A rare case of giant cell tumour of phalanx of great toe

Abstract

Giant cell tumors of bones in foot are very uncommon. They mostly occur after skeletal maturity. The long bones are commonly involved. Tumors involving the phalangeal bone of foot are very uncommon. The author reports a case of giant cell tumor involving the distal phalanx of great toe. A 30 year old male has presented with swelling of right great toe. X-ray showed an osteolytic lesion in distal phalanx of great toe. We did a En-block resection of phalanx. Histopathology showed Giant cell tumor. There was no recurrence of tumor on follow up. Giant cell tumor in such a location is usually aggressive and needs regular follow-up to detect local recurrence.

Keywords: giant cell tumor, foot, interphalangeal joint, tumor, lesion, cortex, engorged veins, musculo skeletal system

Introduction

Giant cell tumor of bone is a rare benign bone tumor accounting for approximately 4% of all primary neoplasm. It typically involves the long bones in young adults. Tumor involving the phalanges of foot is very rare. Only a few cases have been reported. In this location it occurs more often in young female population and it appears to present a more aggressive behavior than in other location. We present a case of giant cell tumor of distal phalanx of great toe.

Case report

A 30 year old male had presented to us with pain and swelling of right big toe of one year duration. The swelling was gradually increasing in size. The swelling was associated with pain. There was no other swelling anywhere else in the body. No constitutional symptoms. On examination there was diffuse swelling of the great toe. Skin was stretched and shiny. There were no engorged veins. The swelling was variable in consistency. The movement of interphalangeal joint was restricted. The x-ray showed an osteolytic lesion involving the distal phalanx. The cortex was eroded and lesion was extending into the soft tissue. The routine blood investigations were normal. Serum alkaline phosphatase level was normal. We had a differential diagnosis of giant cell tumor and bone cyst. We had done excision of the distal phalanx. Since the lesion was extending into the soft tissue we had planned for a radical excision. The biopsy showed giant cell tumor of the distal phalanx. Regular follow up of the patient showed no recurrence of the tumor.

Discussion

Giant cell tumors usually occur in third and fourth decade of life, the most common area involved is around knee joint (70%). Distal radius is the second most common location. The foot is a rare site, accounting for less than 1% of all tumors of musculo skeletal system. In foot approximately 50% of giant cell tumors are seen in the talus. Literature showed only three other case reports of giant cell tumor of phalangeal bone of foot. Giant cell tumors of bones in foot are known to occur in a younger age group more often in females and they tend to have more aggressive behavior both clinical and radiological than in other location. They usually present with pain and swelling of the foot. Symptoms are rapidly progressive and the diagnosis is delayed as symptoms may usually the attributed to non specific foot pathology.

In long tubular bones, radiological differential diagnosis includes chondroblastoma, aneurysmal bone cyst, and non ossifying fibroma. When giant cell tumor occur in long bone X-ray shows a lytic lesion centered in epiphysis but involving the metaphysis and extending at least in part to adjacent articular cortex. No periosteal reaction is appreciated unless a fracture is present. The primary foot lesions consisted mostly of purely lytic defects of bone with some degree of trabeculation which is usually minimal. Some were purely lytic and no lesion was sclerotic. The tumors are aggressive. Most of them were expansile. The cortex showed areas of destruction in most cases. Like long bones no periosteal reaction were observed in the giant cell tumor of the foot. Histologically these tumors from other giant cell containing lesions in the giant cell tumor of the foot.

Histologically these tumors from other giant cell containing lesions in long bones are commonly involved. Tumors involving the phalangeal bone of foot are very uncommon. The author reports a case of giant cell tumor involving the distal phalanx of great toe. A 30 year old male has presented with swelling of right great toe. X-ray showed an osteolytic lesion in distal phalanx of great toe. We did a En-block resection of phalanx. Histopathology showed Giant cell tumor. There was no recurrence of tumor on follow up. Giant cell tumor in such a location is usually aggressive and needs regular follow-up to detect local recurrence (Figure 1).
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References


Figure 1 Giant cell tumour of phalanx of great toe.

Acknowledgements

None.

Conflict of interest

The author declares no conflict of interest.