

Case Report

Case report of a rare thumb exostosis

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ABSTRACT

Thumb exostosis is a rare, benign, and acquired bony tumor of the distal phalanx of the thumb, the mass itself is typically painless, but pressure on the nail plate can result in pain and deformity of the involved digit. This study was conducted at King Hussein Medical Centre in Amman, Jordan. A 38-year-old male patient, medically free, presented with a right thumb ulnar aspect hard mass, and pain at that site of his thumb. He started to notice it since 1 year. On examination, a hard bony lesion around 1×1 cm in size was present on the ulnar aspect of the right thumb tip, with tight but healthy skin over it. X-ray radiographs of the hand showed a bony lesion in continuity with thumb distal phalanx ulnar aspect native cortical bone. Excisional biopsy was done from dead ulnar approach without nail bed removal was done, and histopathology result confirmed the diagnosis of thumb exostosis and no recurrence occurred either on clinical or radiological follow up till date.

Keywords: Subungual exostosis, Osteochondroma, Histopathological, Excisional biopsy

INTRODUCTION

Subungual exostosis is a benign bony tumor that is found in the distal phalanges of the toes, under or next to the nail. Dupuytren was the first to describe the lesion in 1847, when he presented his study of thirty patients who had subungual lesions of the big toe.¹ Most of the cases reported (80%) in previous studies occurred with the big toe, and the remaining cases rarely affected the other toes. In fact, it is very rare for this lesion to occur on the fingers of the hand.^{2,3} There are very few previous studies in the literature that presented this type of finger-related lesions. Moreover, this type of bone tumor is rarely mentioned in standard textbooks, which confirm that its usual location is the toes.³

In this study, we would like to report a rare case of subungual exostosis on the thumb of the hand, which appeared as a painful mass on the side of the nail from the ulnar side of the finger without any skin ulcerations. This mass affected the daily life of the affected patient.

CASE REPORT

A 38-year-old male patient seen in our orthopedic clinic in the year 2018 with painful mass over the ulnar side of the right thumb for the past one year without any skin ulcerations. There was no history of preceding trauma though pain on pressure was the prominent symptom with the normal daily activities. On examination a hard bony prominence, measuring around 1×1 cm was present over the ulnar aspect of the tip of the right thumb with good perfusion of the overlying skin (Figure 1). The lesion was tender without any skin superficial ulceration. The nail was normal (Figure 1c).

X-ray showed the typical appearance of the exostosis, showing that the outer cortex of the tumor is fully continuous with the outer cortex of the distal phalanx of the thumb. It also showed that the tumor cavity is fully continuous with the cavity of the distal phalanx. pedunculated lesion (narrow stalk) pointing away from the joint (IPJ). Figure 2 showed X-ray of the lesion.

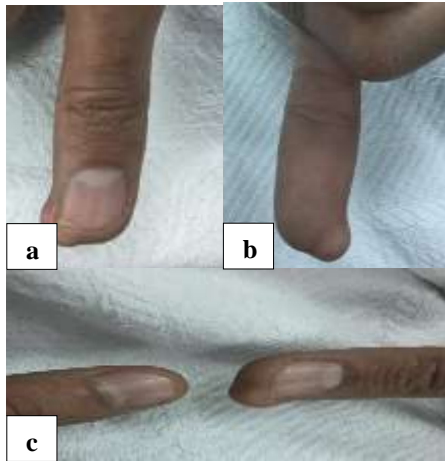


Figure 1: (a), (b) and (c) Tip of the thumb showing the swelling without any skin ulcerations and normal nail.

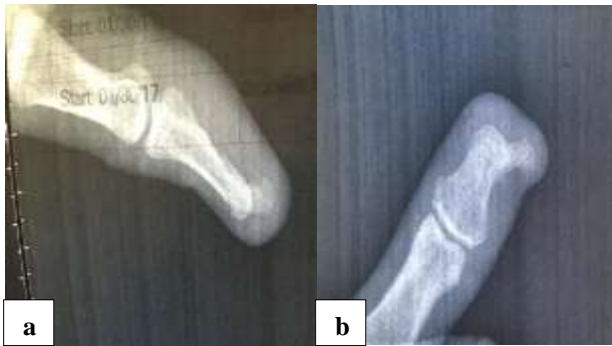


Figure 2: AP and lateral views of the involved thumb.

Operative excision done one week after presentation, using direct dead ulnar approach, preserving the nail bed, the mass excised including the cartilaginous cap using osteotome, bone wax was used to prevent bleeding, the specimen sent for histopathological examination, which confirmed the diagnosis of osteochondroma of the thumb (Figure 4). Excessive skin was removed, for proper wound closure.

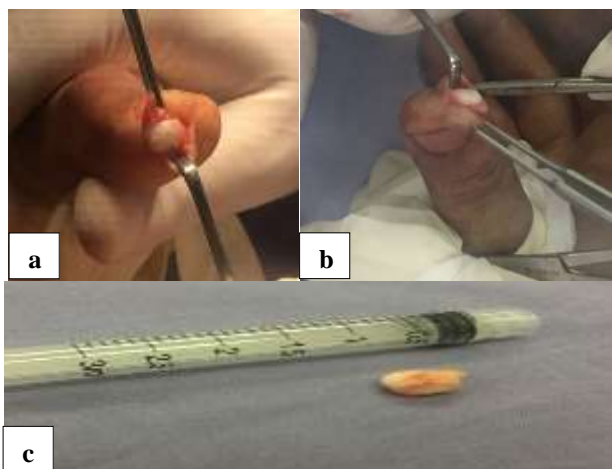


Figure 3: Intra-op appearance of the tumour.

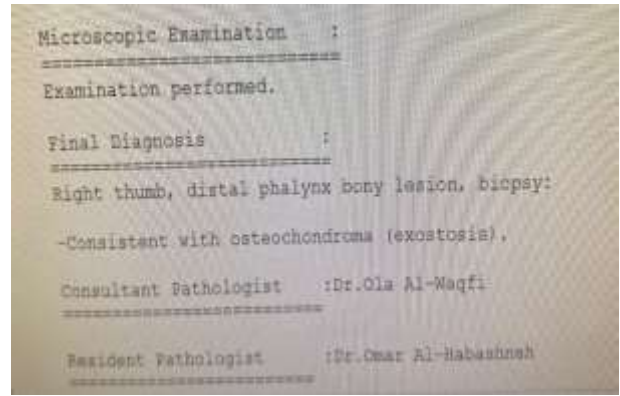


Figure 4: Histopathological examination result.

The post-operative period was smooth without any complications like wound infection or skin necrosis, with no evidence of recurrence until date.

DISCUSSION

Subungual exostosis is an uncommon benign bony tumor that forms in the distal phalanges of the toes, under or adjacent to the nail bed. It is a rare type of osteochondral tumor that affects the toes and fingers.⁴ It is often a solitary lesion that occurs mostly in the second or third decade of life and has clinical symptoms such as pain, swelling, ulcers in the nail bed or secondary infection of the surrounding tissues.⁵ In most cases, the big toe is affected, followed by the other toes. Solitary lesion of the fingers of the hand is rarely reported, and persistent, unexplained changes in the skin of the finger should increase the suspicion of an underlying bone lesion. The skin covering the tumor may become thick like a callus and ulcerate as a result of repeated trauma, and pain is one of its prominent symptoms.³

In our study, a case of benign osteochondroma in the thumb of a 38-year-old man was presented. This is a rare case in the hand. The number of studies describing this type of tumor in the fingers is very few. In 2004, Dave et al described in his study a similar case of a 19-year-old patient, who was suffering from this type of tumor in the thumb with the presence of skin ulcers.⁶ Another study by Mohanna et al in 2000 described a similar case of turret exostosis in the thumb as well.⁷ Finally, a case of 48-year-old male was described in a study by Chao et al in 2019, and the patient had been suffering from this tumor for 18 years with a gradual increase of its size during this period.⁸

Differential diagnosis includes bizarre paraosteal osteochondromatous proliferation (Nora's lesion), periostitis ossificans, and Turret exostosis, all of which may be included in the differential diagnosis of this lesion.^{9,10} Chondrosarcoma, paraosteal sarcoma can be a part of differential diagnoses, but with more aggressive course. Radiographs are the main tool to distinguish osteochondromas from paraosteal sarcomas and Nora's

lesion, where the medullary canal of the underlying bone is continuous with that of lesion.¹⁰⁻¹²

CONCLUSION

This case has been presented to highlight the rare occurrence of subungual exostosis on thumb of the hand as painful mass are uncommon, the mass is curative and not associated with complications.

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Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

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