



E-ISSN: 2395-1958
P-ISSN: 2706-6630
IJOS 2024; 10(2): 255-257
© 2024 IJOS
<https://www.orthopaper.com>
Received: 12-03-2024
Accepted: 18-04-2024

Dr. Apoorv Dua
Assistant Professor,
Department of Orthopaedics,
Baba Saheb Ambedkar Hospital,
Rohini, Delhi, India

Dr. Navneet Goel
HOD, Department of
Orthopaedics, Baba Saheb
Ambedkar Hospital, Rohini,
Delhi, India

Dr. Salman Durrani
Senior Specialist, Department of
Orthopaedics, Baba Saheb
Ambedkar Hospital, Rohini,
Delhi, India

Dr. Mrigank Mathur
Senior Resident, Department of
Orthopaedics, Baba Saheb
Ambedkar Hospital, Rohini,
Delhi, India

Osteochondroma of distal tibia as a solitary variant: Case report and literature review

Dr. Apoorv Dua, Dr. Navneet Goel, Dr. Salman Durrani and Dr. Mrigank Mathur

DOI: <https://doi.org/10.22271/ortho.2024.v10.i2d.3560>

Abstract

Introduction: An osteochondroma / exostosis is a common benign bone tumour covered by cartilaginous cap. Common location are proximal tibia, proximal humerus and distal femur. We report a case of solitary osteochondroma of distal tibia with distal fibula synostosis in an adult male.

Discussion: Osteochondromas are generally diagnosed incidentally during radiographic examination (sessile or pedunculate) or clinically if size is large. Generally, they are asymptomatic. They could be solitary or multiple hereditary exostosis. Age of affection is commonly between 10-30yrs. Observation is the treatment in majority of the cases. Surgical resection is indicated in case of pain, pressure symptoms on neurovascular structures, cosmesis and progression. Osteochondromas are rarely found around foot and ankle.

Conclusion: Most of the osteochondromas are treated conservatively by observation till skeletal maturity. Osteochondroma affecting distal tibia/fibula may be treated with surgical excision in an adult in view of cosmesis, prevention of fracture due to trauma, bursitis due to friction/ pain and mechanical restriction to movements.

Keywords: Osteochondroma, exostosis, benign bone tumor

Introduction

An osteochondroma is a benign bone tumour with cartilaginous cap affecting commonly metaphysis region (distal femur, proximal tibia, proximal humerus and pelvis). Osteochondromas are uncommon around tibia/fibula except in cases of multiple hereditary exostosis [1]. They could be sessile or pedunculated. We describe an uncommon case of osteochondroma of distal tibia with distal fibula synostosis fibula in adult male as a solitary variant.

Case Presentation

A 30yrs old male presented with swelling around the right ankle. His chief complaints were swelling, pain and mild restriction of ankle movements.

On physical examination bony hard swelling was palpable on postero-lateral aspect of distal leg with superficial tenderness with mild restriction of ankle movement.



Fig 1: Clinical Photographs

Corresponding Author:
Dr. Salman Durrani
Senior Specialist, Department of
Orthopaedics, Baba Saheb
Ambedkar Hospital, Rohini,
Delhi, India

Ankle was stable and there was no neurovascular compromise. Other parts of body were examined to rule out multiple swellings.

On X Ray/CT: Well defined mass (pedunculated) arising from posterior aspect of distal tibia involving distal tibio-fibular joint was seen. Initial diagnosis of osteochondroma was made.



Fig 2: X Ray D, depicting the bony swelling

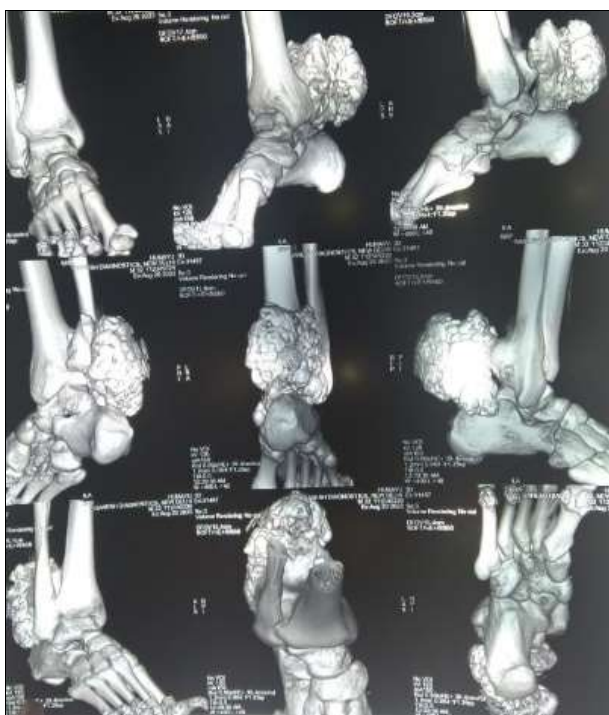


Fig 3: CT Scan Depicting bony swelling

Surgical resection was planned in view of cosmetic deformity, mild movement restriction around ankle (mechanical block) and to prevent any pathological fracture.

Marginal resection of the swelling was done using posterolateral approach preserving neurovascular structures. Intra operative, we found a pedunculated growth resembling a cauliflower with fibular synostosis. Tendoachillies was not adhered to the bony swelling Histopathology was sent which confirmed an osteochondroma. Below knee cast was given for 6 weeks. Initially non weight bearing for around 2 weeks followed by full weight bearing was advised. In the follow up period of around 1 year, no recurrence of swelling was seen.



Fig 4: Post-operative X Ray



Fig 5: Intra operative photograph

Discussion

Osteochondromas are benign lesion of bone. Generally, are solitary except in multiple hereditary exostosis cases. Most lesions are managed conservatively by observation until skeletal maturity as are asymptomatic. Lesions in multiple hereditary exostosis need close observation as they have a tendency for malignant transformation more as compared to solitary lesion. Patient should get evaluated if lesion size increases or gets painful in view of malignant changes <1% [2, 3].

Symptoms are related to size and location, irritation of nearby structures, bursitis due to chronic friction or stalk fracture secondary to traumatism [4].

Surgical resection indicated with symptomatic lesions secondary to soft tissue irritation, for a lesion subjected to minor trauma, cosmetic deformity, neurovascular compression, bursitis or for lesions with characteristics of malignant transformation [1, 5].

Osteochondromas around ankle are rare and if found, they arise from interosseous belly deforming distal tibia / fibula and have been reported to occur prior to physal fusion [6].

Most authors prefer surgical resection in these areas to prevent deformities of ankle (varus/valgus), arthritis, block in motion and fracture [6, 7, 8].

Conclusion

Most osteochondromas are treated with observation as they are asymptomatic commonly. Surgical excision is indicated if lesions get symptomatic due to various reasons. Osteochondromas around ankle can be excised in view of cosmesis, mechanical block to movement, pain due to friction and prevention of pathological fracture due to trauma.

Conflict of Interest

Not available.

Financial Support

Not available.

References

1. Takikawa K, Haga N, Tanaka H, Okada K. Characteristic factors of ankle valgus with multiple cartilaginous exostoses. *J Pediatr Orthop.* 2008;28(7):761-765. DOI: 10.1097/BPO.0b013e3181847511.
2. Loretta Chou B, Yvette Ho Y, Martin Malawer M. Tumours of the foot and ankle: experience with 153 cases, *Foot Ankle Int.* 2009;30(9):836-841. DOI: 10.3113/FAI.2009.0836.
3. Mirra JM. Bone Tumours, clinical, radiological and pathological correlation. Philadelphia, Leo and Febiger. 1989;2:1626-1660
4. Davis JR, Glancy GL, Eibert RE. Fracture through stalk of pedunculated osteochondroma A report of three cases. *chin Orth Recaled Res.* 1991;271:258-264.
5. Bilal Ismail E, Charles Kissel G, Zeeshan Husain S, Tina Entwistle. Osteochondroma of the distal tibia in an adolescent: A case report, *J Foot Ankle Surg.* 2008;47(6):554-548. DOI: 10.1053/j.jfas.2008.07.004. Epub 2008 Sep 23.
6. Wani IH, Sharma S, Malite FH, SINGH M, Sheikh I, Salaria AQ, *et al.* Distal tibia interosseous osteochondroma with impending fracture of fibula – case report and review of literature cases *J.* 2009;(1):115
7. Gupte CM, Das Gupta R, Beverly MC. Transfibular approach for distal tibia osteochondroma an alternative technique for excision, *J foot ankle surg.* 2003;42(2):95-98.
8. Danielsson LG, Iel-Haddad Quadros O. Distal tibial Osteochondroma deforming the fibula, *Acta Orthop Scand.* 1990;61(5):469-470.

How to Cite This Article

Dua A, Goel N, Durrani S, Mathur M. Osteochondroma of distal tibia as a solitary variant: Case report and literature review. *International Journal of Orthopaedics Science.* 2024;10(2):255-257.

Creative Commons (CC) License

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International (CC BY-NC-SA 4.0) License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.