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Synostosing Osteochondroma of Foot: A Rare Case Report

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Abstract
Introduction: *An osteochondroma or exostosis is a benign bone tumour consisting of a bony outgrowth covered by a cartilage cap that occurs commonly in the metaphysis of long bones, mainly the distal femur, proximal tibia and proximal humerus.*
Presentation of Case: *We describe an unusual case of a synostosing osteochondroma affecting the left foot in a young female.*
Discussion: *Most osteochondromas are asymptomatic and seen incidentally during radiographic examination. Osteochondromas are rarely localized in the foot and ankle.*
Conclusion: *Although most of the osteochondromas should be treated conservatively until skeletal maturity, those affecting the foot should be treated with surgical excision in order to relieve pain or prevent fracture due to the expanding nature of this benign tumour.*
Keywords: *Synostosing, osteochondroma, foot , metatarsals.*

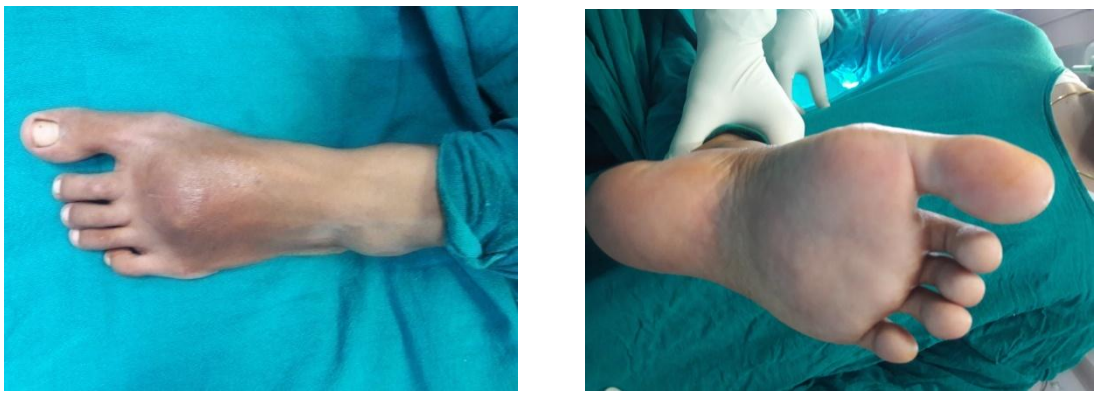
Introduction

An osteochondroma or exostosis is a benign bone tumour. It usually consists of a bony outgrowth covered by a cartilage. Most common site for its occurrence is in the metaphysis of long bones like distal femur, proximal tibia, proximal humerus and pelvis.[1] Most are asymptomatic and seen incidentally during radiographic examination. Osteochondromas are rarely localized in the foot and ankle, except in cases of Multiple Hereditary Exostoses.[2] We describe an unusual case of a synostosing osteochondroma affecting the left foot of a young female.

Presentation of case

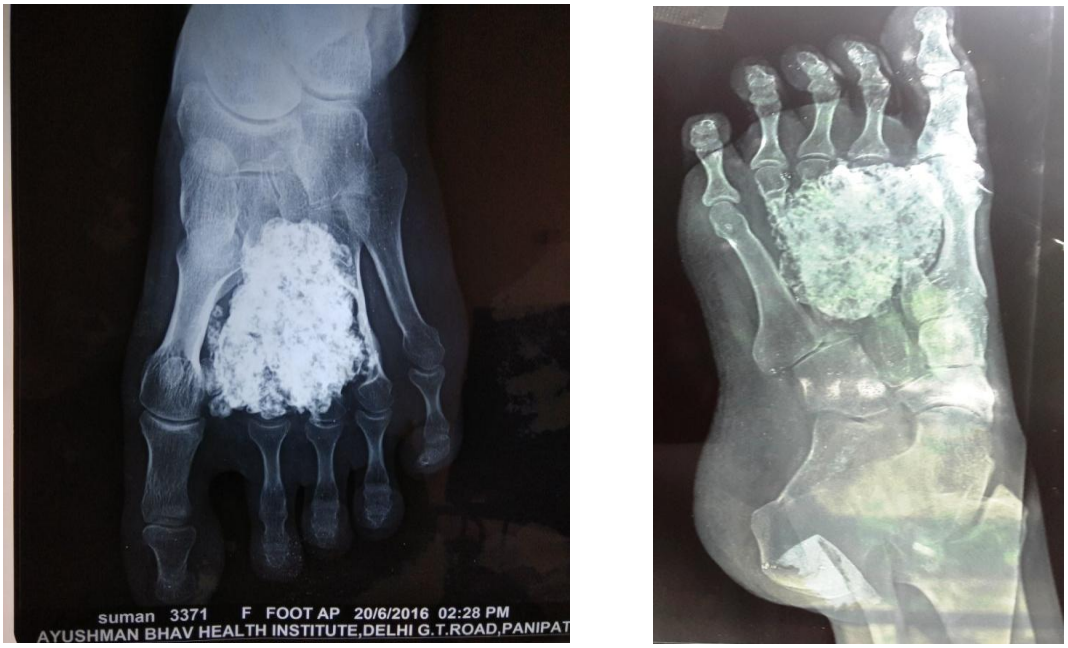
A twenty eight-year-old female came to us with pain in left foot on walking since 5 years and a palpable lump in her left foot since 8 years. On physical examination, there was mild restriction of motion of the toes and a regular fixed swelling over the dorsal and plantar aspect of the left foot of size of approximately 4 x 1cm (Figs. 1), hard in consistency, non-tender, non-compressible and without neurovascular impairment. There was no ankle instability or any subtalar involvement. An X-ray was performed (Figs. 2) showing a well-defined exostosis arising from the second, third & fourth metatarsals, causing pressure erosion and impending fracture of the same. The MRI scan clearly depicted the lesion and the erosion of the metatarsals (Figs. 3). The initial diagnosis was unknown. We performed a thorough physical examination of the patient's limbs & foot in order to rule out another bony swelling.

Due to the risk of having metatarsal fracture and because of pain on weight bearing we decided to perform a surgical excision biopsy of the lesion. The patient underwent removal through dorsal as well as plantar incision. Intraoperatively, we found a sessile hard bony swelling with a broad base resembling a cauliflower, eroding the metatarsals, which were quite thin (Fig. 4), which we could not preserve during the removal of the tumour. After the excision the wound was closed in layers under the drain with k-wires transfixing the proximal phalanges of 2nd, 3rd and 4th toes with the tarsal bones. After the operation the patient was put in a below knee non weight bearing plaster cast for 6 weeks with a gradual transition to partial full weight bearing cam-walker. At six months after the operation, the patient had complete recovery with full range of motion and no residual pain. The histopathology examination proved to be an Osteochondroma.



A **B**

Fig. 1. Clinical photo showing the swelling of the left foot



A **B**

Fig. 2. Radiograph image showing the bony swelling producing erosion and impending metatarsal fracture.

Discussion

Osteochondroma is a benign surface lesion of bone consisting of a bony outgrowth covered by a cartilage cap. It is considered the most common benign bone tumour. Most of the lesions are asymptomatic and never identified. Incidentally discovered osteochondromas in asymptomatic patients are managed with observation. The

patient should be informed of the rare possibility of malignant change which is less than 1% and the need for follow-up if the lesion becomes larger or painful.[3,4] The main symptoms are related to its size and location, irritation of nearby structures, bursitis due to chronic friction or stalk fracture secondary to trauma.[5]

Osteochondromas at the foot are very uncommon except in cases of Multiple Hereditary Exostoses.[2] Surgical treatment of osteochondromas consists of simple excision along with cartilaginous cap to prevent recurrence.[4] Resection is indicated for patients with a symptomatic lesion secondary to irritation of the surrounding soft tissue, for a lesion in a location that is subjected to minor trauma, for a lesion causing a cosmetic deformity or potential damage to surrounding joints or neurovascular structures, and for a lesion that has characteristics of malignant transformation.[6,7] There is still little information of the natural evolution after treatment of osteochondromas arising from the metatarsals and its unusual presentation.

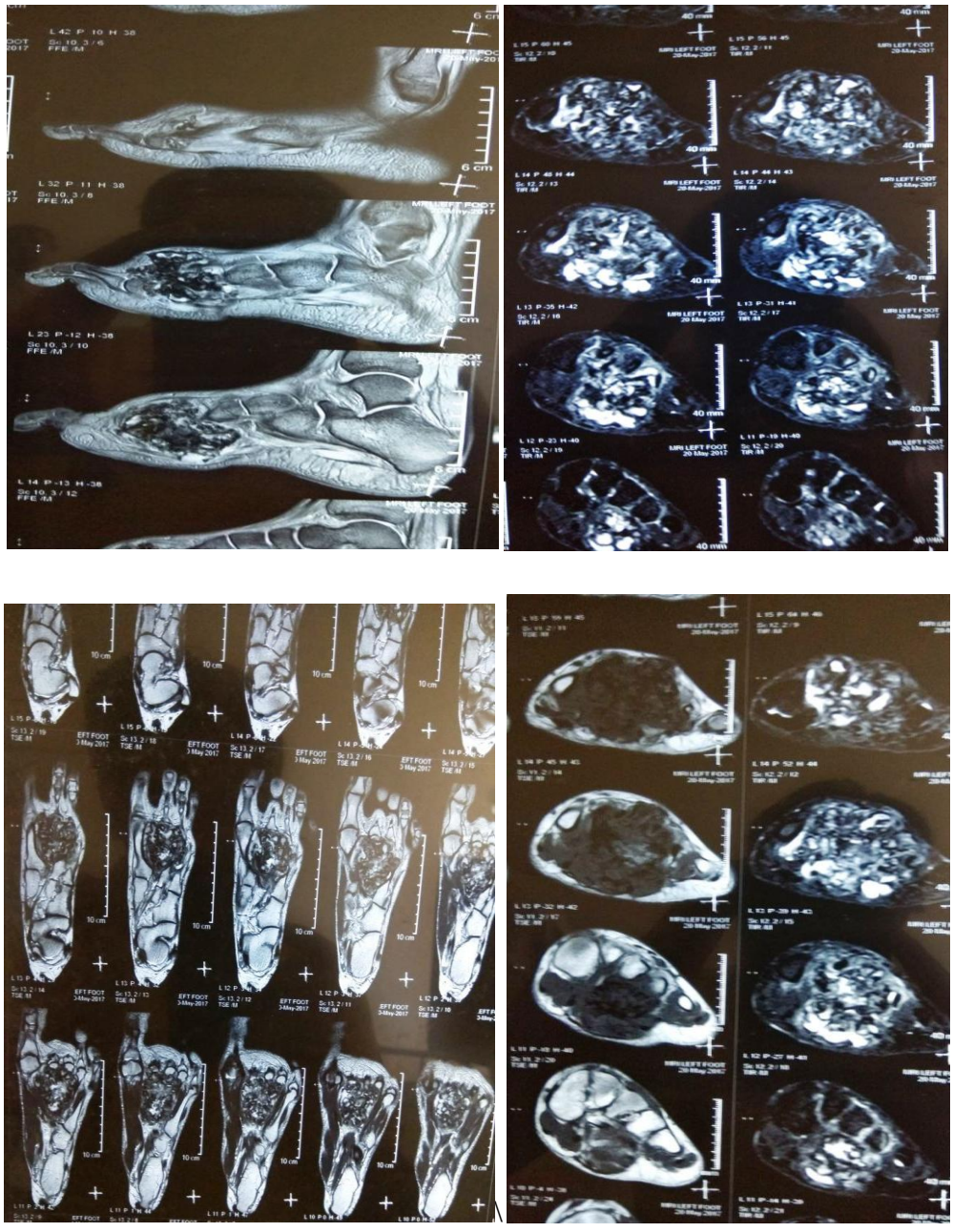


Fig. 3. MRI image demonstrating the lesion.

A **B**

Fig. 4. Intraoperative findings: dorsal approach showing osteochondroma excision from the foot.

Conclusion

Although most of the osteochondromas should be treated conservatively until skeletal maturity, those affecting the foot and are symptomatic should be treated with surgical excision in order to relieve pain or even fracture due to the expanding nature of this benign tumour.

Conflict of interest statement: None.

Funding: None

Ethical approval

Written informed consent was obtained from the patient for publication of this case report and accompanying images.

Author contributions

All authors have made substantial contributions to the publication of this case report.

References

1. Unni KK. Cartilagenous lesions of bone. J Orthop Sci 2001;6:457–72.
2. Takikawa K, Haga N, Tanaka H, Okada K. Characteristic factors of ankle valgus with multiple cartilaginous exostoses. J Pediatr Orthop 2008;28(7):761–5.
3. Chou LB, Ho YY, Malawer MM. Tumors of the foot and ankle: experience with 153 cases. Foot Ankle Int 2009;30(9):836–41.
4. Mirra JM. Bone tumors, clinical, radiological and pathologic correlation. Philadel- phia, Lea and Febiger 1989;2:1626–60.
5. Davids JR, Glancy GL, Eilert RE. Fracture through the stalk of pedunculated osteo-chondromas. A report of three cases. Clin Orth Related Res 1991;271:258–64.
6. Galasso O, Mariconda M, Milano C. An enlarging osteochondroma in the adult patient. J Am Pediatr Med Assoc 2009;99(2):157–61.
7. Matsumoto K, Sumi H, Shimizu K. Tibial osteochondroma causing foot pain mimicking tarsal tunnel syndrome: a case report. J Foot Ankle Surg 2005;44(2):159–62.