Dystrophic calcification of the ankle joint following intra-articular corticosteroid injections

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DESCRIPTION

A 17-year-old Caucasian female with the non-infective, inflammatory condition chronic recurrent multifocal osteomyelitis (CRMO) was referred with pain and stiffness in her right ankle. She had previously received seven, non-image-guided intra-articular corticosteroid injections (IACI) over ~5 years reporting variable clinical benefits and some previous injection flare pain. Examination demonstrated some skin hypersensitivity and local atrophy but no palpable mass or swelling and examination was negative for anterior impingement.

Plain radiographs demonstrated the time-interval development of extra-articular soft-tissue calcification anterior to the ankle joint (figure 1A, B). MRI revealed osteochondral joint degeneration with synovitis. Subsequent treatment over 18 months included two fluoroscopic-guided, 20 mg triamcinolone acetonide IACI using iodine contrast to confirm needle placement (figure 2). Pain control

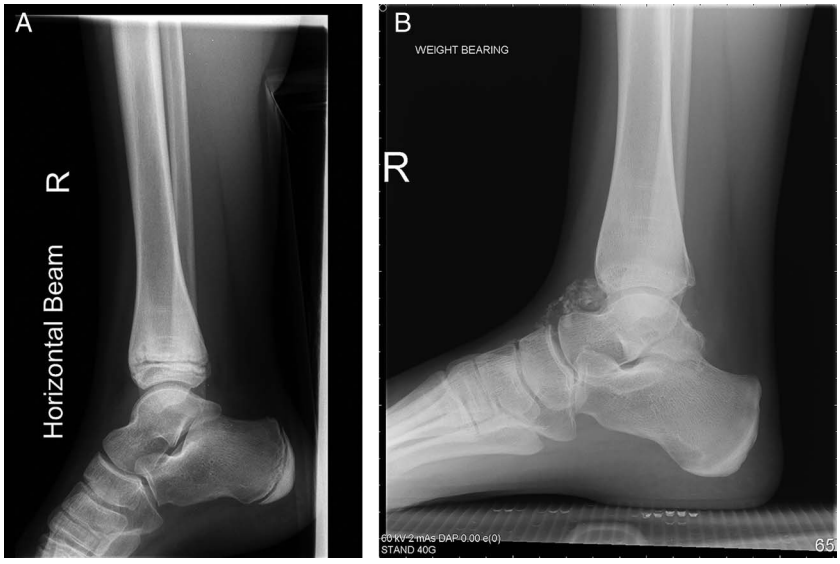

Figure 1(A and B) Lateral radiographs of the right ankle preskeletal and postskeletal maturity over a 5-year interval showing development of dystrophic calcification anterior to the joint.

Figure 2 Anteroposterior fluoroscopy image showing the right ankle during intra-articular injection with an iodine contrast arthrogram.

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Learning points

- Dystrophic calcification is a recognised local side effect of intra-articular corticosteroid injections.
- The ankle joint is associated with one of the lowest accuracies for joint injections although image guidance does not necessarily reduce the local side effects.
- Caution should be exercised when considering repeated corticosteroid injections without appropriately imaging a joint to establish a diagnosis and monitor any local deleterious effects or disease progression.

was achieved without further clinical flare or change in dystrophic calcification.

Lopes *et al*[1] demonstrated the ankle joint had the lowest accuracy for non-image-guided IACI with only 77% being correctly located. Calcification is a recognised side effect of IACI with rates as high as 50% reported and can be located in the pericapsular, intracapsular or intra-articular location.[2] The probable causal mechanism relates to local tissue injury from the needle and low water solubility of the extra-articular corticosteroid with chronic granulomatous inflammation and subsequent dystrophic calcification.

CRMO has very rarely been associated with tumoral calcinosis and the development of large periarticular calcific masses requiring excision so the dystrophic calcification in this case maybe multifactorial.[3]

Competing interests None declared.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

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