

Osteochondroma in Ligamentum Patellae

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Abstract

A case of extraskeletal Osteochondroma in a 53 years old man located in medial portion of right patellar ligament is reported. He presented with a hard swelling with occasional pain in the antromedial part of the knee. It was slightly movable, 5 cm in diameter and interfering with movements of the knee. X-Rays showed radio-opaque bony swelling in that region of knee with some degenerative changes. Excision biopsy and histopathology revealed Osteochondroma.

Key words; Osteochondroma, ligamentum patellae, painful knee.

Introduction

Osteochondroma is most common bone tumor.¹ It forms 10 – 15% of all bone tumors and 20 – 50% of all

benign bone tumors. It is found to be continuous with parent bone and have a cartilage cap.² It arises from metaphysis of long bones,³ common in males under 20.⁴ However, Osteochondroma of soft tissue is uncommon and may arise from synovium of joint or tendon sheath. Rarely osteochondroma arise outside the synovial compartment.⁵ These extrasynovial osteochondromas are present in juxtra articular soft tissues and may be extracapsular, capsular or intracapsular.⁶

Case Report

Fifty three years old male M R, presented with mild pain in his right knee and a lump of about 5 cm in diameter located in antromedial part of knee below the patella in mid October 2009. It had been increasing slowly in size over past three years after history of trauma which was mild and went unnoticed. The swelling appeared sometime after that injury.

On examination the swelling was found to be hard and appeared deep to the medial portion of patellar tendon. It was also extending medially beyond the patellar tendon. It was slightly movable. There was mild restriction of movement of the knee. There was no joint effusion or synovial thickening. X-Ray revealed bony swelling oval in shape with early degenerative changes in the joint. It was decided to explore and excise the swelling because of its large size, location and some interference with movement of the knee and occasional pain, although it was enlarging slowly.

After routine investigation under spinal anesthesia, swelling was explored by longitudinal antromedial

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incision. Patellar tendon was exposed; swelling seemed to be continuous with deep portion of ligamentum patellae. The patellar tendon was slit longitudinally exposing the swelling. Swelling had a rough nodular surface covered with shiny cartilaginous tissue. It was excised in toto. The deep portion of the swelling was resting on the extra synovial portion of the medial condyle of Tibia showing atrophy of the infra-patellar pad of fat. Swelling was neither adherent to any adjoining structure nor communicating with synovial tissues.

On bisecting the mass, it was found to be bony hard covered with cartilage tissue. Whole specimen was sent for histopathology which confirmed it to be osteochondroma.

The wound had uneventful recovery and there was no reactive effusion or swelling of the joint after the surgery. Patient is in our follow-up and he is symptom free, without any sign of recurrence.

Discussion

Osteochondroma can arise from any long bone, mostly around the knee.¹ Some authors consider it developmental lesion rather than neoplasm.² It buds out from metaphysis of long bones.³ Osteochondroma is common in male and present below 20 years.⁴ It grows slowly during childhood and adolescence and usually stops enlarging with skeletal maturity.⁷ Ninety percent lesions are solitary, multiple lesions are part of hereditary multiple exostosis, autosomal dominant disorder. These osteocartilaginous tumors at multiple sites are also called diaphyseal aclasis.⁸ Osteochondroma is common in appendicular skeleton but rare in spine⁹ sometime causing paraparesis.¹⁰

Extraskelatal osteochondroma is rare entity, arising in juxtaarticular soft tissue with no attachment to bone and may be paraarticular, capsular or intracapsular.⁶ Extraskelatal extraarticular osteochondroma are even rare than their intraarticular counterpart.¹¹ Extraskelatal osteochondroma should be considered when well defined osseous mass is present even in some unusual site. Extra skeletal soft tissue Osteochondroma in planter fascia of foot,¹² in heel under calcaneum,¹³ nape of neck,¹⁴ and in thigh have been reported.¹⁵ Similarly intra-articular osteochondroma of knee (anterior portion of knee),⁶ infrapatellar fat pad,¹⁶ and osteochondroma in posterior aspect of knee have been mentioned in literature.¹⁷

This reported case is unique as no case of Osteochondroma in Ligamentum Patellae has been reported in literature so far.

Differential Diagnosis

Mineralized soft tissue lesions like myositis ossificans, synovial chondroma, synovial sarcoma and chondroma have to be considered in differential diagnosis.^{18,19}

Pathogenesis

Knee is common location for extraskelatal osteochondroma.¹⁸ Tumor arises from capsule or para-articular connective tissue of large joints mainly knee, which undergoes cartilagenous metaplasia and subsequent ossification (mature trabecular bone surrounded by cartilage).^{19,20}

Conclusion

Osteochondroma should be kept in mind while dealing with a well defined bony hard swelling occurring in soft tissue or at unusual sites, or even at unusual age.

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