

Clinical Records

Granuloma annulare presenting as multiple nodules on the pinna

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Abstract

Granuloma annulare is a benign, idiopathic, inflammatory dermatosis characterized clinically by dermal papules and annular plaques. We describe the case of a 40-year-old man who presented with a long history of multiple nodules on the left pinna. Histological examination revealed the typical necrobiotic granulomas of granuloma annulare. The condition predominantly affects the extremities of children and young adults; cases involving the pinna are extremely rare.

Nodular lesions are common in otolaryngological practice, and this case illustrates the need for careful clinical assessment and appropriate biopsy in diagnosing lesions of the outer ear

Key words: Granuloma Annulare; Ear, External

Introduction

Granuloma annulare is a benign, idiopathic inflammatory dermatosis characterized clinically by dermal papules and annular plaques. In typical cases the histological hallmark is of necrobiotic granulomas in the superficial and deep dermis. The condition most commonly occurs on the extremities of children and young adults, with females affected twice as commonly as males. The majority of cases are localized and undergo spontaneous resolution, although a generalized form, most frequently seen in older individuals, shows little tendency to spontaneous regression and a poor response to therapy.

We describe the case of a 40-year-old man presenting with a nodular eruption of long duration on the pinna, which had the histological features of granuloma annulare.

Case report

A 40-year-old man presented to the Ear, Nose and Throat outpatients clinic with a five- to six-year history of multiple lesions on the pinna. These caused occasional episodes of discomfort which were worse in the summer months. There was a history of trauma to the outer ear;¹ in particular, cosmetic piercing had been performed in the past. The patient was otherwise fit and well. Each lesion measured about 4–5 mm in size and was firm in consistency and non-tender (Figure 1). The rest of the physical examination was unremarkable.

The lesions were biopsied under local anaesthetic and submitted for histological examination. In the dermis, between the mildly hyperkeratotic epidermis and a small amount of underlying auricular cartilage, there was a florid



FIG. 1
Clinical photograph showing nodules on pinna.

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Accepted for publication: 18 March 2004.

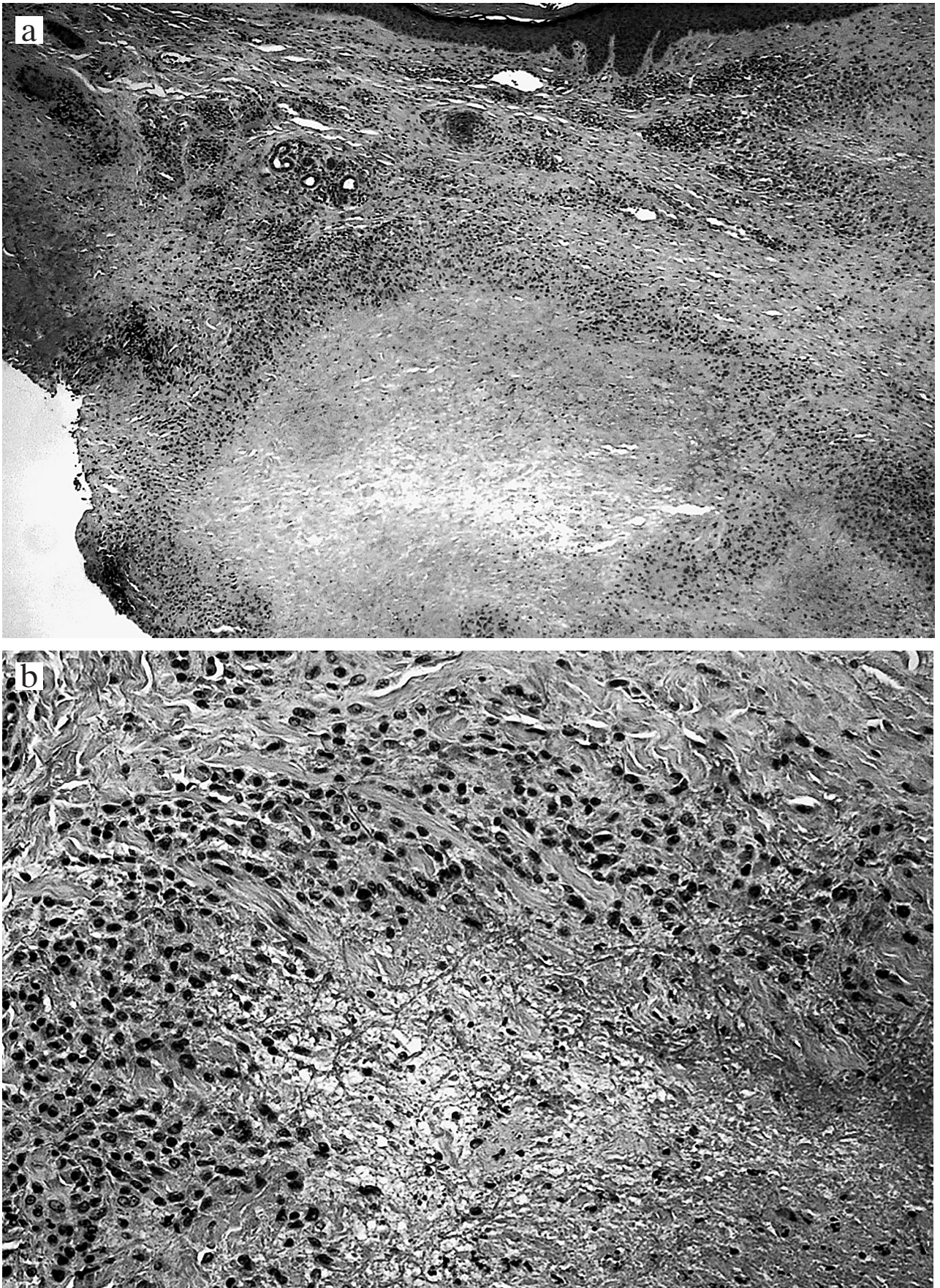


FIG. 2

The low power view (a) shows a large dermal zone of degenerate (necrobiotic) collagen surrounded by a mantle of chronic inflammatory cells. The high power view (b) demonstrates palisading of the surrounding epithelioid histiocytes. Nuclear debris and scattered neutrophils are present in the necrobiotic collagen (bottom right).

granulomatous reaction to necrobiotic collagen (Figure 2a). These granulomatous areas consisted of large zones of degenerate collagen surrounded by palisaded epithelioid histiocytes, the vast majority of which had single nuclei; only occasional giant cells were present. Scattered nuclear debris and occasional neutrophils were present in the areas of necrobiosis (Figure 2b). No foreign material was identified.

The differential diagnosis, from a histological perspective, was between granuloma annulare and a rheumatoid nodule, both highly unusual diagnoses for this location. In the light of the histological findings, further evaluation of the patient was carried out in the outpatient clinic. There was no history of arthritis and no other features to suggest rheumatoid diseases were present. Blood tests, including full blood count, plasma viscosity and autoantibody profile, were unremarkable. Significantly, the test for rheumatoid factor was negative. The diagnosis of granuloma annulare was therefore made.

Discussion

Nodular lesions of the pinna are often encountered in routine otolaryngological practice. Granuloma annulare is only very rarely encountered in this location and, unlike the majority of lesions on the pinna, surgical excision is not the main mode of treatment.

Granuloma annulare is a benign, inflammatory skin disease characterized by necrobiosis of the skin and subcutaneous tissue, that has no proven aetiology or accepted pathogenesis. It can present as either localized, generalized, subcutaneous,² perforating^{3,4} or arcuate dermal erythema, the majority being localized. It can present at any age, but usually involves the hands or feet of children and young adults. It is more common in females, with remissions and relapses. Remissions are common with the localized form. Patients may note improvement of the lesions in winter and worsening in summer; however, lesions may remain largely asymptomatic

Granuloma annulare^{2,5,6} can be associated with trauma, diabetes mellitus, pulmonary tuberculosis, vasculitis, hypercholesterolaemia and history of atopy, insect bites, sun exposure,⁷ thyroiditis, and viral infections including human immunodeficiency virus,⁸ Epstein–Barr virus and herpes zoster virus, and a familial form may be observed in identical twins.

Investigations are done mainly to rule out other possible causes: erythrocyte sedimentation rate, chest X-ray and rheumatoid factors. Depending on the clinical findings,

other tests may be carried out to exclude other causes.

This case illustrates a skin condition which presents rarely to the otolaryngologist's practice. There have been no previous cases of granuloma annulare reported in the Ear, Nose and Throat literature.

- **Case report of patient with multiple nodules on the pinna**
- **Granuloma annulare diagnosed**
- **Such pinna lesions rare but must be considered in differential diagnosis of nodular lesions at this site**

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Mr N. Raghava takes responsibility for the integrity of the content of this paper.

Competing interests: None declared