Metatarsal Brodie’s abscess in a Tunisian child

Kaouther Ben Abdelghani, Leila Souabni, Selma Kassab, Leith Zakraoui

Department of Rheumatology, Mongi Slim Hospital, La Marsa, Tunisia

Correspondence to Dr Kaouther Ben Abdelghani, kawther_ba@yahoo.fr

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DESCRIPTION

Brodie’s abscess is a subacute or chronic variant of osteomyelitis usually involving the metaphysis of long bones. The clinical presentation is often atypical and the diagnosis is challenging. It is rare except in developing countries. A 10-year-old Tunisian girl reported left metatarsalgia with loss of motion evolving since 3 weeks. One month previously, she had suffered from rhinopharyngitis. On examination, the temperature was 38.5°C. There was tenderness and swelling of the dorsal left foot. The erythrocyte sedimentation rate was at 31 mm and the C reactive protein was 20 mg/L. Plain radiographs revealed a metatarsal lytic lesion with important periosteal apposition (figure 1). MRI revealed the characteristic pattern of Brodie’s abscess (figure 2). The patient was prescribed antibiotics (amoxicillin-clavulanic acid 1.5 g/day during 45 days) and foot immobilisation with good clinical response. The X-ray of the foot made 1 month later showed a full metaphyseal consolidation with sequestration (figure 3).

In this case, Brodie’s abscess was difficult to diagnose because of its insidious onset, mild symptoms and especially atypical site. The skeletal lesion affects almost usually the metaphysis of long bones and involves the lower limbs. The predilection site is the femur and tibia. A little more than 15 cases of metatarsal osteomyelitis have been reported in the literature.1–3 In our case, the outcome was favourable under antibiotics. The abscess had disappeared without recurrence or fistulisation with a decline of 2 years.

Figure 1 Metatarsal lytic lesion with important periosteal apposition.

Figure 2 Coronal MRI of the foot showing enhancement after gadolinium injection on T1 sequences consistent with oedema of bone marrow and soft tissue of the second metatarsal.

Figure 3 Metaphyseal consolidation with sequestration.
Learning points

▸ Brodie’s abscess usually affects the metaphyseal regions of long bone especially the tibia. Metatarsal location is a rare condition.
▸ Brodie’s abscess should be kept in mind in case of bone pain and fever in a child in order to avoid misdiagnosis.

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