IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)
e-ISSN: 2279-0853, p-ISSN: 2279-0861.Volume 23, Issue 6 Ser. 5 (June. 2024), PP 18-20
www.iosrjournals.org

A Case Report Of Unusual Presentation Of Osteochondroma Which Was Surgically Intervened

Dr.Udaya Ambaljeri, Dr. Nagaraj B N
(Junior Resident, Orthopaedics, Akash Institute Of Medical Sciences & Research Centre, Bengaluru)
(Professor, Orthopaedics, Akash Institute Of Medical Sciences & Research Centre, Bengaluru)

Abstract:
Osteochondromas are the most common benign bone tumors (accounting for 20–50% of all benign bone tumors). They are developmental malformations rather than true neoplasms and are thought to originate within the periosteum. They usually affect bones that develop by enchondral ossification and rarely originate from bones that develop by intramembranous ossification such as the scapula, pubic rami, clavicle, and ribs.
Case report: *A 13year old boy came with complaints of swelling since one month and pain since 15days in the left proximal tibia. After detailed clinical examination and relavent radiological investigations. excision and biopsy was performed.*
Conclusion: *Osteochondroma is a benign cartilage tumor projecting from the external surface of the bone.Asymptomatic lesions require no treatment, whereas surgical indications encompass symptoms, complications, cosmetic reasons, malignant transformation, or uncertain diagnosis. If complete resection is achieved, the recurrence rate is less than 2%.*
Keyword*: Osteochondroma, exostosis, periosteum, enchondral ossification.*

Date of Submission: 03-06-2024 Date of Acceptance: 13-06-2024

I. Introduction

Osteochondromas are the most common benign bone tumors (accounting for 20–50% of all benign bone tumors). They are developmental malformations rather than true neoplasms and are thought to originate within the periosteum [1, 2]. Inheritance pattern is autosomal dominant which can cause multiple exostoses or isolated lesion [3]. They usually present during the period of rapid skeletal growth and cease to grow once maturity is reached [1, 3]. The patient usually complaints of swelling and cosmetic deformity [4]. They can present either as a pedunculated or a sessile mass (latter being more common)[1]. The lesion is typically mushroom-shaped affecting metaphysis of long bones such as femur and tibia [5]. It usually affects bones that develop by enchondral ossification and rarely originates from bones that develop by intramembranous ossification such as the scapula, pubic ramus, clavicle, and ribs [6].

II. Case Presentation

A 13year old boy came with complaints of swelling in the left proximal tibia since one month. Pain in the lest proximal tibia since 15 days. Pain is generally described as dullaching and it increases with activity

On examination – A Swelling arising from posteromedial aspect of Metadiaphyseal junction of left proximal Tibia .

Range of movements – movements of left knee joint was full and terminally painful. Active toe movements – present. Distal pulse was palpable. (Figure 1)

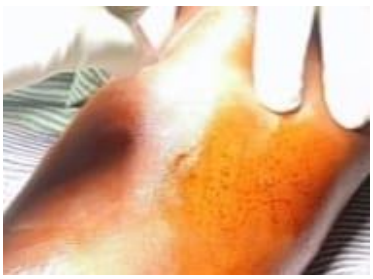

Figure 1

Radiographs of left knee joint revealed sessile Osteochondroma present on left proximal Tibia (Figure 2). MRI of left knee joint was done Irregular free margin and points postero inferiorly away from joint which is suggestive of sessile Osteochondroma. (Figure 3)

Figure 2

Figure 3

The patient was diagnosed to have osteochondroma of left proximal tibia. Patient was taken up for Excision and Biopsy under spinal anesthesia

Intraoperatively incision was taken longitudinally on the swelling on medial aspect near left knee joint, skin subcutaneous tissue cut, tumour was identified, with the help of osteotome tumour was exised and sent for biopsy (Figure 4a & 4b).

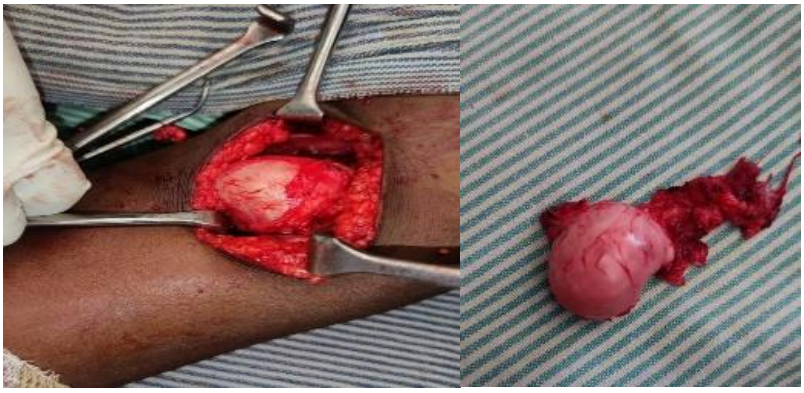

Figure 4a **Figure 4b**

Biopsy Report: Gross Examination Specimen consists of firm to hard grey white pendunculated mushrom like mass with cartilaginous cap and attached fibromuscular tissue measuring 11.5 x 3.2cm. Microscopic Examination Section shows a benign tumor composed of hyaline cartilaginous cap having irregular

lobulations (Figure 5). Underlying cartilaginous cap there are bony trabeculae of lamellar bone.No atypia noted in the sections studied.

Post op x ray showing excised osteochondroma of left proximal tibia (Figur 6).

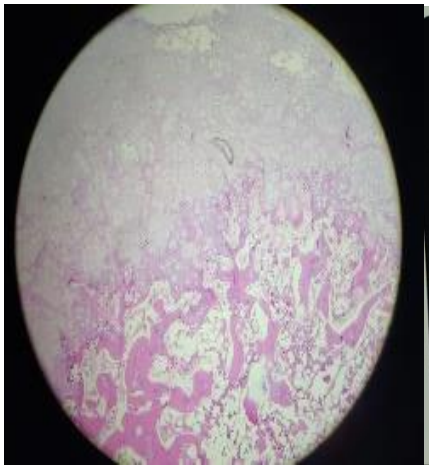

Figure 5

Figure 6

III. Discussion

The overall incidence of osteochondroma reported in literature is 35% of benign and 8% of all bone tumors [6]. Osteochondromas usually develop in bones that develop by enchondral ossification and rarely develop in bones developing by intramembranous ossification like pelvis [6]. Among the long bones, the most common site affected is distal femur [1]. Male predominance is seen with the ratio of 1.6–3.4:1 [8].Osteochondromas are usually seen in growing age group as they develop as cartilaginous overgrowth from physeal plate [1]. They have been reported to develop due to hematopoietic stem cell transplantation and due to surgery/radiation-induced injury [7]. Genetic etiology of the disease is well established with tumor suppressor gene EXT1 and EXT2 being the culprit for the disease. Osteochondromas cause symptoms only when they become large enough to cause a mass effect and compression of nearby structures. Osteochondroma is a benign neoplasm but has the potential of malignant transformation. About 1% incidence of chondrosarcoma developing from osteochondroma has been reported in literature. Our patient had no symptoms of any organ compression and complained only of a swelling in the below left knee causing irritation and pain on walking and squatting. We noticed that the tumor mass was present on posteromedial aspect of left proximal tibia. And the tumor was therefore excised.

IV. Conclusion

Osteochondroma is a benign cartilage tumor projecting from the external surface of the bone.Asymptomatic lesions require no treatment, whereas surgical indications encompass symptoms, complications, cosmetic reasons, malignant transformation, or uncertain diagnosis. If complete resection is achieved, the recurrence rate is less than 2%.

References

[1]. Heck KR Jr. Benign Bone Tumors And Neoplastic Conditions Simulating Bone Tumors. In: Canale ST, Beaty JH, Editors. Campbell's Operative Orthopaedic S. 11th Ed. Philadelphia, PA: Mobsy Elsevier; 2007. P. 858-61.

[2]. Oljaca A, Hirzberger D, Bergovec M, Tiesenhausen K, Koter SH, Friesenbichler J, Et Al. Osteochondroma Of The Scapula Associated With A Subclavian Artery Pseudoaneurysm: Case R E P O R T . S A G E O P E N M E D C A S E R E P 2019;7:2050313X18823089.

[3]. Taheriazam A, Saeidinia A. One-Stage Surgical Excision Of A Huge Bilateral Multiple Osteochondroma Of The Hip: A Case Report. Electron Physician 2017;9:5310-7.

[4]. Nekkanti S, Savsani S, Reddy YC, Meka A, Mahtani A. A Rare Sessile Variant Of Osteochondroma Presenting At An Unusual Site Of The Iliac Wing In A 15-Year Old Boy. J Orthop Allied Sci 2018;6:93-5.

[5]. Mohan M, Buch SA,Babu GS,Castelino RL, Rao S, Rao K. A Rare Clinical Presentation Of An Osteochondroma Of Coronoid Process Of Mandible. J Dent Shiraz Univ Med Sci2018;19:325-30.

[6]. Bovee JV, Wilpshaar TA. Bone: Osteochondroma. Atlas Genet Cytogenet Oncol Haematol2019;23:133-6.

[7]. Sharma S, Kalsotra SN, Gupta P, Wani I, Singh M, Singh D. Solitary Osteochondroma Of The Ilium: A Case Report. Int J Orthop Surg 2009;16:14.