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Case Report

Lytic lesion in the little finger: a case report

Saleh Alhotan*

Department of Surgery, College of Medicine, Qassim University, Saudi Arabia

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***Correspondence:**
Dr. Saleh Alhotan,
E-mail: s.alhotan@qu.edu.sa

ABSTRACT

Enchondroma is the most common benign tumor, affecting the phalanges and metacarpals. They are generally asymptomatic and discovered incidentally. This case report details the clinical presentation, X-ray imaging, and management of a solitary enchondroma affecting the middle phalanx of the little finger of the right hand. The diagnosis was confirmed with histopathological analysis of the retrieved specimen. The postoperative course showed smooth recovery with no complications. There was no recurrence at one year.

Keywords: Enchondroma, Curettage, Bone graft, Lytic lesion, Hydroxyapatite, Recurrence

INTRODUCTION

Enchondroma is a benign tumor, generally affecting the tubular bones of the phalanges and metacarpals, and more rarely the carpal bones, humerus, femur, tibia, and the ribs. They usually occur as solitary tumors, and their most frequent location is the proximal phalanx, followed by the middle phalanx and the metacarpals.[1-3] The tumor arises in the medullary cavity of a bone from the ectopic rests of hyaline cartilage and grows into the cortex, forming an endogenous mass. This tumor grows slowly. without causing any symptoms and is often detected incidentally or else be discovered following a pathological fracture. Surgical intervention for tumor excision retrieves sample for histopathologic confirmation and treats or prevents pathological fractures.

The objective of this article is to present a new case of enchondroma affecting the middle phalanx of a little finger.

CASE REPORT

A 42-year-old male, a farmer by profession, reported with swelling and minimal pain of the middle phalanx of the little finger of the right hand. The patient mentioned that he has had this swelling for 10 months and that it had increased and become painful over time. There is no family history of malignancy or history of trauma. On physical examination, the middle phalanx of the little finger was swollen, and there was a non-tender, immobile, hard, slightly tender, 0.5×0.5 cm mass along the volaromedial surface (Figure 1 A, B). There were no features of vascular compromise, nor was there any neurodeficit. There were no limitations in passive or active interphalangeal joint functions.

Plain X-ray revealed a well-defined, eccentric lytic image with small calcifications, occupying the middle phalanx of the right small finger, and penetrating the cortex along its volaromedial surface (Figure 1 C). A provisional diagnosis of enchondroma was made, and a surgical operation was undertaken under regional anesthesia. The incision was made above the lesion, and curettage was done. The resulting cavity was filled with hydroxyapatite/tri-calcium phosphate (HA/TCP) bone graft substitute. The surgical incision was closed primarily. The postoperative phase was uneventful, and histopathological analysis of the specimen confirmed that the lesion was an enchondroma without atypical cells. The patient was followed up periodically, and at one year, the patient was asymptomatic, with a normal range of motion of the affected finger, and plain images showed features of clear bone remodelling.

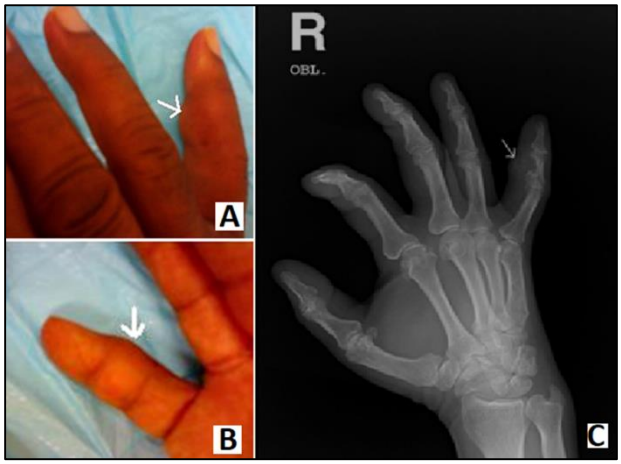

Figure 1: Visible swelling over middle phalanx of right little finger as seen (A) from medial aspect (A) & (B) volar aspect (B); (C) X-ray oblique view of right hand revealing a lytic lesion in the affected phalanx (white arrow).

DISCUSSION

Enchondroma is the most common primary phalangeal tumor that generally manifests between the first and fourth decades. In most of the cases (75%), they are solitary (monostotic or singular) enchondromas, though very uncommonly, the lesions can simultaneously affect two phalanges or a phalanx and the metacarpal of the same digit.[5]

In 1971, Takigawa introduced a morphological classification system for enchondromas based upon their shapes, and since then, this classification has been often used in the peer-reviewed literature.[6] Based on the number of the lesions, this system classifies enchondromas into two types (monostotic and polycentric types), and based on simple radiographic findings, there are five forms (central, eccentric, combined, polycentric, and giant). However, it is not clear if this classification based on morphology could predict treatment outcomes or prognosis in any patient. As per this classification, our reported case was monostotic and eccentric.

Most cases are asymptomatic because of the slow progression and are discovered by chance in radiological examinations performed for other reasons. The most typical causes of symptoms are extensive lesions, pathologic fractures, and, very rarely, malignant transformation.[5] Enchondromas of the distal phalanx may cause clubbing of the finger. Similarly, bone avulsion of the deep flexor tendon insertion may accompany the pathological fractures leading to limitation of the active flexion of the distal phalanx, which is limited in addition to pain.[7] In the presented case, the clinical manifestation was the progressive swelling of the middle phalanx of the little finger, along with pain, without any prior trauma.

Surgical curettage constitutes the primary approach to management. In addition to treating or preventing pathological fractures and relieving pain or swelling, the retrieved specimen leads to the histopathologic confirmation of enchondroma. Regarding the treatment of solitary enchondromas of the hand, there is debate on the best surgical technique. Disagreement remains whether curettage alone is enough and whether filling of the residual bony cavity with autogenous or allogeneic bone grafting is the best course of action.[8,9]

In the presented case, the bony cavity was filled with hydroxyapatite graft without any complications. Allogenic bone grafting, if used to reconstruct a bone defect after curettage, prolongs the operation time and can potentially result in donor site complications such as infection, hematoma, pain, and paresthesias.[10] Various adjuvant treatments have been reported in the literature to reduce the risk of recurrence, including high-speed burring, phenol cauterization, dehydrated alcohol instillation, CO2 laser ablation, and bone cementation.[11]

CONCLUSION

Enchondroma is a benign bony lytic tumour that affects the phalanges. Curettage with reconstruction is the mainstay of management.

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