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 15.79×10⁹/l, neutrophils 5.89×10⁹/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. 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.

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.
▸ Erythrocyte sedimentation rate is the most accurate investigation for correlating with the clinical course of discitis.

Competing interests None.
Patient consent Obtained.

REFERENCES