

# Clinical features and image manifestations of recurrent retinoblastoma with limb bone metastasis and without CNS involvement

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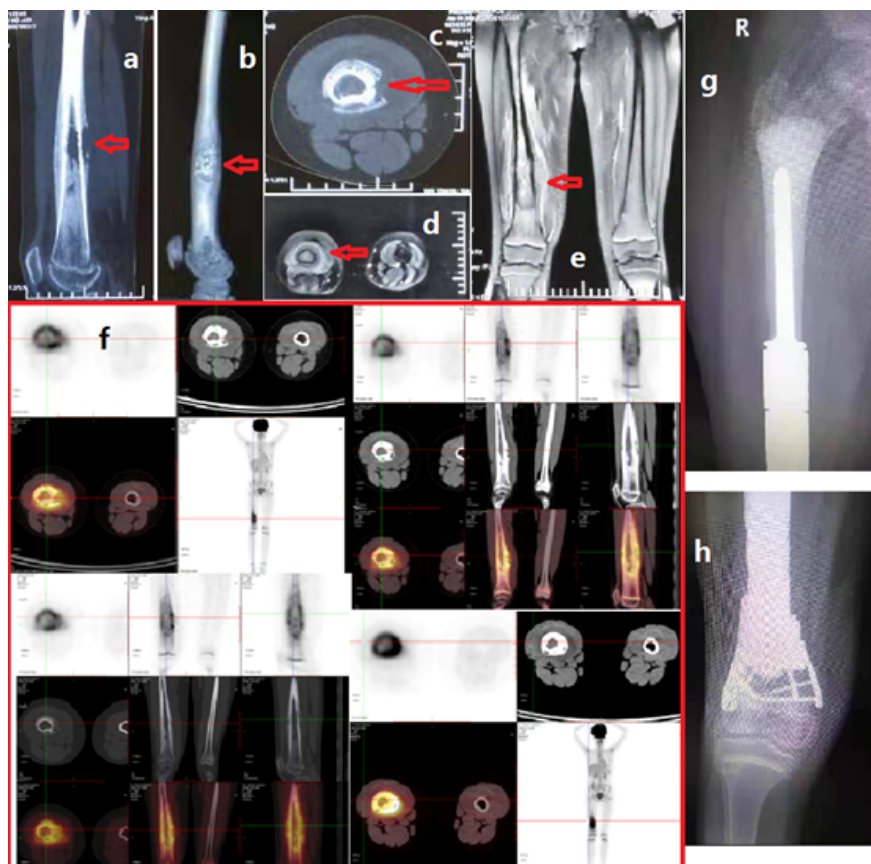
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## Abstract

Background: Retinoblastoma (RB) is the most common intraocular malignancy in infancy and childhood. Bone metastases are common and usually involve the skull and axial bones; limb bone metastases are rare. Herein, we evaluated the clinical features, image manifestations, treatment, and prognosis of patients with recurrent RB with limb bone metastasis and without central neural system involvement. Procedure: Clinical data of 5 patients with retinoblastoma who were diagnosed at the Department of Pediatrics in Beijing Tongren Hospital, between January 2015 and January 2021, were retrospectively analyzed. Results: Three males and two females were included (7 eyes: 4 stage E and 1 each of stage D, C, and B). The interval between symptom onset and bone metastasis was 12-102 months. Three cases were unilateral (2 left and 1 right), and two were bilateral. The most common symptom was pain. Three patients had bone marrow and lymph node metastasis. Three patients had single and two had multiple skeletal lesions. The main limb bones involved were the femur, humerus, talus, and ulna. Serum neuron specific enolase (NSE) was significantly elevated in 4 cases, and slightly elevated in 1 case; primary intravenous chemotherapy resulted in a decrease in NSE and gradual resolution of bone lesions. At the time of follow-up, 2 patients died and 3 were in complete remission. Conclusions: Regular lifelong follow-up of patients with RB is warranted to identify bone metastases. Clinicians should consider examination findings, imaging findings, and laboratory results to identify bone metastases and initiate appropriate treatment.

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Table\_1\_Clinical\_characteristics\_and\_laboratory\_results\_of\_recurrent\_RB\_patients\_with\_serious\_limb\_bone, available at <https://authorea.com/users/386270/articles/711587-clinical-features-and-image-manifestations-of-recurrent-retinoblastoma-with-limb-bone-metastasis-and-without-cns-involvement>