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A Case of Simple Bone Cyst of Calcaneum Treated with Curettage and Filling of Bone Defect with Bio Composite

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ABSTRACT

A simple bone cyst is usually a unilocular, solitary cystic lesion of the bone filled with serous or serosanguinous fluid and lined by a fibrous membrane. They are most commonly seen in the first 2 decades of life. The metaphyseal areas close to the physics are the most commonly affected, but they can occur in any bone. We present a case of a 20 year old female with Simple bone cyst of the calcaneum. Curettage was performed along with filling of the defect with Bio composite Beta Tricalcium phosphate/Calcium sulphate hemihydrate compound. The patient was reviewed after 3 months and is bearing full weight on the affected ankle.

Key words: Bio composite beta tricalcium phosphate, Calcium sulphate hemihydrate compound

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INTRODUCTION

Calcaneal tumours are a rare occurrence. Simple bone cysts are normally uniloculated, cystic cavities in the bone which are solitary. They commonly in young individual are upto 20 years of age. Simple bone cysts are said to occur when a focal defect in the remodelling of the metaphysis. This blocks the interstitial fluid drainage leading to increase in pressure and eventually necrosis of the bone and accumulation of fluid. The most commonly affected sites are the metaphyseal areas like the proximal and distal femur and the proximal tibia although they might be seen in any location [1-3].

CASE PRESENTATION

A 20 year old female presented with the complaint of pain in the right ankle. The pain was sudden in onset and started spontaneously while the patient was walking. There was no history of a fall or trauma to the ankle. On examination, there swelling over the calcaneum along with local tenderness. There was no redness or local warmth. Ranges of movements of the ankle. There was no Neuro-vascular deficit. X-ray of the right ankle was taken which showed a well marinated, lytic lesion in the calcaneum. MRI showed a cystic lesion in the calcaneum reaching the subtalar joint superiorly and calcaneo-cuboid joint anteriorly.

Anaesthetic fitness obtained and patient was posted for Curettage. Through lateral approach of Calcaneum, incision was made. Skin and subcutaneous tissue retracted. A small window was made in the lateral wall of calcaneum. Cyst was curetted completely. Bio composite was inserted into the defect and allowed to set. Thorough wound wash was given. Wound closed in layers. Sterile dressing was done and Below Knee slab was applied.

DISCUSSION

Unicameral bone cysts, also known as simple bone cysts, are common benign lesions of the bone that are mainly seen in childhood and in most cases, are asymptomatic. These cysts are surrounded by a fibrous membrane lining and are filled with clear serosanguinous fluid.

During the active phase, the cyst is adjacent to the growth plate. As the lesion becomes inactive it starts migrating away from the growth and starts gradually resolving.

On X-ray, UBCs are seen as well-defined lucent lesions with transition zone which is narrow. It is mostly seen in skeletally immature patients. They are located centrally with a sclerotic margin in most cases. In most cases; there is no soft tissue involvement or periosteal reaction. They sometimes expand the bone, thinning of the endosteum without a breach of the cortex unless there is a presence pf pathological fracture. UBC is made of one contiguous cystic space but rarely, they are multiloculated.

On MRI, they appear dark on T1 and bright on T2 weighted images.

If a fracture occurs, a small fragment may be seen within the cavity which shows up as the classical ‘fallen leaf’ sign.

Biopsy showed single cystic cavity with thin fibrous lining containing fibrous tissue, giant cells, and blood. Chronic inflammatory cells were found in small numbers.

Curettage and filling of the bone defect is one of the accepted treatment modalities for the management of Simple bone cysts. It is associated with recurrence in about 10-20% of the cases [4,5].

CONCLUSION

The calcaneum is one of the rarer locations for the occurrence of a Simple bone cyst. For a proper diagnosis, correlation of the clinical presentation, site, radiological and histological findings is required. Curettage of the cyst along with filling of the defect is an excellent option in the management of these lesions.

REFERENCES

1. Sung AD, Anderson ME, Zurakowski D, et al. Unicameral bone cyst: A retrospective study of three surgical treatments. Clin Orthop Related Res 2008; 466:2519-26.
2. Glaser DL, Dormans JP, Stanton RP, Davidson RS. Surgical management of calcaneal unicameral bone cysts. Clin Orthop Relat Res 1999; 360:231–237.
3. Kadhim M, Thacker M, Kadhim A, et al. Treatment of unicameral bone cyst: Systematic review and meta-analysis. J Child Orthop 2014; 8:171–91.
4. Chigira M, Maehara S, Arita S, et al. The aetiology and treatment of simple bone cysts. J Bone Joint Surg Br 1983; 65:633–637.
5. Pogoda P, Priemel M, Linhart W, et al. Clinical relevance of calcaneal bone cysts: A study of 50 cysts in 47 patients. Clin Orthop Relat Res 2004; 424:202–210.