

Generalized granuloma annulare presenting as arcuate dermal erythema

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SUMMARY

Generalized granuloma annulare (GGA) is an uncommon cutaneous disease of unknown origin, characterized by numerous flesh-colored to erythematous papules with or without annular configuration. Clinical associations of GGA with diabetes mellitus, thyroid diseases, malignancies, AIDS, and chronic hepatitis C virus infection have been reported. Therapy has been attempted with various modalities with moderate efficacy. We report a case of GGA presenting as arcuate dermal erythema with excellent therapeutic response to corticosteroid therapy (a short course of intramuscular corticosteroids, a prolonged low oral dose, and topical corticosteroids).

Introduction

Granuloma annulare (GA) is a degenerative disease of the skin characterized by focal degeneration of collagen with surrounding areas of reactive inflammation and fibrosis. Clinically GA presents as localized, generalized, subcutaneous arcuate dermal erythema or perforating lesions (1). Approximately 15% of patients have more than 10 lesions and are thus considered to have GGA. Arcuate dermal erythema is a rare form in which annular and circinate erythematous lesions that resemble erythema multiforme, erythema migrans, or erythema annulare centrifugum are present. In such patients the papular quality is less obvious than the erythema and diagnosis is usually made by biopsy rather than by clinical inspection. Treatment of GGA has been attempted with topical and oral

glucocorticoids, hydroxychloroquine, dapsone, cyclosporine, cryosurgery, retinoids, and PUVA therapy (2, 3). Localized and solitary lesions of GA usually resolve but resolution is less likely to occur with diffuse disease.

Case report

A 62-year-old woman with a 1-year history of an asymptomatic eruption on the skin was admitted to the Department of Dermatology. This condition initially began 1 year prior with a few small annular plaques on the wrists. Physical examination revealed symmetric confluent areas of violaceous erythema with circinate borders that were slightly raised and a bit more livid on the legs and trunk (Figs. 1, 2). These erythematous lesions resembled erythema annulare centrifugum and the papular quality was

KEY WORDS

generalized
granuloma
annulare,
arcuate dermal
erythema



Figure 1. Confluent areas of violaceous erythema on the legs.



Figure 2. Confluent areas of violaceous erythema on the trunk.



Figure 3. Symmetrically distributed erythematous papules on the back.

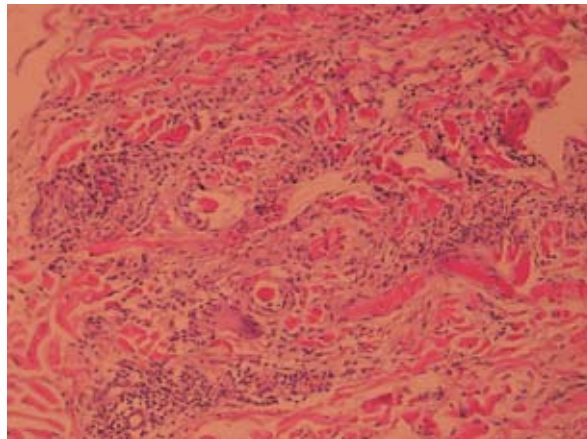


Figure 4. Palisading granulomatous infiltrate of lymphocytes and histiocytes around a central zone of degenerated collagen and rare giant cells (H&E 10×).

less obvious than the erythema. On the dorsal sides of the hands and around the wrists, there were a few arcuate erythematous plaques with raised borders. On the back and the extensor surfaces of the arms, there were symmetrically distributed erythematous to skin-colored discrete papules (Fig. 3).

Struma diffusa was diagnosed by an endocrinologist. Thyroid scintigraphy revealed two nodular lesions presenting as functional nodules. FSH and FT4 levels were within normal ranges. A chest X-ray and abdominal ultrasound were normal. The full blood count, blood chemistry, lipid profile, and urinalysis were within normal limits. An oral glucose tolerance test was normal. Histopathologic analysis of a skin specimen revealed a palisading granulomatous infiltrate of lymphocytes and histiocytes around a central zone of degenerated collagen as is typically found in GA. There were rare giant cells (Fig. 4: H&E 10×).

The patient refused oral PUVA therapy, and so she was given a short course (7 days) of IM

methylprednisolone (40 mg daily dose) and a prolonged course of low-dose oral prednisone (2 months, daily dose of 20 mg initially, then 10 mg), as well as a potent topical corticosteroid. This therapeutic option yielded good results after 2 months: all erythematous lesions on her legs and trunk faded and those with raised borders flattened. Today, 1 1/2 years after her first physical examination, the lesions have almost completely resolved. There are only hyperpigmented areas left on the legs and a few papules without an annular appearance distributed on her arms and trunk.

Discussion

Although the cause of GGA is not clear, it may be an idiopathic and benign condition, but it may also be associated with some neoplasms, diabetes mellitus, thyroid diseases, AIDS, and chronic

hepatitis C virus infection (4–6). Patients should be carefully followed in order to rule out these possible diseases. In our case, clinical examination did not reveal any underlying disease, but only GGA and struma difussa. We present a rare dermatosis (GGA) and its variant, arcuate dermal erythema, which is an uncommon form. In our case, GA was diagnosed on the basis of the typical morphology of the lesions

on the arms and by histopathological examination. In general, therapy has been attempted with various modalities with moderate efficacy (5–7). Typically there is a lack of response to therapies, but in our case there was excellent response to a short course of intramuscular corticosteroids, a prolonged course of oral low-dose corticosteroids, and topical corticosteroids.

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