A Persistent Lesion on the Chest

Abstract

Granuloma annulare (GA) is a benign and usually self-limited cutaneous condition that classically presents as arciform to annular plaques in a symmetrical and acral distribution. The exact etiology of GA is unknown. Two-thirds of patients with GA are less than 30 years old. GA is recognized based on its characteristic appearance and no specific investigation is necessary. Reassurance and clinical observation may be the treatment of choice for localized and asymptomatic disease. Spontaneous resolution occurs within 2 years in 50% of cases. Persistent lesions may be treated with very potent topical corticosteroids, intralesional corticosteroid injections, or cryotherapy. Use of more toxic treatments are controversial in recalcitrant cases.

Keywords: Granuloma annulare, Overview, Paraneoplastic, Self-limiting, Treatment

A 29-year-old healthy female presents with an annular lesion on the intermammary area for 3 months (Figure 1). The lesion is non-pruritic. The patient noticed the lesion after she suffered from an insect bite while she was away at her cottage. After doing her own research on the Internet, she was worried that her symptom was secondary to Lyme disease. She subsequently saw her family physician, who ordered the serologic testing of Lyme disease which returned to be negative. She has been treated with topical terbinafine for the presumptive diagnosis of tinea corporis with no improvement.

About the authors
Francesca Cheung, MD CCFP, is a family physician with a special interest in dermatology. She received the Diploma in Practical Dermatology from the Department of Dermatology at Cardiff University in Wales, UK. She is practising at the Lynde Centre for Dermatology in Markham, Ontario and works closely with Dr. Charles Lynde, MD FRCPC, an experienced dermatologist. In addition to providing direct patient care, she acts as a sub-investigator in multiple clinical studies involving psoriasis, onychomycosis, and acne.
**Case Study**

**What is your diagnosis?**

Granuloma annulare (GA) is a benign and usually self-limited cutaneous condition that classically presents as arciform to annular plaques in a symmetric and acral distribution. Upon close inspection, GA lesions are found to be composed of individual small papules measuring a few millimeters in diameter. The exact etiology of GA is unknown. Trauma, insect bite reactions, and viral infections have all been proposed as inciting factors.\(^1,2\)

Based on the T-cell subpopulations identified in GA lesions, a delayed-type hypersensitivity reaction to an unknown antigen has been postulated as the precipitating event.\(^3\)

Two-thirds of patients with GA are less than 30 years of age and this condition is commonly seen in children and young adults. The female-to-male ratio is approximately 2:1. The plaques may be skin-colored, pink or violaceous in color and are usually asymptomatic.

Generalized GA occurs in up to 15% of patients with symmetric distribution of lesions on the trunk and extremities. Generalized GA has a later age of onset and poorer response to treatment.

GA has been described as a paraneoplastic granulomatous reaction to solid organ tumors, Hodgkin disease, non-Hodgkin lymphoma and granulomatous mycosis fungoides. The clinical pattern is frequently atypical in these patients, with painful lesions in unusual locations such as the palms and soles.\(^4,5,6\)

GA is recognized based on its characteristic appearance and no specific investigation is necessary. Biopsy may be necessary for lesions that are atypical in presentation (e.g. unusual symptoms such as pain or appearance in atypical body location).

The differential diagnosis for conventional GA includes lichen planus, tinea corporis, mycosis fungoides, sarcoidosis, and leprosy. GA lesions seldom show epidermal changes such as scales. Tinea can be excluded by potassium hydroxide (KOH) examination of the associated scales, while annular lichen planus is characterized by

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**Figure 1:** An annular lesion on the intermammary area
Summary of Key Points

Granuloma annulare is a benign and usually self-limited cutaneous condition that classically presents as arciform to annular plaques in a symmetrical and acral distribution.

Two-thirds of patients with GA are less than 30 years of age and this condition is commonly seen in children and young adults.

GA has been described as a paraneoplastic granulomatous reaction to solid organ tumors, Hodgkin disease, non-Hodgkin lymphoma and granulomatous mycosis fungoides.

Given the self-limited and benign nature of GA in most cases, treatment may not be necessary as the lesions disappear spontaneously within 2 years in 50% of cases.

Post-test CME Quiz

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References: