

Osteochondroma of Patella: A Case Report.

A Suryanarayana Rao¹

¹Associate Professor, Orthopaedic Department, Meenakshi Medical College Hospital and Research Centre, Enathur, Kanchipuram, Tamil Nadu.

Received: July 2017

Accepted: July 2017

Copyright: © the author(s), publisher. It is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

Osteochondroma of patella are rare and only few cases are reported in scientific literature. We report a case of patellar osteochondroma treated at our tertiary care hospital.

Keywords: Osteochondroma, Patella.

INTRODUCTION

Osteochondroma is the commonest benign tumour of bone. It accounts for 10% of all bone tumors and 30% of benign tumors.^[1] Osteochondroma of patella are very rare and very few cases have been described in literature.^[2] WHO 2002 defined Osteochondromas as a cartilage capped bony projection arising from the external surface of bone containing a marrow cavity that is continuous with that of the underlying bone.^[3] Malignant transformation of Osteochondromas can occur later in adulthood but rarely metastasize. Primary tumors of the patella account for <0.06% of bone tumors⁴. We here report a case of patellar osteochondroma treated at our tertiary care hospital.

CASE REPORT

55 year old female came to outpatient department with the complaint of painless swelling over right knee since 5 year. On physical examination, size of swelling was 4 cm longitudinally × 3 cm transversally × 2 cm anteroposterior was observed. Margin was well defined. Swelling was adhered to underlying patellar bone. On flexion and extension movements of knee, swelling moved with patella. There was no tenderness. There was no neurovascular deficit and the range of motion of the

Knee was not impaired. On X-ray there were lytic areas present with dense corresponding to bone and less dense areas that might correspond to cartilage. CT-scan showed a primary tumor at the lower center of the patella, with osteocartilaginous characteristics. The diagnosis of patellar osteochondroma was made, and surgery was planned. Resection of lesion was done and tissue was send for histopathological evaluation [Figure 1]. It showed islands of hyaline cartilage with centre of ossification and sclerotic lamellar bone and fatty marrow. The diagnosis of patellar osteochondroma was made without signs of malignant transformation. Patient was followed up at 6, 12, 18 week, 1 year, 2 year and 5 years. Over the course of the follow-up, the patient did not present any signs of recurrence for 5 years.



Figure 1: Photograph showing osteochondroma of patella.

Name & Address of Corresponding Author

Dr. A Suryanarayana Rao.
Associate Professor,
Orthopaedic department,
Meenakshi Medical College Hospital and Research
Centre, Enathur, Kanchipuram, Tamil Nadu.



Figure 2: Postoperative clinical photograph showing range of movement of right knee.

DISCUSSION & CONCLUSION

Osteochondromas are solitary or multiple, pedunculated or sessile exophytic outgrowths from the bone surface that are composed of cortical and medullary bone with an overlying hyaline cartilage cap. Osteochondromas occurs in adolescent and in bones that present endochondral ossification.^[5] Osteochondromas arising from patella as in our case is unusual. The most frequently involved are the long bones of lower extremity;^[6] the knee (40%) 7 followed by the humerus (10-20%) 8 are more frequently involved. Other more unusual locations include the small bones of the hands and feet (10%), scapula (4%), pelvis (5%), and cranial base and jaw⁶; the spine is affected in 1.3-4.1% of cases. vast majority of solitary Osteochondromas are asymptomatic and diagnosed incidentally.^[8] Clinical symptoms may be related to tendonitis, joint locking, degenerative arthritis, limitation of flexion and extension, cosmetic deformity, neurovascular impingement, pseudoaneurysm formation, fracture, overlying bursa formation, or malignant transformation. Painless swelling and cosmetic deformities related to the slowly enlarging mass are the most common complaints,^[9] which were similar to the complaints our patient reported with. Although radiography is often diagnostic alone, other imaging modalities include MRI and CT scan which help to exclude sarcomatous degeneration. Osteochondromas may be sessile or pedunculated. CT scanning using three-dimensional imaging reformation allows optimal depiction of the pathognomonic cortical and marrow continuity of the lesion and parent bone, especially for Osteochondromas in complex areas of the anatomy.^[10] MRI is the best imaging modality for evaluating cortical and medullary continuity between Osteochondromas and parent bone. MRI evaluates the cartilaginous cap and malignant transformation.^[11] Malignant transformation is seen in <0.4-2.2% of patients of solitary Osteochondromas and up to 27% of patients with multiple hereditary exostoses. Surgery to resect the tumor is not essential in all cases. Its main indications are when the exostosis is

interfering with the growth of the extremity, which leads to functional and mechanical alterations; in the presence of malignant transformation, which is characterized by a thick coating of more than 2 cm in adults; and in the presence of bone erosion, vascular compression and/or nerve compression with symptoms and joint locking promoted by the Osteochondromas. The relative indications are esthetic complications, which often give rise to post-operative skin scarring that is worse than the esthetic deformity itself; and pain, which may occur because of bursitis or after fracturing, depending on the patient's symptoms.^[12]

REFERENCES

1. Jaffe HL. Tumors and tumorous conditions of the bones and joints. Philadelphia: Lea and Febiger; 1958. p. 558-67.
2. Sadykhov AG. Osteochondroma of the patella. *OrtopTraumatol Protez.* 1962; 23:77-8
3. Khurana J, Abdul-Karim F, Bove e JV. Osteochondroma. In: Fletcher CD, Unni KK, Mertens F, editors. World Health Organization Classification of Tumours. Pathology and Genetics of Tumours of Soft Tissue and Bone. Lyon: IARC Press; 2002. p. 234-236
4. Dahlin DC, Unii KK. Bone Tumours: General Aspects and Data on 8542 Cases. 4th ed. Springfield: Charles C Thomas; 1986. p. 3-17.
5. Robbin MR, Murphey MD. Benign chondroid neoplasms of bone. *Semin Musculoskelet Radiol* 2000; 4(1):45-58
6. Resnick D, Kyriakos M, Greenway GD. Osteochondroma. In: Resnick D, editor. *Diagnosis of Bone and Joint Disorders.* 3rd ed., Vol. 5. Philadelphia, PA: W.B. Saunders; 1995. p. 3725-3746.
7. Giudici MA, Moser RP Jr, Kransdorf MJ. Cartilaginous bone tumors. *Radiol Clin North Am* 1993; 31(2):237-259.
8. Scarborough MT, Moreau G. Benign cartilage tumors. *Orthop Clin North Am* 1996; 27(3):583-589.
9. Karasick D, Schweitzer ME, Eschelman DJ. Symptomatic osteochondromas: Imaging features. *AJR Am J Roentgenol* 1997; 168(6):1507-1512.
10. Lange RH, Lange TA, Rao BK. Correlative radiographic, scintigraphic, and histological evaluation of exostoses. *J Bone Joint Surg Am* 1984; 66(9):1454-1459.
11. Park YK, Yang MH, Ryu KN, Chung DW. Dedifferentiated chondrosarcoma arising in an osteochondroma. *Skeletal Radiol* 1995; 24(8):617-619.
12. de Moraes F, Demello MC, Rocha AV, Dos Santos MR. Patellar osteochondroma: A case report. *Rev Bras Ortop* 20144; 9(2):206-209.

How to cite this article: Rao AS. Osteochondroma of Patella: A Case Report. *Ann. Int. Med. Den. Res.* 2017; 3(5):OR33-OR34.

Source of Support: Nil, **Conflict of Interest:** None declared