

Images in clinical medicine



Saga of first metacarpal disappearance: an uncommon presentation of giant cell tumor of metacarpal

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Saga of first metacarpal disappearance: an uncommon presentation of giant cell tumor of metacarpal

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Image in medicine

Giant cell bone tumor is a benign tumor. It has a propensity to cause local recurrence and occasionally metastasis, and it is aggressive locally. Young adults are more likely to develop giant cell tumors in the epi-metaphyseal ends of their long bones. The most commonly involved areas are distal femur and proximal tibia. Rarely it can happen in the hand and foot. The hand's most frequent site for multiple lesions is the metacarpal bone. A 50-year-old male presented to the orthopedic outpatient department with a pain and swelling in the left hand for 4 months. Without any prior signs of trauma or fever, the

swelling gradually grew, which then restricted mobility in the thumb's interphalangeal and metacarpophalangeal joints. X-ray showed the whole first metacarpal bone was affected by an expansile lytic lesion on radiographs, along with soft tissue extension and destruction of the metacarpophalangeal and carpometacarpal joints.

Excision of the tumor was performed under nerve block anesthesia and the thumb reconstruction was done with fibular bone graft with fusion of the metacarpophalangeal and interphalangeal joints. The graft was held in place with an intramedullary 1.8 mm Kirschner wire. A thumb spica was then applied for a period of two months.



Figure 1: (A) swelling over first web space; (B) plain radiograph of left hand shows first metacarpal bone was affected by an expansile lytic lesion on radiographs, along with soft tissue extension and destruction of the metacarpophalangeal and carpometacarpal joints; (C) MRI revealed a mass lesion which was heterogeneously hyperintense on T2 and STIR images; (D) tumor with multiple cavity and cyst; (E) histopathological evidence of osteoclastic giant cells admixed with stromal cell; (F) post-operative radiograph of left-hand first metacarpal joint managed with fibular bone graft and K-wires