Purulent infection in the third finger with associated osteomyelitis

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DESCRIPTION

An 82-year-old woman was referred to our department due to swelling, warmth and severe functional impairment in the third finger of her right hand. She had a medical history of arterial hypertension, diabetes mellitus and atrial fibrillation. After physical examination, severe tumefaction of the finger was evident (figure 1). Spontaneous flexion of the distal interphalangeal joint with full incompetence to active extension and severe pain upon passive extension were noted. Pain was experienced with flexo-extension movements in the proximal interphalangeal joint and increased when the volar aspect of the finger was pressed above the flexor tendon sheath. The patient reported an accidental prick with a needle in the volar aspect of the distal phalanx (DP) almost 2 months ago. Inflammation and purulent exudate occurred over the following 2 weeks but the patient did not seek medical counsel.

The patient's temperature was 36.3°C and blood analysis revealed mild leucocytosis (12 500 cells/dl). Plain radiography of the affected finger showed a type-IV osteomyelitis with full-thickness bone sequestrum of the DP and the distal third of the middle phalanx (MP; figure 2). Complete

Figure 1 View of the dorsal aspect of the third finger at physical examination. Note the enlargement of the finger and the passive flexion of the distal interphalangeal joint.

Figure 2 Plain radiographies of the affected hand. Full-thickness bone sequestrum of the distal phalanx, distal interphalangeal joint and distal half of the middle phalanx is observed.

destruction and instability of the distal interphalangeal joint was observed.

A drainage incision was performed along the radial neutral line and spontaneous purulent oozing from the volar aspects of the DP and MP occurred. The soft tissues in the dorsal aspect of these phalanges and even the extensor tendon showed necrosis.

The patient underwent amputation of the DP and the distal half of the MP. Multiple surgical debridements were carried out over the following days before the wound was definitively closed. Upon hospitalisation, the patient received endovenous antibiotic treatment with clindamycin (600 mg every 8 h) and gentamicin (240 mg every 24 h) for 10 days until the patient was discharged.

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Learning points

- ▶ Osteomyelitis in the fingers, although infrequent, is usually related to surrounding soft tissue infections, especially after a penetrating trauma.¹
- ▶ Patients with vascular disease or immunodeficiency have an increased risk of developing osteomyelitis. Other contributing factors could be contamination and severe damage in the soft tissues when injury occurs.²
- ▶ Radiographic findings are extremely infrequent in acute osteomyelitis (excluding soft tissue swelling). The first radiological signs in the bone usually appear 10–14 days after the onset of the infection.³
- ▶ In acute or chronic osteomyelitis, the optimal duration of antibiotic therapy remains unclear although 6 weeks is the most frequent regimen.⁴ Amputation of the involved finger or extremity may reduce the time of the antibiotic therapy if the remaining soft tissues and bone are free of disease.

Competing interests None.

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