

Resolution of Disseminated Granuloma Annulare With Removal of Surgical Hardware

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PRACTICE POINTS

- Disseminated granuloma annulare may occur as a delayed-type hypersensitivity reaction to implanted surgical hardware.
- Resolution may occur following removal of surgical hardware.

To the Editor:

Disseminated granuloma annulare is a noninfectious granulomatous disease of unknown etiology. Reported precipitating factors include trauma, sun exposure, viral infection, vaccination, and malignancy.¹ In contrast to a localized variant, disseminated granuloma annulare is associated with a later age of onset, longer duration, and recalcitrance to therapy.² Although a variety of therapeutic approaches exist, there are limited efficacy data, which is complicated by the spontaneous, self-limited nature of the disease.^{3,4}

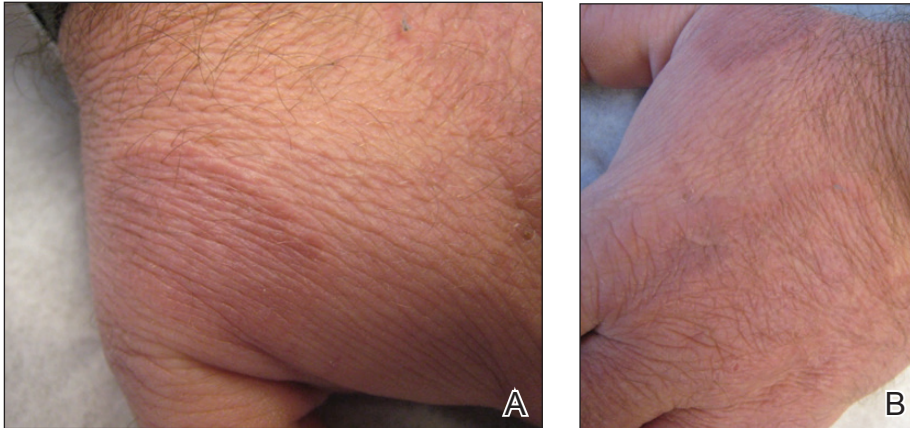
A 47-year-old man presented with an eruption of a thick red plaque on the dorsal aspect of the left hand (Figure). The eruption began 6 weeks following fixation of a Galeazzi fracture of the right radius with a stainless steel volar plate. Subsequent to the initial eruption, similar indurated plaques developed on the left thenar area, bilateral axillae, and bilateral legs. A punch biopsy was conducted to rule out

necrobiosis lipoidica diabetorum and sarcoidosis as well as to histopathologically confirm the clinical diagnosis of disseminated granuloma annulare. Following diagnosis, the patient received topical clobetasol for application to the advancing borders of the plaques. At 4-month follow-up, additional plaques continued to develop. The patient was not interested in pursuing alternative courses of therapy and felt that the implantation of surgical hardware was the cause. To the best of our knowledge, there have been no reports of precipitation of disseminated granuloma annulare in response to surgical hardware. Given the time course of onset of the eruption it was plausible that the hardware was the inciting event. The orthopedist thought that the fracture had healed sufficiently to remove the volar plate. The patient elected to have the hardware removed to potentially resolve or arrest the progression of the plaques. Resolution of the plaques was observed by the patient 2 weeks following surgical removal of the volar plate. At 4 months following hardware removal, the patient only had 2 slightly pink, hyperpigmented lesions on the left hand in the areas most severely affected, with complete resolution of all other plaques. The patient was given topical clobetasol for the residual lesions.

Precipitation and spontaneous resolution of disseminated granuloma annulare following the implantation and removal of surgical hardware is rare. Resolution following hardware removal

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A thick red plaque on the dorsal aspect of the left hand (A and B).

is consistent with the theory that pathogenesis is due to a delayed-type hypersensitivity reaction to an inciting factor.⁵ Our case suggests that disseminated granuloma annulare may occur as a delayed-type hypersensitivity reaction to implanted surgical hardware, which should be considered in the etiology and potential therapeutic options for this disorder.

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