

Letters to the Editor

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Subcutaneous calcification following injection of triamcinolone hexacetonide for plantar fasciitis

SIR, We report a patient who developed subcutaneous calcinosis and ulceration over the heel following injection of triamcinolone hexacetonide. This agent has the potential to cause complications many years after treatment.

A 67-yr-old lady was referred with a weeping ulcer on the medial aspect of the left heel, which had developed slowly over the previous 12 months. She recalled two injections at the site for plantar fasciitis given 2 months apart ~15 yrs earlier by her GP. Small gritty particles with the appearance of salt grains often appeared on the surface of the ulcer, which remained moist and required a dry dressing for comfort.

Examination showed a 3 × 3 cm ulcer with slightly raised edge. There was concern about malignancy and thus the lesion was excised. Histology showed focal ulceration with extensive scarring and multiple foci of dermal calcification with a histiocytic reaction (calcinosis cutis).

There were no clinical features such as RP or arthritis to suggest a CTD and serum calcium, ANA and ENA were normal or negative.

Plain X-rays (Fig. 1) showed calcification on the medial aspect of the left calcaneum.

The General Practitioner confirmed that the patient had had two injections of triamcinolone hexacetonide (Lederspan, Lederle), dose unknown, 15 yrs earlier and commented that it was probably the last time he had used this agent.

Triamcinolone hexacetonide was first associated with IA and peri-articular calcification in juvenile idiopathic arthritis in 1990 [1, 2],² although a study in 2000 found an incidence of only 3 in 194 children [3].

A single case report in 1991 demonstrated soft tissue calcification in the heel of a patient following multiple injections of triamcinolone hexacetonide to treat pain from a calcaneal spur; it was suggested that accumulation of insoluble steroid acted as a foreign body and induced a chronic granulomatous response with dystrophic calcification [4]. This case is similar to ours where we were able to confirm a foreign body (histiocytic) reaction. X-rays showed superficial calcification (reflecting 'salt grains' seen by the patient), which suggest either that the steroid was injected too superficially or that a proportion migrated back along the needle track.

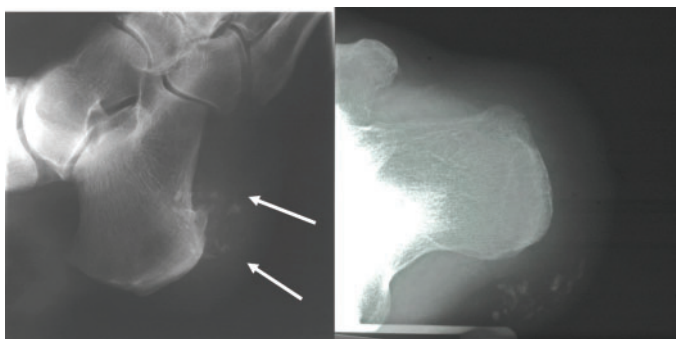


Fig. 1. X-rays of left heel showing calcification on the medial aspect of calcaneum.

Triamcinolone hexacetonide has much lower solubility in water (0.0004% w/v at 25°C) than methylprednisolone acetate (0.0014% w/v at 25°C) and hydrocortisone (0.07% w/v at 25°C) [5]. Whilst this may produce a longer lasting effect [6], it also renders the compound more likely to induce a foreign body (granulomatous) response after subcutaneous injection or extravasation from a joint and has therefore been withdrawn.

An alternative, triamcinolone *acteonide*, is 10 times more water soluble (0.004% w/v at 25°C) than the hexacetonide and indeed intralesional injection of this compound has been advocated for treatment of the subcutaneous calcification which can occur following extravasation of calcium gluconate [7].

Clinicians should be aware of the chronic inflammatory response which may cause skin ulceration many years after injection of triamcinolone hexacetonide into subcutaneous tissue.

Rheumatology key message

- Patients may present with a chronic inflammatory response causing skin ulceration many years after injection of triamcinolone hexacetonide.

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- 1 Job-Deslandre C, Menkes CJ. Complications of intra-articular injections of triamcinolone hexacetonide in chronic arthritis in children. *Clin Exp Rheumatol* 1990;8:413–6.
- 2 Sparling M, Malleson P, Wood B, Petty R. Radiographic followup of joints injected with triamcinolone hexacetonide for the management of childhood arthritis. *Arthritis Rheum* 1990;33:821–6.
- 3 Breit W, Frosch M, Meyer U, Heinecke A, Ganser G. A subgroup-specific evaluation of the efficacy of intraarticular triamcinolone hexacetonide in juvenile chronic arthritis. *J Rheumatol* 2000;27:2696–702.
- 4 Conti RJ, Shinder M. Soft tissue calcifications induced by local corticosteroid injection. *J Foot Surg* 1991;30:34–7.
- 5 Derendorf H, Mollman H, Grüner A, Haack D, Gyselby G. Pharmacokinetics and pharmacodynamics of glucocorticoid suspensions after intra-articular administration. *Clin Pharmacol Ther* 1986;39:313–7.
- 6 Hollander JL. Intraarticular corticosteroid therapy in arthritis. *Maryland State Med J* 1970;19:62–6.
- 7 Ahn SK, Kim KT, Lee SH, Hwang SM, Choi EH, Choi S. The efficacy of treatment with triamcinolone acetonide in calcinosis cutis following extravasation of calcium gluconate: a preliminary study. *Pediatr Dermatol* 1997;14:103–9.

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Long-term tocilizumab therapy in a patient with rheumatoid arthritis and chronic hepatitis B

SIR, Immunosuppressive therapy for patients with RA and HBV infection is a difficult problem clinically [1]. Tocilizumab is a