Title: Osteofibrous dysplasia progressed after epiphyseal plate closure

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Osteofibrous dysplasia (abbreviated as OFD) characteristically involves cortical bone of the anterior shaft of the tibia during infancy and childhood. If the lesion enlarged after epiphyseal plate closure, OFD-like adamantinoma should be considered.

A 14-year-9-month old girl complaining of left gonalgia without any episode of trauma was referred to our hospital under the diagnosis of a bone tumor. A well-marginated lucent lesion surrounded by sclerosis and thinning of the anterior cortex of the diaphysis of the proximal forth of the tibia is seen on plain radiographs. Under the presumptive imaging diagnosis of OFD, observation follow-up was started. The epiphyseal plate closure was seen at the age of 15-year-9-month, and no interval change continued radiologically. The pain disappeared spontaneously after the initial visit, however, the symptom relapsed at the age of 17-year-8-month. Plain radiographs disclosed an enlarged lesion, and a needle biopsy was done. Spindle-cell proliferation accompanying scattered bone trabeculae with osteoblast rimming was observed. Cytokeratin was negative. Under the diagnosis of OFD, curettage with β triphosphate-calcium packing was performed. Complete turnover of the β triphosphate-calcium without any evidence of recurrence was observed 6 months after surgery.

There has been no report that OFD progressed after the epiphyseal plate closure.

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