

Generalized Granuloma Annulare Responsive to Narrowband UVB

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PRACTICE POINTS

- The generalized variant of granuloma annulare (GA) can be persistent, sometimes lasting years to decades; treatment is not always effective.
- The safety profile and tolerability of narrowband UVB phototherapy make it a suitable treatment option for generalized GA.

To the Editor:

Granuloma annulare (GA) is a common dermatosis that usually presents with dermal papules and annular plaques in a symmetric distribution.¹ The etiology is unknown, but a delayed-type hypersensitivity reaction is the favored pathogenesis. Several systemic associations have been reported with generalized GA including diabetes mellitus, hyperlipidemia, autoimmune thyroiditis, rheumatoid arthritis, and lymphoproliferative malignancies, as well as other malignancies and viral infections such as human immunodeficiency virus and hepatitis C. Localized GA often is self-limiting, but generalized disease can be chronic and progressive. Although asymptomatic in most cases, the lesions can be cosmetically bothersome, and many patients desire treatment. There are few well-controlled studies of treatment, and most are limited to case reports and series. A review of GA treatment noted only 3 randomized studies: 2 relating to photodynamic therapy and 1 to cryosurgery. Well-accepted therapies, such as topical and intralesional corticosteroids, antimalarials, immunosuppressants, antibiotics, and phototherapy, are substantiated by lesser-quality evidence.¹ Phototherapy has been studied for the treatment of GA and other disorders with altered dermal

matrix deposition for which there are limited effective treatment options. UV irradiation promotes degradation of structural components of the dermis and inhibition of collagen production.² Granuloma annulare generally is resistant to therapy. We report a case of generalized GA of long duration that responded well to phototherapy with narrowband UVB (NB-UVB).

A 60-year-old woman presented with generalized GA of 4 years' duration that was confirmed on biopsy on 2 occasions (Figure 1). The lesions were asymptomatic but disfiguring and consisted of extensive pink, thin,

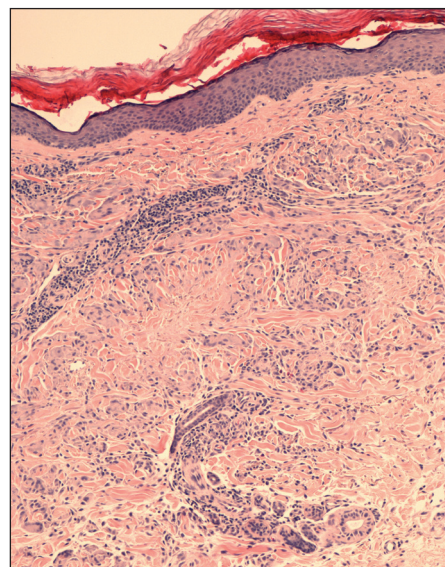


FIGURE 1. Granuloma annulare. Plump histiocytes arranged in a palisaded fashion around foci of incomplete collagen degeneration associated with moderate perivascular lymphocytic infiltrate and basket weave horn in the epidermis (H&E, original magnification $\times 100$).

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annular plaques and papules on the torso, arms, and legs (Figure 2A). Apart from mild depression for which she was being treated with paroxetine and trazodone, she was otherwise healthy without evidence of thyroid disease, hyperlipidemia, or diabetes mellitus. Prior treatments for GA had included tapering courses of prednisone (up to 30 mg/d, tapered by 5 mg every 4 days) and beta-methasone dipropionate cream 0.05%. She was started on NB-UVB therapy 5 times weekly in incremental doses with no adjuvant therapy. After 100 treatments, there was notable improvement with lesions becoming paler and flatter, with some involuting completely (Figure 2B).

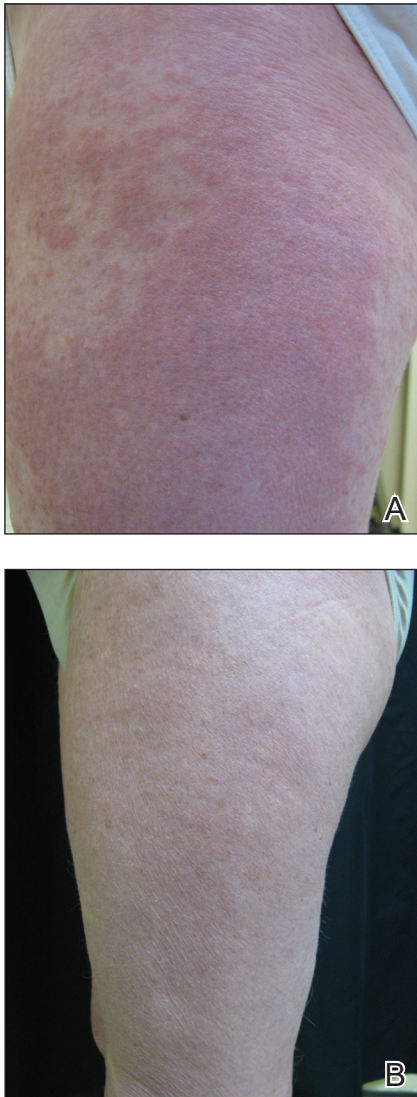


FIGURE 2. Granuloma annulare. A, Extensive pink, thin, annular plaques and papules on the left lateral thigh before phototherapy. B, Notable improvement was seen after 100 narrowband UVB phototherapy treatments.

The frequency of treatment was reduced to 3 times weekly with continued improvement. An NB-UVB device was used containing 48 TL 100W/01-FS72 lamps with a mean irradiance of 2.9 mW/cm². Her starting dose was 90 mJ/cm². The cumulative dose after 100 treatments was 35,600 mJ/cm². Apart from occasional mild erythema, there were no adverse effects.

Inui et al³ described the successful treatment of generalized GA with NB-UVB. A retrospective review of NB-UVB for vitiligo, pruritus, and inflammatory dermatoses included 2 cases of generalized GA that were noted to have only a minimal to mild improvement.⁴ Most reports relating to phototherapy of GA have focused on psoralen plus UVA (PUVA). A retrospective study of 33 patients treated with systemic PUVA showed improvement in two-thirds of patients.⁵ Older studies showed systemic PUVA was effective in 1 patient after 53 treatments⁶ and in 4 patients using a high-dose protocol⁷; topical PUVA was effective in 4 patients after an average of 26 treatments.⁸ Psoralen plus UVA bath was reported as an effective treatment of generalized GA in a child.⁹ UVA1 phototherapy provided good or excellent results in half of patients (10/20) studied with generalized GA; however, discontinuation of treatment resulted in early recurrence of disease.¹⁰ In general, NB-UVB has been preferred over PUVA and UVA1 due to long-term safety, tolerability, and access. Although further clinical trials are needed, our report suggests that NB-UVB could be a useful modality in generalized GA.

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