

# Chondrosarcoma of the proximal phalanx of the 4th finger – a rare location –

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**INTRODUCTION**  
Cartilaginous tumors that involve the small bones of the hand are generally benign, such as the enchondroma, the chondromyxoid fibroma or the chondroblastoma. At this location, a chondrosarcoma diagnosis is rare, but should always be considered because it is locally aggressive and has the potential for metastatic dissemination, being associated with a worse prognosis.

**CASE REPORT**  
An 81-year-old woman presented with a tumor at the proximal phalanx of the 4th finger of the right hand (dominant hand). She noted the lesion 18 months before and it has been progressively growing and recently she complained of pain and stiffness of the metacarpal-phalangeal joint

Objectively there was a painful hard mass, adherent to the deep tissues, limited to the phalanx area [1].

X-Ray revealed a lytic lesion with cortical destruction and calcified areas suggesting chondroid matrix [2]. CT showed a 3,5cm locally destructive lesion, including soft tissue components [3], T1 hypointense and T2 Hyperintense in the MRI, with lobulation areas typical of cartilaginous tissue. Scintigraphy and Thoracoabdominal CT scan did not show any distant lesions. A CT guided fine-needle biopsy was performed, and it revealed a Grade I Chondrosarcoma (WHO classification) [4].

Given the characteristics of the tumour, we chose to do a radical excision of the 4th ray [5]. No complications occurred during the procedure and post-operative period.

Pathology confirmed the diagnosis of Grade I Chondrosarcoma, invading the cortex and surrounding soft tissue. There was no lymphatic or venous invasion – [pT1 G1 LO VO RO].

Two-years after the procedure, there was no complications or recurrence of the disease, and the functional and cosmetic results are excellent [6].

**DISCUSSION/CONCLUSION**  
Phalanx chondrosarcoma is rare but should be taken into consideration for the differential diagnosis, especially when painful and when the radiological findings suggest an enchondroma. Although its metastatic potential is low, it is extremely locally aggressive. Once localized disease is confirmed, treatment consists in radical or enlarged resection. Its response to chemotherapy or radiotherapy is very low. When compared to the metacarpal-phalangeal amputation, the digital ray amputations have better functional and cosmetic results, and allows for a larger margin of resection, with higher limb salvaging probability.

Panel 1 – Evaluation and Treatment



Panel 2 – Final Result



1.Campbell's Operative Orthopaedics, 12th Edition- Elsevier- 2013

2.Essadki, B.; Belabidia, B.; Fikry, T. et al. Chondrosarcoma of the hand: Diagnostic and therapeutic discussion (three case reports). Chir Main Apr; 20(2):164-71, 2001.

3.Bové, J.; vander Heul, R. et al. Chondrosarcoma of the phalanx: A locally aggressive lesion with a high metastatic potential: a report of 35 cases and a review of the literature. Cancer Nov 1; 66(9):1724-31, 1999.