

## Images in Locomotor Apparatus Pathology

# Subungual osteochondroma: a frequent mismanaged tumor

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### Abstract

Osteochondroma is a benign bone tumor which occasionally develops on distal phalanges. This case consists of a 12-year-old female with an osteochondroma of the third phalange of the second finger of the foot, with a story of a failed treatment that has undergone a second surgery after few weeks.

**Key words:** exostosis, osteochondroma, subungual.

### Riassunto

L'ostecondroma è un tumore benigno dell'osso che occasionalmente si sviluppa sulle falangi distali. Si descrive il caso di una bambina di dodici anni affetta da un osteocondroma della terza falange del secondo dito del piede, trattata senza successo e sottoposta ad una seconda chirurgia dopo poche settimane.

**Parole chiave:** esostosi, osteocondroma, subunguale.

### Introduction

A 12-years-old girl presented with a non-painful subungual ulcerated bump lesion of the right second finger of the foot (Fig. 1).



**Figure 1**

Images of the ulcerated lesion.

Her parents reported the presence of a bump about four months before, and an unsuccessful treatment performed 20 days before elsewhere. A radiographic examination showed an irregularity of the apex of the phalanx and a bump with density alike the surrounding soft tissues (fig. 2).

The girl was operated under general anesthesia in a com-



**Figure 2**

Preoperative radiography.

petent operating room for foot surgery. Through "fish mouth shaped" incision the distal portion of the phalanx was exposed, and the bump was radically excised. The suture also involved the nail and the wound was left to



**Figure 3**  
One-month clinical checkup image showing nail re-growing.

secondary healing (Fig.3). The histological diagnosis was osteochondroma. No recurrence was seen at the last clinical checkup 2 years after surgery.

### Comment

Osteochondromas are benign bone tumors. Bone tumors are rare and subungual osteochondromas represent 1,3% of all bone tumors<sup>1</sup>. These tumors affect children, and they histologically consist of a central bone nucleus covered with a hyaline cartilage cap<sup>2,3</sup>. Usually, the cartilage portion in the radiograms is confused with the surrounding soft tissues, and the bump is larger than that visible in the radiographic examination. This could determine a wrong diagnosis and a little cautious behavior of the surgeon. Several authors<sup>4,5</sup> stated how osteochondroma, and other tumor with continuity with osseous structure located in the juxtaepiphyseal region of the distal phalanx, are frequently misdiagnosed and mismanaged. Possible complications of subungual osteochondromas include recurrence, onychodystrophy, infection, malignant transformation (1% of osteochondromas), and poor cosmesis; repeated surgery increases the risk of undesirable events with damage to the patient and medical-legal implications.

A reduction in errors treating subungual osteochondroma could be carry out by making surgery in an environment where the surgeon is able to adapt the procedure to all accidental circumstances that pediatric subungual tumor can predictably present.

### References

1. Tamayo-Pacho F, Mora-Ríos FG, Mejía-Rohenes LC, Montero-Quijano MG, López-Marmolejo A. Osteochondromas: presentación del osteochondroma subungueal [Osteochondromas: introducing the subungual osteochondroma]. *Acta Ortop Mex.* 2017;31(4):162-164.
2. Monteleone M, De Angelis Ricciotti F. Sulle esostosi osteogeniche. *Ortopedia e Traumatologia.* 1962;30 (2): 117-178.
3. Pérez-Palma L, Manzanares-Céspedes MC, de Veciana EG. Subungual Exostosis Systematic Review and Meta-Analysis. *J Am Podiatr Med Assoc.* 2018;108(4):320-333.
4. Ippolito E, Falez F, Tudisco C, Balus L, Fazio M, Morrone A. Subungual exostosis. Histological and clinical considerations on 30 cases. *Ital J Orthop Traumatol.* 1987;13(1):81-7.
5. Ozcan O, Boya H, Araç F, Tandoğan R. Subungual osteochondroma: a case report. *Joint Dis Rel Surg.* 2006;17(1):53-55.