

LETTER

Generalized granuloma annulare: Narrow-band UVB phototherapy combined with tacrolimus ointment

Dear Editor,

A 67-years-old Caucasian woman with Fitzpatrick skin phototype II sought medical advice for the evaluation of histology-proven generalized granuloma annulare (GGA). Physical examination showed multiple erythematous-violaceous papules and plaques with annular and arciform configuration, localized at the limbs, trunk, and neck, with particular emphasis on the extensor surface of the forearms, Figure 1. Histopathology revealed palisading histiocytic granuloma with central collagen degeneration and mucin deposition.

The patient was successfully treated in another clinic with intramuscular 40 mg triamcinolone acetonide injection every 3 weeks. All the cutaneous manifestations have been characterized by a relapsing remitting trend in the last 2 years, so repeated courses of treatment were necessary to control the disease. Although the complete response associated with systemic corticosteroid she had to stop the treatment because of various metabolic side effects, including

hypertension, osteoporosis, and diabetes mellitus. The patient was switched to high-potency topical corticosteroid; despite the treatment the lesions were persistent and progressive. At this time, our decision was made to start phototherapy. The Granuloma Annulare Severity Index (GASI) score at the start of the treatment was 40.¹ She initiated treatment with narrow-band ultraviolet B (NB-UVB) phototherapy sessions, three times weekly, for 7 weeks using a cabin equipped with TL 01 lamps (Waldmann Medizintechnik, Villingen-Schwenningen, Germany) and concomitant tacrolimus 0.1% ointment applied once daily. The initial dose was 0.20 J/cm², according to the phototype, which was gradually increase of 0.05–0.10 J/cm² every session according to patients' tolerance, and never exceeded 1.25 J/cm². Twenty-one NB-UVB phototherapy sessions were performed (cumulative dose 20.3 J/cm²), with a complete resolution of the lesions except for few elements on the extensor surface of the forearms; the GASI score after treatment was 10, Figure 1B. At

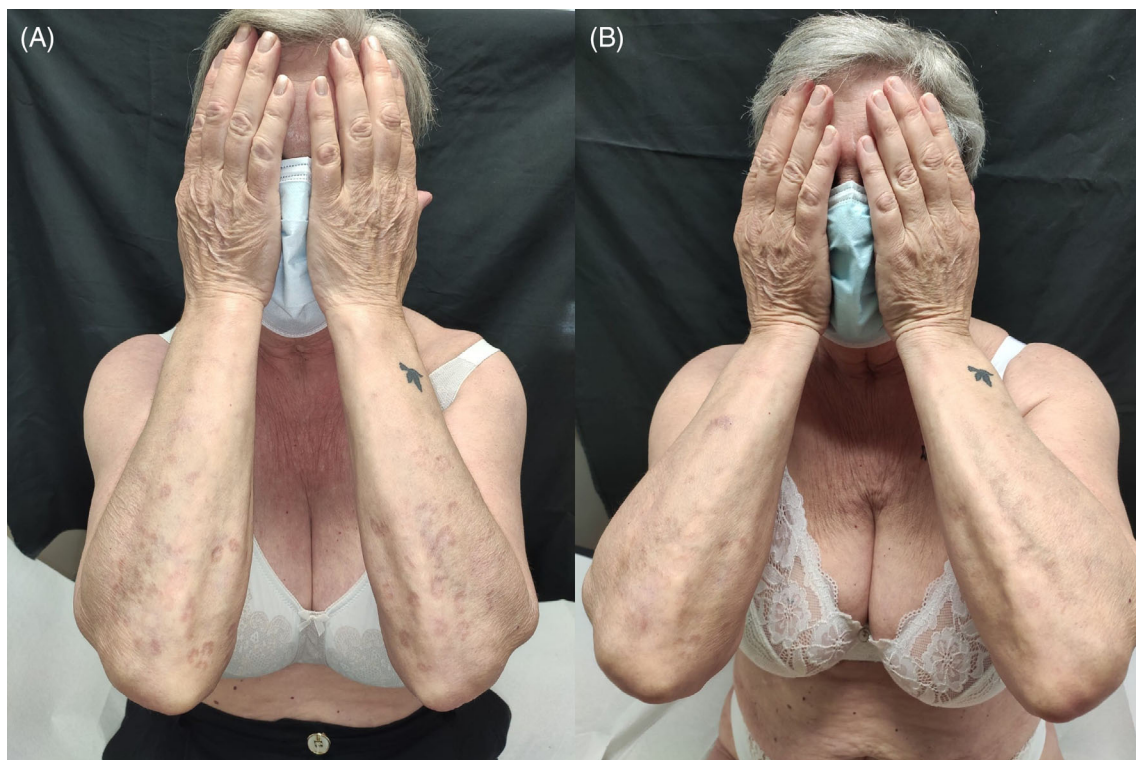


FIGURE 1 (A) Violaceous papules and plaques, prevalently localized on the dorsal aspect of the forearms with annular and arciform configuration. (B). Clear improvement after 21 NB-UVB phototherapy sessions and concomitant tacrolimus ointment

9 months follow up the patient's disease was stable without recrudescence.

Granuloma annulare is a benign inflammatory condition that is characterized by annular patches, plaques, and/or papules. The widespread variant, which is less common, represents a significant issue for most patients because of recurrent or persistent extensive disease often resistant to current treatment modalities.²

Various treatments for GGA have been described in literature, including, but not limited to, topical and systemic corticosteroid, phototherapy, retinoids, calcineurin inhibitors, dapsone, hydroxychloroquine, apremilast.² Many of these treatments carry with them numerous side effects; because GGA is a benign condition, safety profile and cost need to be considered when choosing a treatment regimen. In this regard, NB-UVB proved to be a successful and safe treatment, managing to treat effectively more than 50% of patients and with optimal tolerance and major safety profile compared to PUVA.^{3,4} One issue with this treatment is the length of scheme course. In order to augment the efficacy and reduce the duration of treatment we propose a combined scheme, already in use for the treatment of vitiligo,^{5,6} for rapid and relevant improvement. Moreover, long-term tacrolimus ointment therapy is nonatrophogenic and reverses corticosteroid-induced skin atrophy.

To the best of our knowledge, this is the first known reported case in literature of GGA treated with this NB-UVB and tacrolimus ointment. The efficacy of this therapeutic modality should be determined by a prospective study comparing it to PUVA; additionally long-term safety data and randomized controlled trials on a large numbers of patients are required to prove on a large-scale basis the efficacy of this combination therapy.

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CONFLICT OF INTEREST

The authors declare no potential conflict of interest.

AUTHOR CONTRIBUTIONS

All authors listed above fulfill all four of the following criteria recommended by the ICMJE: (1) substantial contributions to the conception or design of the work; the acquisition, analysis, and interpretation of data for the work; (2) drafting the work or revising it critically for important intellectual content; (3) final approval of the version to be published; (4) agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy

or integrity of any part of the work are appropriately investigated and resolved.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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