Annular pruritic plaques in a middle-aged woman

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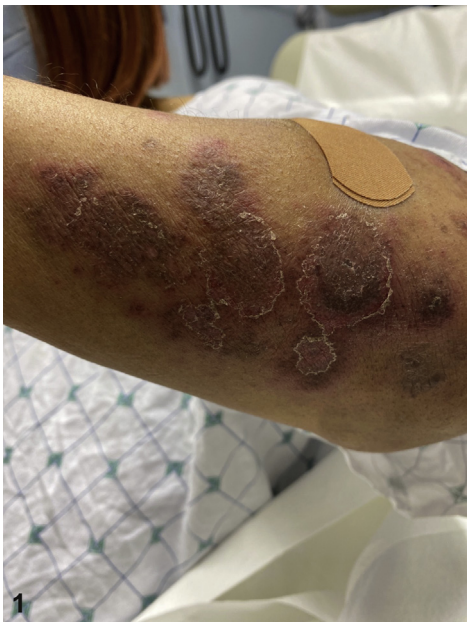

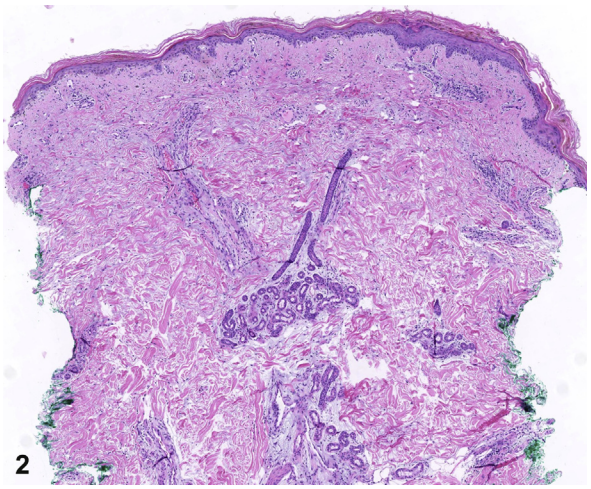

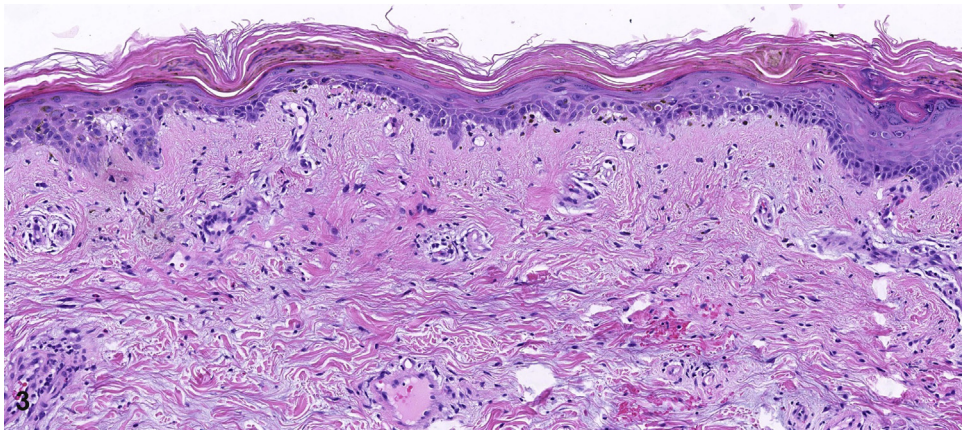

VIGNETTE

A 64-year-old woman with a history of rheumatoid arthritis, hypertension, asthma, and gastroesophageal reflux presented for a 2-month history of a worsening pruritic rash on the extremities. Review of systems was pertinent for chronic joint pain. She had been treated by a gastroenterologist 3 months before for worsening reflux and

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began receiving pantoprazole; otherwise, there were no recent changes in her medications. Examination of the patient's extremities revealed large annular, erythematous to violaceous plaques with coarse scale and focal hemorrhagic crust (Fig 1). A punch biopsy of the left forearm was performed for histopathologic review (Figs 2 and 3).

Question 1: What is the diagnosis?

A. Erythema annulare centrifugum

B. Granuloma annulare

C. Subacute cutaneous lupus erythematosus

D. Sarcoidosis

E. Syphilis

Answers:

A. Erythema annulare centrifugum—Incorrect. Although clinically erythema annulare centrifugum typically presents as annular plaques with "trailing scale," characteristic histology is that of a superficial perivascular lymphohistiocytic infiltrate that forms tight aggregates around vessels, commonly referred to as a "coat-sleeve" distribution.

B. Granuloma annulare—Incorrect. Lesions of granuloma annulare are commonly distributed on the hands or dorsal aspect of the feet and notably lack scale or other surface changes. Histology demonstrates granulomatous dermal inflammation in either an interstitial or palisaded pattern with foci of collagen degeneration, increased mucin, and eosinophils.

C. Subacute cutaneous lupus erythematosus—Correct. Subacute cutaneous lupus erythematosus is a subtype of cutaneous lupus erythematosus characterized by annular plaques in a photoexposed distribution with raised scaly pink-red borders that may display a chronic eczematous or psoriasiform appearance. In approximately 20% to 30% of patients with subacute cutaneous lupus erythematosus, the disease is linked to drug exposure. Histologic features include vacuolar interface changes and a mild superficial to mid dermal perivascular lymphocytic infiltrate. Compared with lesions of discoid lupus, basement membrane thickening is minimal, and hair follicles are often unaffected or show only slight keratin plugging.[1]

D. Sarcoidosis—Incorrect. The cutaneous lesions of sarcoidosis frequently present as red-brown or erythematous plaques and papules, and similar to granuloma annulare, often lack secondary change or scale. The histology of sarcoidosis is typified by well-formed, noncaseating granulomas that lack significant associated inflammation.

E. Syphilis—Incorrect. The clinical presentation of syphilis is widely variable and is often referred to as "the great imitator." The most common clinical presentation in the secondary stage is a generalized, nonpruritic, papulosquamous eruption. In contrast to the case presented, histology classically demonstrates psoriasiform epidermal hyperplasia overlying a lichenoid inflammatory infiltrate with an abundance of plasma cells.

Question 2: Of the drugs listed below, which is most often implicated (>10 cases reported) in the development or worsening of subacute cutaneous lupus erythematosus?

A. Pseudoephedrine

B. Penicillamine

C. Procainamide

D. Polymyxin B

E. Hydrochlorothiazide

Answers:

A. Pseudoephedrine—Incorrect. The use of pseudoephedrine is implicated in the development of fixed drug eruption, specifically the nonpigmenting type.

B. Penicillamine—Incorrect. Penicillamine is used as a copper chelator for the treatment of Wilson disease. It is associated with many cutaneous adverse reactions, including pemphigus vulgaris, lichen planus, elastosis perforans serpiginosa, and systemic lupus erythematosus, among others.

C. Procainamide—Incorrect. Procainamide is a known trigger for the development of drug-induced systemic lupus erythematosus, which typically lacks skin findings and has milder systemic involvement compared with idiopathic systemic lupus erythematosus.

D. Polymyxin B—Incorrect. Polymyxin is a mast cell degranulation trigger and should be avoided in patients with known mastocytosis.

E. Hydrochlorothiazide—Correct. Drug-induced (DI) subacute cutaneous lupus erythematosus was first described in 1985 by Reed et al,[2] who identified 5 patients with subacute cutaneous lupus

erythematosus after hydrochlorothiazide exposure. Since then, numerous drugs have been implicated in the development or worsening of subacute cutaneous lupus erythematosus, including terbinafine, tumor necrosis factor α inhibitors, antiepileptic medications, and proton-pump inhibitors.[3,4]

Question 3: Which serum antibody test most often yields positive results for patients with DI subacute cutaneous lupus erythematosus?

A. Antihistone antibody

B. Anti-Ro/Sjögren's-syndrome-related antigen A

C. Anti-topoisomerase I

D. Anti-Mi2

E. Anti-double stranded DNA

Answers:

A. Antihistone antibody—Incorrect. Although observed in approximately 33% of patients with DI subacute cutaneous lupus erythematosus, antihistone antibodies are more specific to drug-induced systemic lupus erythematosus.[3]

B. Anti-Ro/Sjögren's-syndrome-related antigen A—Correct. Anti-Ro/SSA positivity is observed in approximately 80% of patients with idiopathic and DI subacute cutaneous lupus erythematosus. Anti-Ro positivity is also observed in neonatal lupus and Sjögren syndrome.[3] Anti-Ro positivity was observed in the case described.

C. Anti-topoisomerase I—Incorrect. Also known as topoisomerase I, Scl-70 autoantibodies are observed most commonly in the diffuse cutaneous form of systemic sclerosis.

D. Anti-Mi2—Incorrect. Anti-Mi2 antibodies are observed in patients with the pathognomonic cutaneous lesions of dermatomyositis, including poikiloderma, shawl sign, and facial dermatosis. It is associated with a favorable prognosis.[5]

E. Anti-double stranded DNA—Incorrect. Anti-dsDNA has high disease specificity for systemic lupus erythematosus and lupus nephritis. Positivity is observed in a minority of patients with DI subacute cutaneous lupus erythematosus (<20%).[6]

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