Ring sequestrum of the tibia

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DESCRIPTION

A 43-year-old man presented with recurrent pus discharge from his left upper leg for the past 3.5 years. He has had a gunshot injury to the left hip leading to fracture dislocation of the left hip. Initially, he was treated by skeletal traction using Steinmann pin through the upper left tibia. This was followed by pin tract infection, which persisted. The patient took various broad-spectrum antibiotics (eg, amoxiclav, erythromycin, cefuroxime, amikacin, ciprofloxacin, etc), off and on for about 2 years. Now, he had a pus discharging sinus on the anterolateral aspect of the upper leg with surrounding discolouration of the skin (figure 1). Wound swab culture grew *Pseudomonas aeruginosa*. Radiograph of the upper leg showed a ring sequestrum in the upper tibia, surrounded by dense sclerosis (figures 2 and 3). Saucerisation of the cavity was done with complete removal of sequestra and all granulation tissues (figure 4). The wound healed in 10 days time, without any discharge or symptoms.

Metallic pin insertion for providing skeletal traction and external fixation, in major fractures of the lower limb is common.¹ Minor pin tract infection occurs in 5–10 % of patients, and these usually respond to antibiotic therapy and local wound care. However, in 4 % of these patients, chronic pin tract osteomyelitis may develop,² which is seen on the radiograph as a ring sequestrum.³ Staphylococcal osteomyelitis is reported more common in short-term fixator use, while Gram-negative rod infections are common with

Figure 2 Anteroposterior view of the leg showing chronic osteomyelitis of the upper tibia.

long-term use.⁴ The treatment of chronic pin tract infection includes removal of pins, appropriate antibiotic therapy and saucerisation of the cavity with removal of sequestra.^{2,5}

Figure 1 Pus discharging sinus on the anterolateral aspect of the upper leg.

Figure 3 Lateral view of the leg showing ring sequestrum with surrounding dense sclerosis in the upper tibia.

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Figure 4 Excised ring sequestrum with granulation tissue.

Learning points

- ▶ Metallic pins in the bone must be inserted cautiously and kept with due care, as the damage to bone and superadded infection may lead to chronic osteomyelitis.
- ▶ Treatment of chronic pin tract infection is usually surgical.

Competing interests None.

Patient consent Obtained.

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