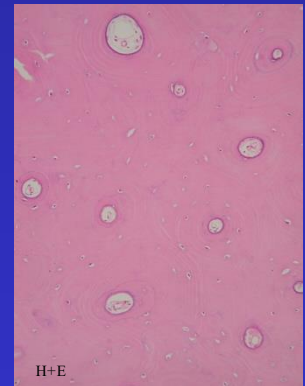
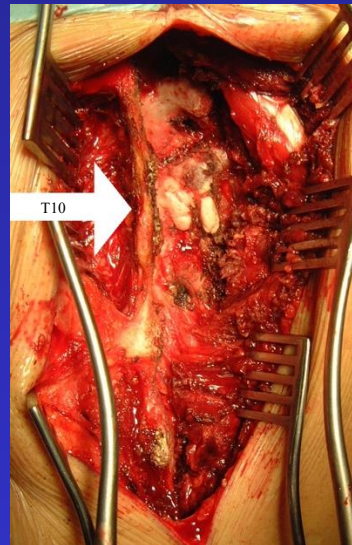
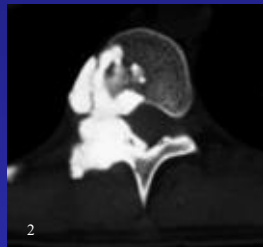
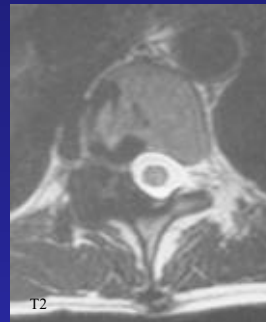
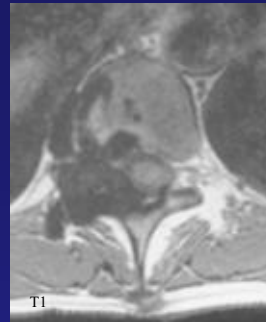


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Objective: To present the clinical features, radiological findings and differential diagnosis of this rare benign condition.

Design: Melorheostosis (Leri's Disease) is a rare mesenchymal dysplasia commonly exhibiting hyperostosis on the internal and external aspect of tubular bones in a sclerodermal distribution. It usually occurs in the limbs, frequently crosses joints and there is often ossification in local soft tissues. Presenting features may include pain, restricted joint movement and skin thickening. It very rarely affects the spine and its cause is unknown.



Subject: A 40-year-old female presented with insidious onset of mild mid thoracic back pain. There was no history of trauma and she had no past medical or family history. She underwent a six-month course of physiotherapy but this failed to help her symptoms. She developed a small lump over the area of pain and her GP arranged an X-Ray. This showed an irregular area of high attenuation over the right side of the tenth thoracic vertebra. A CT demonstrated a "dripping candle wax" appearance of densely calcified cortical bone undulating over the right side of the body and posterior elements of T10. The ossification crossed the synovial zygoapophyseal joint but not the intervertebral disc and a diagnosis of melorheostosis was suggested. MRI supported the CT findings and confirmed the presence of a soft tissue lesion over the dorsal process of T10. A bone scan verified the solitary nature of the lesion and showed widening of the right side of the body of T10 with increased focal uptake. All blood and urine investigations were normal.

Results: The patient underwent an open biopsy to obtain sufficient tissue for histological diagnosis and confirm that the lesion was benign in nature. It was felt that the dense ossification of the lesion would make percutaneous biopsy difficult. The most important differentials to exclude were an osteosclerotic bone metastasis and osteosarcoma. Other differential diagnoses were a parosteal osteoma, a burnt out osteoblastoma and a giant bone island. The soft tissue histology showed a necrotic fibrocartilaginous mass. The bone samples required prolonged decalcification prior to cutting and were composed of compact cortical bone similar to the appearances seen in ivory osteoma and also consistent with melorheostosis. This pathological pattern and the radiological finding of cortical compact bone crossing a synovial joint confirms the diagnosis of melorheostosis.

Conclusions: Spinal melorheostosis is a rare condition. The diagnosis should be considered in the differential of atypical osteosclerotic lesions of vertebrae. Adequate histological sampling is essential in order to exclude malignancy.

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