

Case report

Intraarticular osteochondroma of distal humerus, proximal radius and ulna

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Abstract

Intraarticular location of osteochondroma is very rare and only few such cases have been reported in the literature previously. Intraarticular osteochondroma generally appears as a single loose body or multiple loose bodies in the joint cavity. We present here a case of 38-year-old lady who presented in the out patients department of Orthopaedics, BPKIHS, Dharan with pain and swelling in and around the right elbow joint for previous one year. She sought treatment in many centers of eastern Nepal and B.P Koirala Cancer Hospital, Bharatpur in the line of soft tissue tumor. Due to its rarity and unique characteristics, we herein report the case of intraarticular osteochondroma of elbow joint.

Keywords: elbow joint, intra articular, osteochondroma

Introduction

Osteochondroma represents the most common bone tumor and is a developmental lesion rather than a true neoplasm.¹ It constitutes 20%–50% of all benign bone tumors and 10%–15% of all bone tumors.² Osteochondromas are composed of cortical and medullary bone with an overlying hyaline cartilage cap and demonstrate continuity with the underlying parent bone cortex and medullary canal. Common sites of osteochondroma include around knee joint, hip joint, shoulder joint and elbow joint. In long bones, osteochondroma arises adjacent to the physis and tends to remain in the metaphyseal region.³

Intraarticular osteochondroma is rare and when it occurs it appears as a single loose body or multiple loose bodies in the joint cavity.⁴

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Case report

A 38-year-old lady presented in the out patients department of Orthopaedics, BPKIHS, Dharan with pain and swelling in and around the right elbow joint for previous one year. She sought treatment in many centers of eastern Nepal and B.P Koirala Cancer Hospital, Bharatpur in the line of soft tissue tumor. She had no history of elbow trauma or surgery before. There was no history of hereditary multiple exostosis in the family. On physical examination, there were tender hard bony masses on both sides of the elbow joint more prominently on the medial side. The range of motion of the elbow joint was 15 to 100 degrees with pain on movement. Plain radiographs showed multiple sessile osteochondroma at the distal end of humerus, proximal end of the radius and ulna, some of which are intra articular (Fig. 1). MRI of the right elbow done outside and at BPKIHS showed multiple intra articular epiphyseal osteochondroma (Fig. 2 a,b). USG of the right elbow and FNAC of the mass done outside was inconclusive.

Since her elbow pain had worsened and range of motion of the elbow joint had decreased, we planned excisional biopsy. We approached the elbow through posterior approach, excised the osteochondroma from the epiphyseal region of distal humerus, proximal ulna and radius and sent the specimen for histopathological examination. Incision was closed in layers and above elbow plaster of paris slab was applied. Sutures and slab were removed on 14th post-operative day and elbow was mobilised (Fig. 3). Histopathological report confirmed osteochondroma.



Fig. 1: Pre-operative plain X-rays right elbow

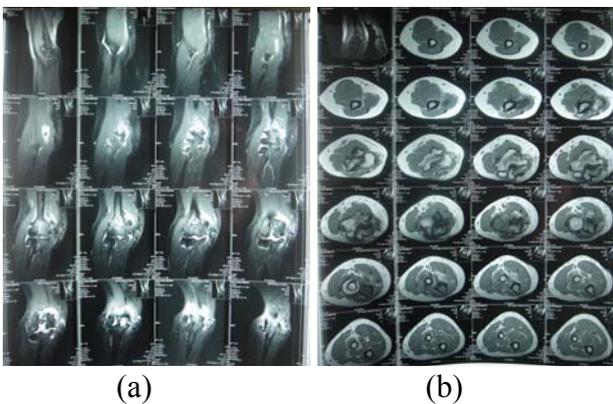


Fig. 2: MRI of right elbow



Fig. 3: Post-operative plain x-ray of right elbow

Discussion

Osteochondroma usually occurs around the growth plate of long bones in childhood and then it moves toward diaphysis according to the growth.¹ Therefore, It is very rare that osteochondroma is located in the intra-articular site of the joint.⁵ Osteochondroma becomes symptomatic if it irritates soft tissues such as muscles, tendons and nerves.⁶ In the present case, patient felt pain in the elbow joint. We found sessile type of osteochondroma from distal humerus, proximal ulna and radius, some of which were located intraarticularly making the diagnosis more challenging and difficult. Preoperative imaging including plain X-rays and MRI showed multiple intraarticular epiphyseal osteochondroma. Such lesions should be differentiated from other conditions such as osteochondritis desiccans, osteochondral fractures, and detached osteophytes. Patient had no history of trauma to the elbow joint, we also observed no defect in the articular cartilage. In our case, excised bony part demonstrated typical features of osteochondroma. The lesion had cartilaginous cap and secondary bone formation through a process similar to normal enchondral ossification.

Conclusion

Osteochondroma occurs around the growth plate of long bones in childhood and then moves toward diaphysis according to the stage of growth. Therefore, it is rare for an osteochondroma to be located intraarticular. Surgical removal should be considered for both treatment and confirmation of the diagnosis.

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