Title:

A case of actinic granuloma responding to oral acitretin

Running title:

Actinic granuloma treated with retinoid

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Authors (with full names and institutional affiliations):

1. Dr Karolina Louisa Suzanna Kerkemeyer[1]
- Department of Dermatology, St Vincent's Hospital Melbourne, Australia

2. Dr Alvin H Chong
- Department of Dermatology, St Vincent's Hospital Melbourne, Australia
- Skin and Cancer Foundation Victoria, Australia

3. Dr Saurabh Prakash
- Melbourne Pathology, Collingwood, Australia

Corresponding author:

Name - Dr Karolina Louisa Suzanna Kerkemeyer

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[1] Author's present address: Department of Dermatology, Monash Medical Centre, Clayton

Postal address - Department of Dermatology, Monash Medical Centre, 246 Clayton Rd, Clayton VIC 3168
Email address - KarolinaLouisaSuzanna.Kerkemeyer@monashhealth.org
Telephone number - 03 9594 6666

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DR. KAROLINA LOUISA SUZANNA KERKEMEYER (Orcid ID : 0000-0001-9367-2348)

Article type : Case Letter

Title:

A case of actinic granuloma responding to oral acitretin

Main text:

Actinic granuloma is a rare, granulomatous dermatosis. Treatment is challenging and often disappointing, with few cases documenting response in the literature. Here we report a case of actinic granuloma successfully treated with oral acitretin.

A 61-year-old woman presented to clinic with a 10-year history of asymptomatic photo-distributed annular lesions. On examination, widespread annular plaques of varying size with erythematous elevated borders and central clearing were noted across her shoulders, arms and upper chest (Fig. 1a). Routine haematological- and biochemical-testing, as well as angiotensin converting enzyme and antinuclear antibody were all negative or within normal range. Biopsy taken from a lesion on the right upper chest demonstrated dermal inflammatory cell infiltrate composed of scattered foreign body-type multinucleated giant cells, some engulfing elastin fibres (Fig. 2). No necrobiosis or increase in dermal mucin was identified. Previous treatment with topical corticosteroids, hydroxychloroquine, 200 mg daily, for four months, and later, methotrexate, 10 mg weekly, for three months, was ineffective and did not halt progression of new lesions. Cyclosporin, 50 mg, twice daily was ceased after one month due to nausea. Treatments with intralesional Kenacort 10mg/ml were initially responsive, however the lesions soon became resistant and, as well, too widespread to be a viable treatment option. The patient was commenced on acitretin 10 mg per day with strict photo-protection. Within six weeks of therapy there was improvement of the lesions.

Nine months later, acitretin was self-ceased due to dry skin, however new annular plaques subsequently appeared. The patient was restarted and maintained on acitretin 10 mg per day, resulting in flattening of borders and overall lesion fading (Fig. 1b). Routine monitoring during treatment demonstrated normal liver function and lipid profile.

Actinic granuloma is a rare, benign, granulomatous dermatosis first described by this name in 1975.[1] It is most commonly seen in fair-skinned middle-aged adults who convey a history of excessive photo-exposure.[1,2,3] Pathogenesis is incompletely understood. One theory suggests cell-mediated immune response to solar-damaged elastic fibres.[2,3,4] Actinic granuloma typically presents as asymptomatic annular plaques with elevated erythematous margins and central atrophy on photo-exposed areas of the skin.[1,3,4,5] Histopathology is characterised by the presence of dermal histocytes and foreign-body giant cells, with or without elastophagocytosis. Necrobiosis and mucin are generally absent.[1,2] Multiple therapies have been trialled with limited success, including intralesional corticosteroids, cyclosporin, and PUVA.[3,4,5] To date, three cases of actinic granuloma successfully treated with acitretin have been described.[3,4,5] In one case, complete fading and flattening of margins was obtained after 12 months of treatment with acitretin, 25 mg daily.[3] In a second report, disease progression was halted after six months of treatment.[5] A similar outcome was noted in a third patient; treatment however was ceased due to increasing cholesterol and triglyceride levels.[3] Our case provides support for the use of acitretin as a treatment option for actinic granuloma. The mechanism how acitretin modulates actinic granuloma is unknown. Lesions tend to recur when treatment is ceased. Further studies to explore the mechanism by which acitretin exerts their effect are needed, which may lead to treatment optimisation for actinic granuloma.

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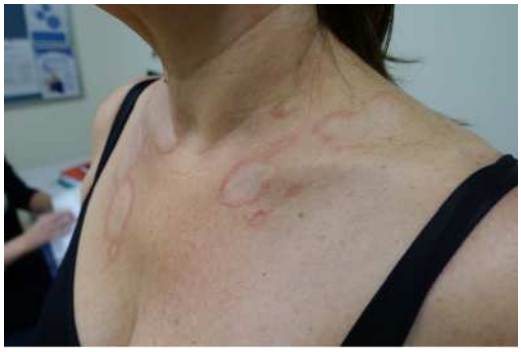
Figure legends:

Figure 1a
Clinical photograph taken at presentation. Multiple atrophic plaques with areas of central sparing and raised erythematous edges can be seen on the upper chest and shoulders.

Figure 1b
Clinical photograph taken after treatment with acitretin. Flattening and fading of lesions, with good cosmetic result achieved.

Figure 2
Dermal inflammatory cell infiltrate including foreign-body-type multinucleated giant cells (H&E x400).



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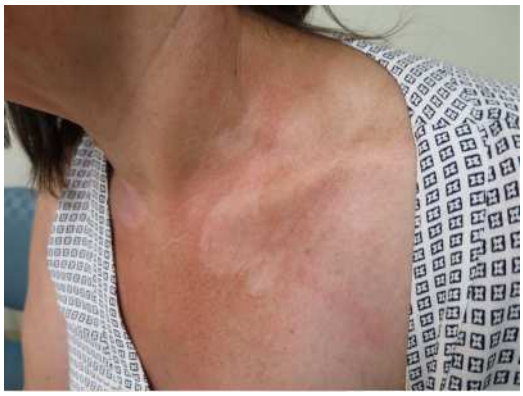

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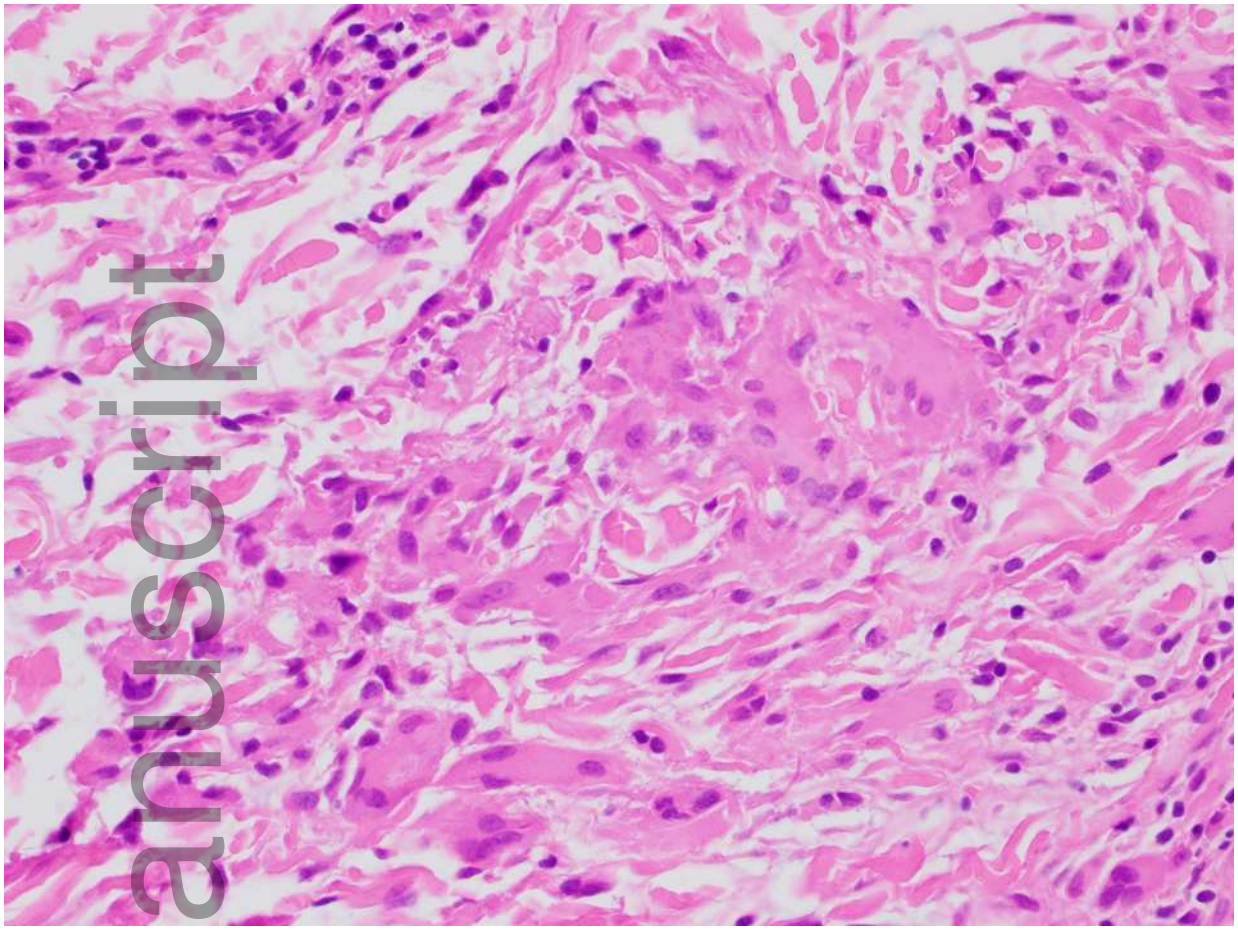

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