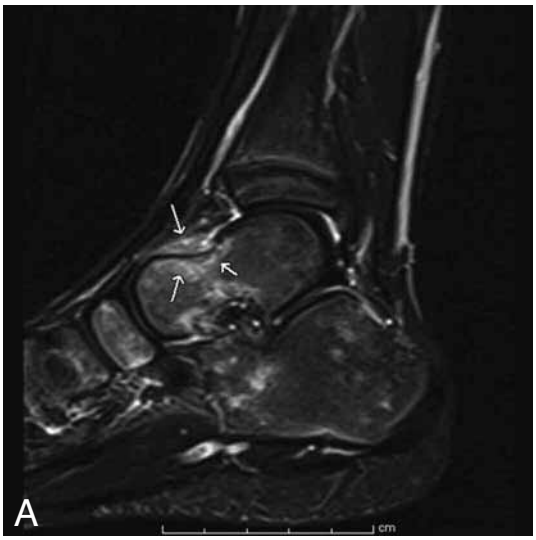
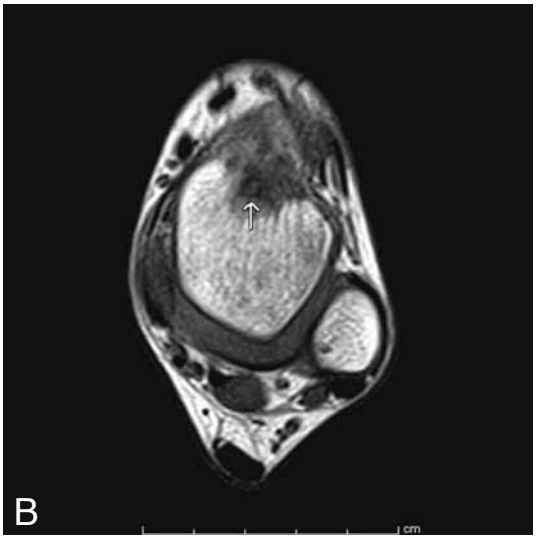
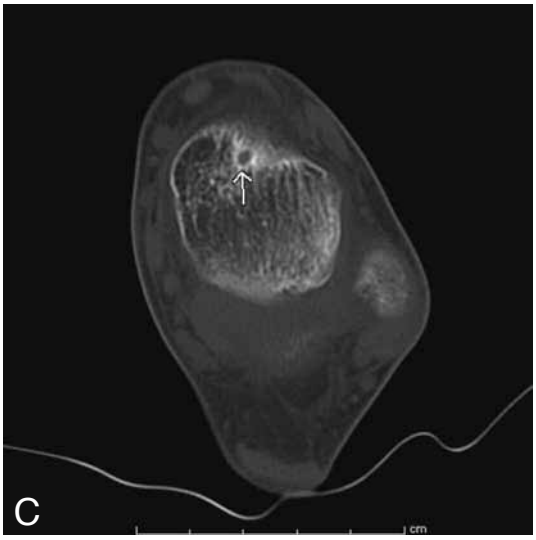
JBR–BTR, 2012, 95: 335.

IMAGES IN CLINICAL RADIOLOGY







Osteoid osteoma of the talar neck

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A 6-year-old boy was referred by his general practitioner to our hospital for further investigation of chronic hindfoot pain. An MRI scan was performed. Sagittal IR images revealed bone marrow edema in the anterosuperior portion of the talus ('talar neck') with adjacent soft tissue edema (Fig. A). Axial T1 SE depicted a rounded structure with peripheral hypo-intensity within this region of bone marrow edema, suggestive for osteoid osteoma (Fig. B). The presence of an osteoid osteoma was confirmed by CT, which showed a low-attenuation nidus with minimal peri-nidal sclerosis (Fig. C). The patient underwent surgical excision of the lesion. The diagnosis of osteoid osteoma was histologically confirmed.

Comment

Osteoid osteoma is a benign skeletal neoplasm that represents up to 10% of all benign bone lesions. Approximately 50% of patients are between 10 and 20 years of age and there is a strong male predominance. Typical symptoms are focal pain that worsens at night and is relieved after administering salicylates.

They are typically located in the lower extremity at the metadiaphyseal region of long bones. However, 2-11% of all osteoid osteomas are located in the ankle and foot, with the talus being the most commonly affected.

These unusually located osteoid osteomas of the foot often lack typical clinical and radiological findings (such as a prominent periosteal reaction). Subsequently, diagnosis is often delayed.

CT is considered as the gold standard for localization of the nidus in typical and atypical osteoid osteomas. We usually find a low-attenuation nidus, sometimes combined with focal central calcification and peri-nidal sclerosis. On MR-images the nidus shows a variable pattern of signal intensity, based on the amount of fibrous tissue or calcification. High grade bone marrow edema limited to the affected bone and adjacent soft tissue edema is present in most cases of osteoid osteoma located in the foot.

The lesions may eventually become asymptomatic. Nevertheless most lesions require surgical excision. Other modalities of ablation include radiofrequency ablation under CT or ultrasound guidance, although these treatments sometimes present us with a diagnostic challenge due to a lack of histological confirmation.

Reference

1. Allen S.D., Saifuddin A.: Imaging of intra-articular osteoid osteoma. *Clin Radiol*, 2003, 58: 845-852.

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