and lower costs compared with PUVA and broad-band UV-B treatment.¹¹ Furthermore, the therapy has been used to treat psoriasis and other diseases that respond to PUVA: vitiligo, atopic dermatitis, cutaneous T-cell lymphoma, polymorphic light eruption,^{12,13} and more recently, lichen planus.¹⁴

LN is more common in young adults and children. In children, however, PUVA treatment is contraindicated. Because narrow-band UV-B phototherapy requires lower cumulative radiation doses than PUVA to obtain remission of the treated disease, it can be safely used in children and pregnant women. In recent years, cases of generalized LN that responded favorably to narrow-band UV-B have been reported.¹⁵⁻¹⁷ Although the precise mechanism of narrow-band UV-B therapy in LN is unknown, it is believed that lymphocyte apoptosis and its effects on cellular immunity modulation play a key role in the success of the treatment.¹⁶ Narrow-band UV-B therapy has an inhibitory effect on antigen presentation because it depletes the number of Langerhans cells, which act as antigen-presenting cells in LN and trigger the cellular immune response. In addition, it induces the production of immunoregulatory substances, such as interleukin-10, α -melanocyte-stimulating hormone (MSH), and prostaglandin E₂, and downregulates the expression of intercellular adhesion molecules (ICAM) such as ICAM-1.¹²

However, the efficacy of phototherapy treatments in LN is hard to evaluate because of the low incidence of the disease, the absence of controlled clinical studies, and the tendency toward spontaneous resolution. In our 2 patients, the rapid improvement of the lesions after a few sessions (in the first case, the lesions had been present for 7 years) supports the therapeutic effect of UV-B therapy. Also, in the second patient, the lesions on the legs, which receive a lower dose of UV-B radiation due to the booth design, required more sessions to obtain a favorable response.

We consider that narrow-band UV-B therapy may be an effective alternative treatment in cases of generalized LN and can be used in children. However, although narrow-band UV-B therapy appears to show a lower carcinogenic potential compared with other types of phototherapy, it should be used with care in children with LN.

Conflicts of Interest

The authors declare no conflicts of interest.

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