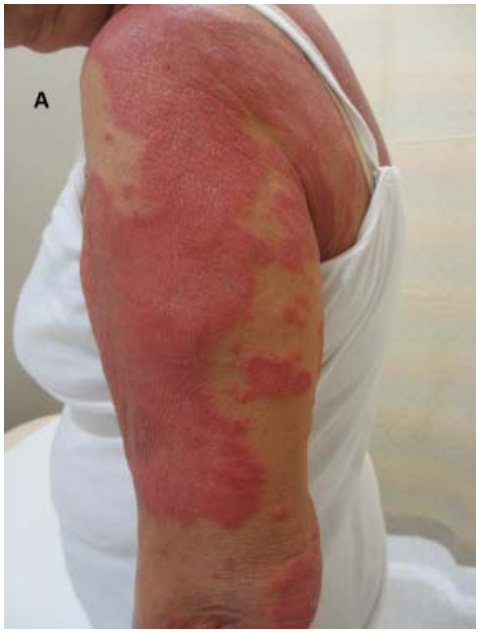
An Uncommon Cutaneous Reaction for a Common Drug

A 72-year-old Chinese female presented with a rapidly progressing, generalised rash over a 2-week period. Her medical history includes hypertension for which nifedipine had been started 5 weeks earlier. She was otherwise well with no systemic symptoms. Physical examination showed annular, scaly, erythematous plaques with central clearing on her upper and lower limbs, neck, trunk, and back (Figs. 1A and 1B).

What is the diagnosis?

A. Plaque psoriasis
B. Drug-induced subacute cutaneous lupus erythematosus (DI-SCLE)
C. Erythema annulare centrifugum
D. Sweet's syndrome
E. Cutaneous T-cell lymphoma



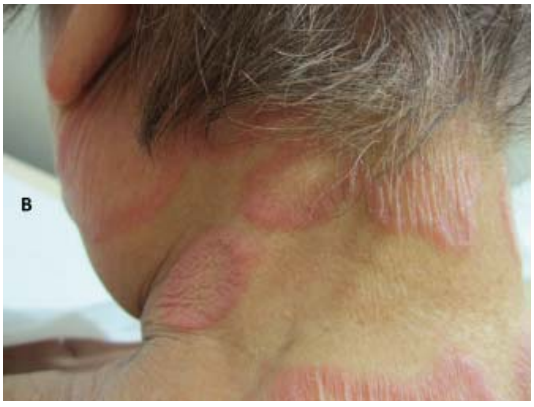


Fig. 1. A 72-year-old patient presented with rapidly progressing, generalised rash. Erythematous, annular, scaly plaques with central clearing are seen on patient's (A) upper limb and (B) neck.

Case Report

The patient's full blood count, liver and renal biochemistry were unremarkable apart from eosinophilia (0.9 x 10^3/μL, normal range = 0.0 – 0.4 x 10^3/μL). Her antinuclear antibody, anti-double-stranded DNA, antihistone antibody, and Ro/Sjögren syndrome-associated antigen A (Ro/SSA) autoantibodies were negative. Direct immunofluorescence was negative. A skin biopsy from a representative lesion showed focal interface activity with basal vacuolar change and lymphocytic exocytosis admixed with few eosinophils (Fig. 2). There was increased mucin on Alcian blue stain. The clinical picture and histological findings were consistent with DI- SCLE. Her lesions resolved within several weeks upon withdrawal of nifedipine.

Discussion

DI-SCLE is characterised by scaly annular skin lesions, usually in sun exposed areas. It is related to drug exposure. Antihypertensives including hydrochlorothiazide and nifedipine, and antifungals are some of the common triggers for DI-SCLE. More recently, chemotherapeutic drugs such as taxanes have been reported to cause DI-SCLE.[1] The

Answer: B

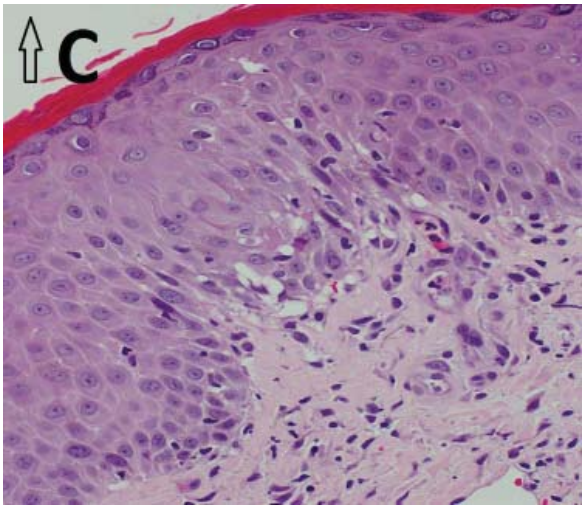


Fig. 2. Skin biopsy from thigh; H&E stain, original magnification x40.

onset of cutaneous lesions from the initiation of the culprit drug varies with different drug classes. Cutaneous lesions may appear within 5 weeks after exposure to antifungals, while calcium channel blockers may trigger a rash up to 3 years after initial exposure.[2] The pathogenesis of DI-SCLE is unknown. Some have suggested that DI-SCLE may be a consequence of de novo autoantibody formation after drug exposure. Others suggest DI-SCLE as a development of a condition in an already predisposed patient.[3]

There is a strong association with Ro/SSA autoantibodies (found in up to 90% of patients).[2,4] However, antihistone antibody is positive in only one-third of patients of DI-SCLE.[2] Positive direct immunofluorescence may be found in up to 80% of cases of DI-SCLE.[2] The characteristic histological feature of DI- SCLE is an interface dermatitis with focal vacuolisation of the epidermal basal layer and perivascular dermal lymphocytic infiltrate.[2] A recent retrospective study demonstrated that tissue eosinophilia is not a differentiating histological feature of DI-SCLE, and that the diagnosis of DI-SCLE should be based largely on drug history and clinical findings.[5]

DI-SCLE is similar to idiopathic subacute cutaneous lupus erythematosus in terms of clinical, histopathological, or immunopathological features.[2] In contrast, patients with DI-SLE present with fever, weight loss and serositis. Antihistone antibody may be positive in 95% of patients in this group of patients.[6]

In our patient, we diagnosed DI-SCLE based on the recent introduction of typical drug, clinical features and supportive histology findings. Interestingly, Ro/SSA autoantibodies were negative in this patient. Nifedipine was withdrawn and she was treated with topical betamethasone valerate 0.1%. Five weeks after drug withdrawal, her rash had completely resolved. On the last follow-up 4 months later, there was no relapse of her symptoms.

Conclusion

Discontinuation of the offending drug usually results in resolution of the skin lesions in DI-SCLE within weeks.[2] However, some cases may require the use of topical or systemic corticosteroids.

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