Introduction

Giant cell tumor (GCT) of the bone is a benign, locally aggressive tumor mainly found in epiphysis of long bones. It is mainly found in young adults of 15-35 years, with slight female predominance. Microscopic examination of these tumors reveals osteoclast-like giant cells with multiple nuclei residing in a spindle cell stroma. 80-90% are found in long bones, with 50% occurring in lower end of femur and upper end of tibia. It is also found frequently in the end of radius, proximal humerus, and fibula. 4% of them occur in the pelvic bone and spine. Only as few as 2% of them are found in small bones of hand and feet. Very few cases of GCT have been reported in the metatarsal. It is hypothesized that the proper management of these types of tumors is available in literature.

Case Report:

We report a case of GCT of the fifth metatarsal in a 26 year old male who presented with foot pain and mild swelling since 6 months. A diagnosis of GCT was made on the basis of clinical, X ray and MRI features and confirmed by histopathological examination of the biopsy material and was managed by intralesional curettage and autogenous bone grafting. The case was followed up for 6 months and showed no signs of recurrence and good clinical and radiological outcome.

Conclusion:

We concluded that giant cell tumors could present at uncommon sites also, and they should be considered in the differential diagnosis of lytic lesions of the epiphyseal region. The management principles, however, remain the same as other bones.

Discussion

Giant cell tumor of the bone is a benign, locally aggressive lesion. It is a relatively rare tumor. It is composed of stromal cells and multinucleated giant cells that exhibit the phenotypic features of osteoclasts.

Giant cell tumor mainly occurs in the long bones [75-90%], especially the lower end of femur and upper end of tibia. Other common sites are distal radius and humerus. Giant cell tumors of the bones of the hand and foot bones are rare. GCT of foot is even rarer than GCT of hand. GCT of the hand & foot seems to represent a different lesion than conventional GCT in the rest of the skeleton. Owing to the rarity of these tumors in these locations, various differential diagnoses should be kept in mind such as giant cell tumor, giant cell reparative granuloma, aneurysmal bone cyst, chondromyxoid fibroma, brown tumor of hyperparathyroidism, angiosarcoma, myeloma, and an expansile metastatic lesion, such as renal cell carcinoma.

The various treatment modalities described in literature are curettage, curettage and bone grafting, irradiation, amputation, and resection with reconstruction.

In our case, curettage with bone grafting was the preferred choice because the size of the lesion was small and anatomy of the host bone was preserved. Moreover, there was no intraarticular breaching. The tumor mass was carefully cut out after making a large cortical window and the defect was filled with bone graft, which got incorporated in the recipient bone and there were no clinical or radiological signs of recurrence.

Conclusion

We concluded that giant cell tumors could present at uncommon sites also, and they should be considered in the differential diagnosis of lytic lesions of the epiphyseal region.
diagnosis of lytic lesions of the epiphyseal region. The management principles, however, remain the same as other bones. A thorough curettage and bone grafting can give good results in these cases where there is no cortical expansion and nil to minimum articular breaching.

Clinical message:
Giant cell tumors may be found in small bones of foot and this should be kept in differential diagnosis of chronic foot pain. They could easily be managed by thorough curettage and bone grafting if they are of small size and detected earlier.

Consent: The patient has given their informed consent for the case report to be published.

Competing interests: The author(s) declare that they have no competing interests

Figures:

Figure 1: Pre op X rays

Figure 2: MRI showing lesion

Figure 3 a: Intra op curettage 3 b: cavity left after curettage

Figure 4: Follow up X rays

REFERENCE