

Case Report

A rare case: exostosis of right foot

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ABSTRACT

Exostosis is benign tumor. Osteochondromas are benign metaphyseal osseous growths occurring in long bones of body. They contain cartilaginous cap which are present before closure of physis plate. Growth of these structures ends with physis fusion. Being benign in nature, they don't require any surgery. Unless and until they cause compression symptoms on nerves and blood vessels, difficulty in movements of joints, and patients request for cosmetic appearance. Here by we present a rare case of 19 years old male patient with right foot exostosis. The same patient has multiple Exostosis in bilateral ankle, knee and humerus but without any family history. Exostosis was found on plantar aspect of foot, which made it difficult for him to walk. Surgical excision was done. Pre, per and post-operative period was fine. Patient was able to walk normally thereafter. There was no recurrence of growth thereafter.

Keywords: Hereditary multiple exostosis, Exostosis, Foot exostosis

INTRODUCTION

Osteochondromas through benign account for 35% of benign bone tumors.¹ Small, asymptomatic they present commonly as solitary lesions. These lesions are common in males, young population. At times 15% of patients present with multiple exostosis, an autosomal dominant condition. Any portion of skeleton can be involved, mainly metaphysis of long bone. These are extremely rare to see in small bones of foot and hand. Periosteal osteochondromatous proliferations and subungual exostosis resemble with osteochondromas. Osteochondromas are sessile and pedunculated. Cortex, spongiosa of osteochondromas will be continuous with bone cortex and spongiosa. These lesions grow away from metaphysis and from joint. Pedunculated exostosis is mushroom shaped with bone stalk and cartilaginous cap.²

Through benign they present with symptoms of compression, (because of large size) on adjacent nerves and vessels.² Come in the way of movement of tendons and muscles near joints. Pain through fracture of stalk.

Differential diagnosis is periosteal osteochondromas, proliferations subungual exostosis, and periosteal osteosarcomas.² Management is mainly excision biopsy.

CASE REPORT

Nineteen years, male patient presented with complaints of swelling right foot 13 years. He also complains of difficulty in walking right foot over past 10 years. The present illness started with insidious onset, gradual progressive and attained present state over 5 years back. Swelling suddenly stopped growing 5 years back. No complains of pain. Swelling was present over plantar aspect of right foot, which made it difficult to weight bear. No history of fall or trauma. Patient had bilateral hand deformity.

On examination of right foot, a swelling of 6×5 cm noted over right lateral and plantar aspect of foot. Swelling was bony hard, non-mobile, pedunculated with stalk connecting main bone mass with head of 5th metatarsal bone. Skin over the swelling was non-pinchable. No engorged veins and sinuses. Swelling was moving with 5th

Metatarso-phalangeal joint over tarso-metatarsal joint. Similar swelling noted over bilateral wrist over distal end of ulna. Bilateral distal end of ulna was not palpable with ulnar deviation of wrist joint.

Routine blood and radiological (X-ray) were done in terms of preparation of surgery. X-ray shows 5th metatarsal exostotic growth observed overhead, pedunculated with mushroom shaped head seen over plantar aspect of foot. Other X-rays show bilateral radial club hand with exostosis, bilateral fibular exostosis.

Patient was taken-up for surgery for excision biopsy. Pre and post-operative period went uneventful. Patient started walking normally after surgery.



Figure 1: Lateral and oblique view of right foot with exostosis over 5th metatarsal.



Figure 2: Removed exostosis in AP and oblique views.

DISCUSSION

Bony outgrowth from bone surface can be called exostosis.³ In Dahlin study of 748 cases of exostosis; only 1.3% of cases were found on foot region.¹ The common varieties of exostosis of foot are osteochondroma, subungual exostosis. Both are differentiated by histopathology. Both have base with trabecular bone with hyaline cartilage (osteochondroma) and fibro cartilaginous (subungual) caps. Differential diagnosis of subungual exostosis is pyogenic granuloma, in growing toenails, and

glomus tumors.³ Case reports were present with exostosis over navicular, cuneiform, metatarsals. But most of them were small. None of these case reports reported such an exuberant outgrowth on the plantar aspect, making it difficult to walk for the patient. Moreover, on histopathological examination revealed no cartilage cap. Specimen represented only trabecular bone.

Differential diagnosis we thought in our case could have been degenerative calcifications, traumatic calcifications, malunion resulting after trauma. None of these conditions could stand in here, because of age of the patient, no trauma in patient's history.

In our patient we could find exostosis over ankle, knee, elbow and proximal humerus. We could also find radial club hand bilaterally with exostosis seen in ulna in X-rays. We could not find any other family member with such presentation (absence of family history in 10%). X-ray shows uninterrupted flow of cortex and medullary bone into osteochondroma, absence of growth plate with skeletal maturity, presentation at knee. We confirm this as a case of hereditary multiple exostosis.⁴ Still our area of focus is on foot exostosis, which was a rare presentation on foot, that too on plantar aspect of foot.

CONCLUSION

Exostosis over the plantar aspect of foot is a rare condition, which can affect mobility of patient. Exostosis excision resulted in return of mobility of patient, thus early return of daily activities of living of the patient.

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Ethical approval: Not required

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