Images in...

Diagnostic use of MRI in the non-mobile infant

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DESCRIPTION

A previously mobile 13-month-old toddler presented to the paediatric emergency department following a fall with subsequent reluctance to weight-bear. A fractured femur was strongly suspected initially, but was not confirmed on x-ray. She was followed up in fracture clinic for 10 days.

She deteriorated further evidencing a reluctance to sit and screaming episodes when lying supine but not when lying prone. Inflammatory markers were raised with white cell count of $15.79 \times 10^9/l$, neutrophils $5.89 \times 10^9/l$, c reactive protein of 39 mg/l and erythrocyte sedimentation rate of 60 mm/h.

An MRI performed 14 days later revealed lumbar discitis with associated vertebral osteomyelitis (figures 1–3).

She received intravenous antibiotics for 4 weeks followed by oral antibiotics for 6 weeks and made a good recovery.

Discitis is rare in children. Presenting symptoms include a limp or refusal to walk, and older children can present with back pain.¹ A high index of clinical suspicion is required and therefore diagnosis is often delayed. The mean duration of symptoms can be 24 days prior to presentation² and average diagnosis can be delayed by a further 12 days postpresentation.²

Figure 1 T1 weighted image. Well established Discitis at L3/4.

Figure 2 T2 weighted image. Discitis with associated vertebral osteomyelitis and marrow oedema in the vertebral bodies of L3 and L4.

Figure 3 Coronal section demonstrating early inflammatory changes seen in the paravertebral channels affecting both psoas muscles.

Treatment includes a prolonged course of antibiotics and immobilisation. Early treatment is associated with shorter duration of symptoms.³ Most children make a good recovery, although long-term morbidity including chronic back pain, premature ankylosis and degenerative changes may occur in up to 50% in subsequent follow-up.³

Learning points

- ▶ Although discitis is rare, it should be suspected in children refusing to weight bear.
- ▶ Spinal MRI is the investigation of choice and may avoid a delay in diagnosis and thus subsequent treatment.³
- ▶ Erythrocyte sedimentation rate is the most accurate investigation for correlating with the clinical course of discitis.³

Competing interests None.

Patient consent Obtained.

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