



Medical Imagery

Idiopathic bone marrow oedema with joint effusion: A differential diagnosis to infectious osteomyelitis



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A 45-year-old healthy man reported progressive right hip pain during walking without a history of trauma or systemic inflammation. The pain responded favourably to ibuprofen and/or rest. Magnetic resonance imaging (MRI) revealed homogeneous inflammation with effusion into the joint (Figure 1). Idiopathic bone marrow oedema (IBME) of the femoral head was diagnosed radiologically. The patient was advised to practice partial weight-bearing. No biopsies were performed. The patient declined to use crutches and relied on aspirin, ibuprofen, and intranasal calcitonin for 4 weeks. Two months later, his pain gradually disappeared over the course of 4 weeks. A control MRI at 5 months showed the absence of inflammation. The patient remained pain-free for the next 4 years.

IBME is a rare, (auto)immune disease of unknown origin, affecting mostly males between 30 and 60 years of age, and usually the lower extremity bones. Diagnosis is by MRI (low signal on T1, lack of subchondral changes, and high signal on T2; Emad et al., 2012). Biopsies are not necessary. Resolution is spontaneous. Affected persons must be told to have patience. Recurrences, osteonecrosis, and fractures are possible in severe cases. Treatment

is symptomatic and anti-inflammatory. The beneficial effects of non-weight-bearing and calcitonin or osteoporotic medication are anecdotal, with uncertain evidence (Ikemura et al., 2016), while intravenous prostaglandins represent promising current research (Meizer et al., 2005).

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Patient consent

The patient consented by signature to the publication of his history and photographs.

Conflict of interest

The authors have no conflict of interest to declare. This publication fulfils the ethical requirements of the Declaration of Helsinki.

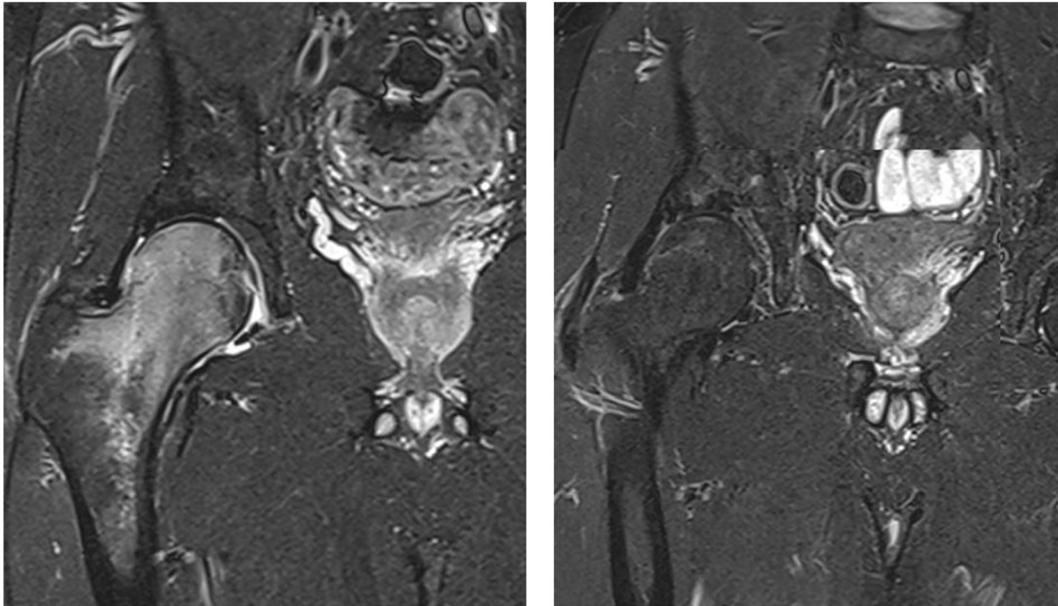


Figure 1. A 45-year-old male with idiopathic bone marrow oedema of the right femoral head and intra-articular effusions. Image obtained at diagnosis (left) and at the 5-month control (right).

Transparency declarations

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References

- Emad Y, Ragab Y, El-Shaarawy N, Rasker JJ. Transient osteoporosis of the hip, complete resolution after treatment with alendronate as observed by MRI description of eight cases and review of the literature. *Clin Rheumatol* 2012;31:1641–7.
- Ikemura S, Mawatari T, Matsui G, Iguchi T, Mitsuyasu H. Clinical outcomes in relation to locations of bone marrow edema lesions in patients with a subchondral insufficiency fracture of the hip: a review of fifteen cases. *Br J Radiol* 2016;86:20150750.
- Meizer R, Radda C, Stolz G, Kotsaris S, Petje G, Krasny C, et al. MRI-controlled analysis of 104 patients with painful bone marrow edema in different joint localizations treated with the prostacyclin analogue iloprost. *Wien Klin Wochenschr* 2005;117:278–86.

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