Photo Quiz

ANNULAR SCALY PLAQUES

A 57-year-old woman presented with a largely asymptomatic rash on her feet that began six months earlier. She had infrequent mild pruritus but no other symptoms related to the rash. She had no systemic symptoms such as fever, chills, myalgias, or arthralgias. The rash did not improve after two months of treatment with terbinafine cream.

Physical examination demonstrated well-circumscribed, erythematous, annular plaques on the dorsa of her feet that were 3 to 4 cm in diameter (Figure 1). The plaques had no induration, but there was a trailing white scale. They were nontender to palpation, and the surrounding skin was unaffected. Findings from a potassium hydroxide preparation of the scale were negative.

Question

Based on the patient's history and physical examination findings, which one of the following is the most likely diagnosis?

A. Erythema annulare centrifugum.

B. Granuloma annulare.

C. Psoriasis.

D. Tinea pedis.

Discussion

The answer is A: erythema annulare centrifugum. Erythema annulare centrifugum is an inflammatory disorder of unknown origin that is thought to be a reactive process, often in response to an infection, malignancy, or medication.[1,2] There are two forms: superficial and deep. Both types of rashes are characterized by annular, erythematous plaques that expand centrifugally. They most commonly affect the trunk and proximal extremities, and migrate centrifugally.[1-3] The superficial form displays the characteristic trailing white scale, whereas the deep form classically lacks the scale and has infiltrated borders.[2-4] Most cases are asymptomatic, although mild pruritus is sometimes reported.[1,4]

Source: Adapted from Am Fam Physician. 2016;93(10):865-866.

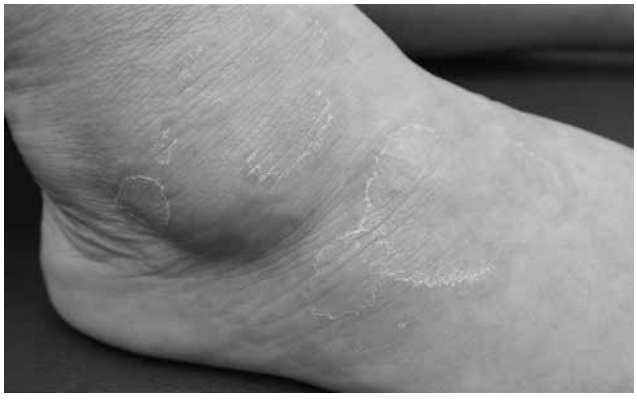

Figure 1.

Erythema annulare centrifugum most commonly occurs in patients in their 50s, and affects men and women equally.[1,3,4] Disease progression is variable. The rash may be episodic or may last for weeks to decades.[1,2,4] Erythema annulare centrifugum does not cause systemic symptoms.[1,4] Treatment with topical, intralesional, or systemic steroids may lead to involution and repression of plaques but generally does not prevent new eruptions or recurrences.[2,4]

Granuloma annulare is an asymptomatic rash of unknown etiology. It is characterized by indurated papules coalescing into annular plaques without scale, and typically occurs on the dorsal hands and feet. Central clearing or slight central depression is common. Granuloma annulare is often self-limited with spontaneous resolution in 50% of patients; however, there is a 40% recurrence rate.[1]

Psoriasis is a chronic autoimmune inflammatory dermatosis characterized by increased keratinocyte proliferation, resulting in well-demarcated pink plaques with thick overlying silvery scale. The scale is typically found throughout the plaque. Classic plaque-type psoriasis occurs on the extensor surfaces (elbows and knees), but the scalp and buttocks are often also affected. Psoriasis may be accompanied by nail changes, such as onycholysis and pitting.[5] Psoriatic arthritis affects up to 30% of patients with psoriasis.[6]

Tinea pedis is a common fungal infection of the feet caused by dermatophytes. It classically occurs in the interdigital spaces. Tinea causes serpiginous and annular patches and thin plaques, with a scale on the leading edge. Tinea is often pruritic or causes a burning

Summary Table

Condition	Characteristics
Erythema annulare centrifugum	Trailing white scale (superficial form); asymptomatic, annular, erythematous plaques; commonly occurs on the trunk and proximal extremities
Granuloma annulare	Absence of scale; asymptomatic, self-limited indurated papules coalescing into annular plaques, with central clearing or slight central depression; occurs on dorsal hands and feet
Psoriasis	Thick overlying silvery scale; well-demarcated pink plaques occurring on extensor surfaces, scalp, and buttocks; accompanied by nail changes and arthritis
Tinea pedis	Leading edge of scale; fungal infection on the feet causing serpiginous and annular patches and thin plaques; pruritus or burning is common

sensation.[1] The diagnosis of tinea is often made clinically but can be confirmed with identification of hyphae on a potassium hydroxide preparation.[2]

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N Engl J Med. 2001;345(23):1667-75.

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