Clinical vignette

Rheumatology 2017;0:1
doi:10.1093/rheumatology/kex264

Uncommon local reaction at the injection site of subcutaneous methotrexate

A 66-year-old man with a long-standing history of seronegative knee arthritis treated with subcutaneous MTX (15mg/week) presented with an asymptomatic erythematous plaque with crusting and scaling at the left side of the abdomen, corresponding to the last injection site (Fig. 1A). The patient explained similar local reactions had healed without scars appearing with the last injections, when the accumulated dose was 1.425 g. He self-administered the drug and was instructed in MTX self-injection several times, but the injection technique was not verified. Histopathological and microbiological studies of the plaque were unremarkable (Fig. 1B). Subcutaneous MTX was discontinued and switched to oral administration. One week later, the lesion had almost healed without scarring (Fig. 1C). No new skin lesions appeared after 1 year of follow-up.

Subcutaneous administration of MTX is usually well tolerated and adverse local side effects are rare [1]. There is a single previous report of intense erythematous and scaly plaques appearing at the injection sites of subcutaneous MTX [2]. In both cases, the lesions began to appear several months after starting the medication. The pathogenesis of this uncommon local reaction is unknown. Physicians should be aware of the possibility of occurrence of such local reactions since they can produce loss of adherence to subcutaneous MTX.

Funding: No specific funding was received from any bodies in the public, commercial or not-for-profit sectors to carry out the work described in this manuscript.

Disclosure statement: The authors have declared no conflicts of interest.

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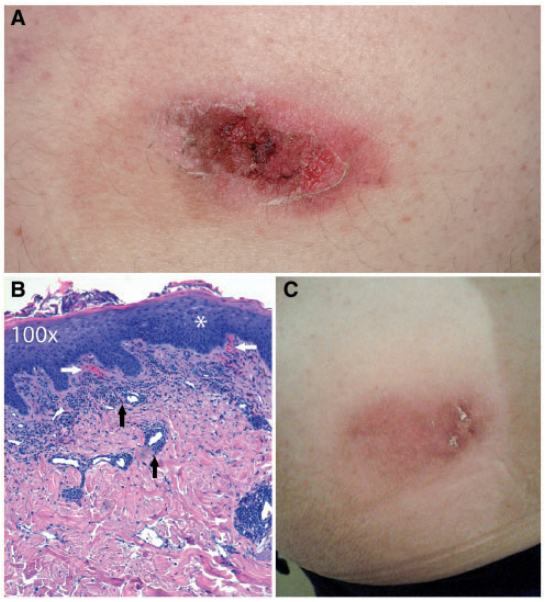
Fig. 1 Skin lesion caused by the administration of subcutaneous MTX



(**A**) Irregular erythematous plaque with crusting and scaling at the subcutaneous injection site of MTX. (**B**) Histology showed acanthosis and hyperkeratosis, with minimal spongiosis (white asterisk; haematoxylin and eosin staining). In superficial dermis, moderate perivascular inflammatory infiltrates constituted predominantly by lymphocytes were observed (black arrows), with little accompanying erythrocytic extravasation (white arrows). (**C**) Clinical improvement of the lesion 1 week later (on the right side of the plaque, two crusty lesions corresponding to the scars of the skin biopsies).

References

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