

Case presentation

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A 46-year-old woman presented with a 20 year-tumor located in the distal phalanx of the right middle finger. The tumor was in the base, on the subungual region, close to the ulnar border of the hand (Figures 1-3). It caused idiopathic pain of increasing severity over the years, which was exacerbated after a trauma to the same region, reaching a 10/10 on a pain severity score and being unresponsive to oral NSAIDs.

The patient visited her orthopedist, who prescribed acetaminophen, but the pain persisted and even interfered with the patient's sleep. The orthopedist ordered a hand MRI for further evaluation and staging of the tumor, in order to develop a treatment plan.



Figure 1. Tumor on the subungual region of the big toe, close to the ulnar border of the hand. The patient suffered intense pain that exacerbated after a trauma.

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How to cite this paper: Ghisi JP, Trache A, Dalmasso ML. Postgraduate Orthopedic Instruction: Imaging. Case presentation. *Rev Asoc Argent Ortop Traumatol* 2019;84(1):3-7. <http://dx.doi.org/10.15417/issn.1852-7434.2019.84.1.948>



Figure 2. Detailed picture of the middle finger (front). There is discoloration of the cuticle, the lunula and the proximal nail plate and, underneath, a reddish tumor. There is swelling and flushing of the eponychium and of the proximal nail fold on the side of the lesion.



Figure 3. Detailed picture of the middle finger (lateral). Upon inspection, the tumor is defined as a reddish-bluish lump that causes bulging of the nail plate, partial destruction of the medial nail fold, effacement of the lateral nail fold, and thickening of the eponychium and the paronychium.

FINDINGS AND INTERPRETATION OF IMAGING STUDIES

The MRI scans of the hand show an ovoid tumor located on the subungual region of the big toe (Figures 4-9). T1-weighted sequences of the tumor show a low to intermediate signal intensity, with marked hyperintensity in fluid sensitive sequences (T2, STIR, proton-density fat-suppressed scans). This methodology allows for a clear definition of tumor morphology, margins, size and extension, as well as bone erosion and remodeling, all of which results in an adequate treatment approach.

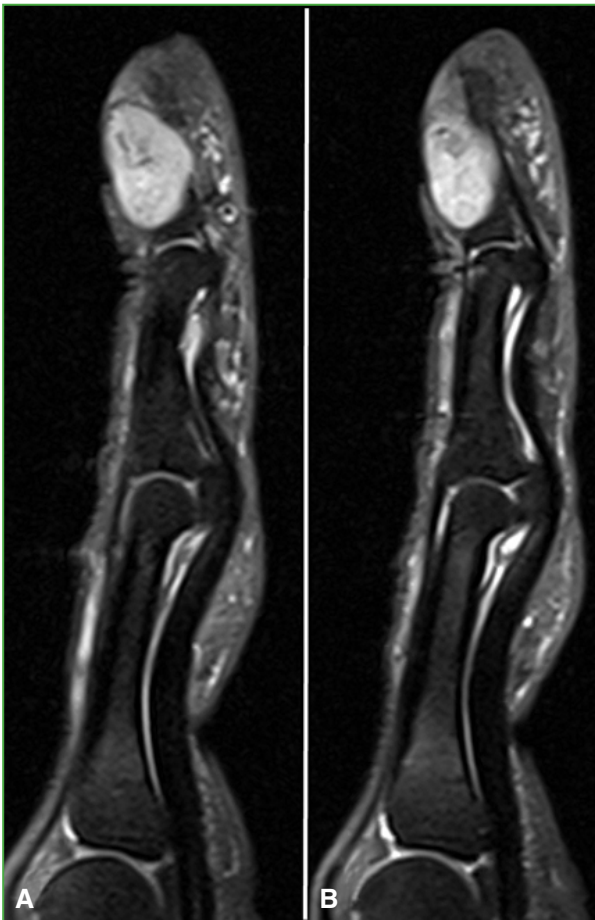


Figure 4. A y B. Contiguous sagittal slices (proton-density fat-suppressed scans [2240/29]). Hyperintense ovoid tumor with slightly heterogeneous matrix and well-defined margins.



Figure 5. A y B. Contiguous sagittal slices of T1-weighted images [561/14]). Typically, the lesion shows a low signal in this sequence.

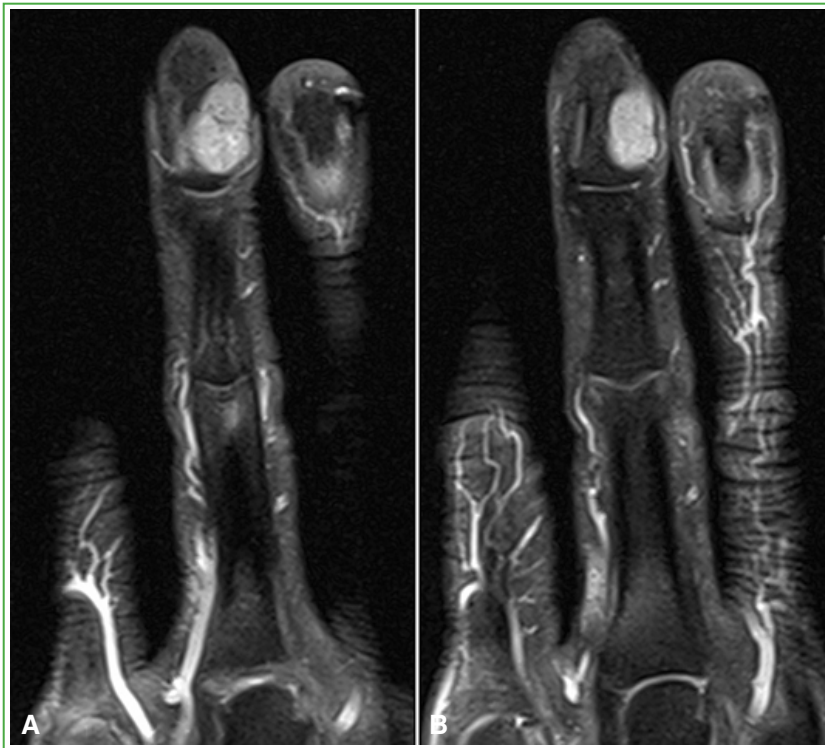


Figure 6. A y B. Contiguous coronal slices (proton-density fat-suppressed scans [2240/29]). Multi-slice MRI allows us to perform an adequate preoperative assessment, since surgery is the treatment of choice for this type of tumor.

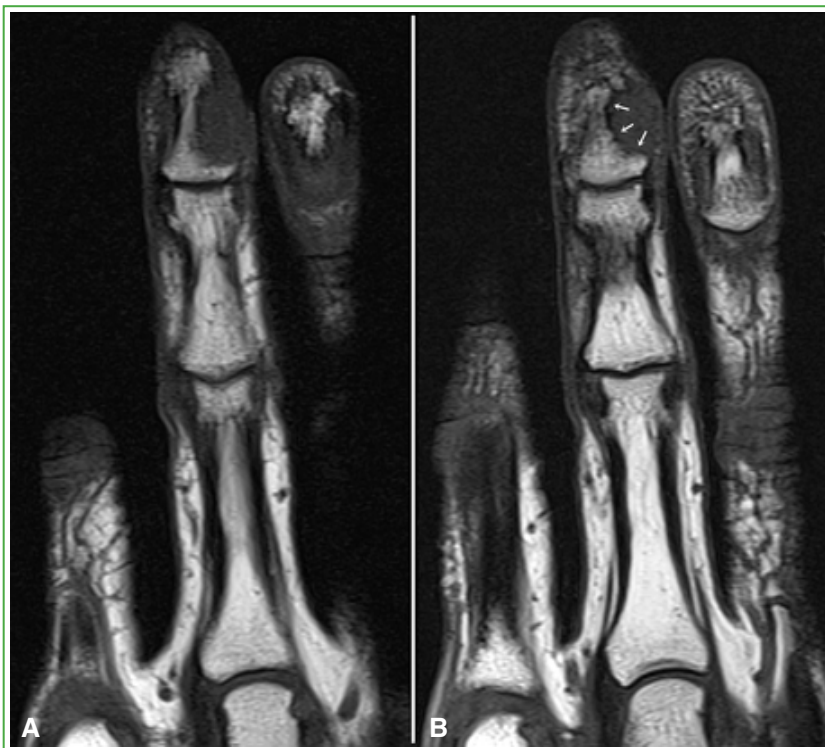


Figure 7. A y B. Contiguous sagittal slices of T1-weighted images [505/13]. This plane shows bone remodeling of the distal phalanx (white arrows), consistent with a slow-growing tumor.

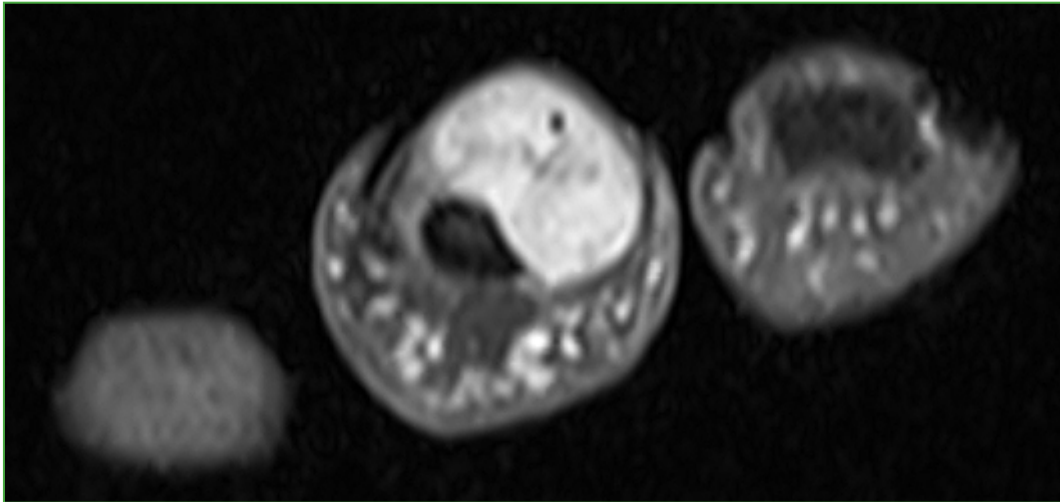


Figure 8. Axial slice (proton-density fat-suppressed scans [2000/29]). The signal is hyperintense in this sequence, with a heterogeneous matrix. Signal void, represented as black dots, is suggestive of blood vessels.

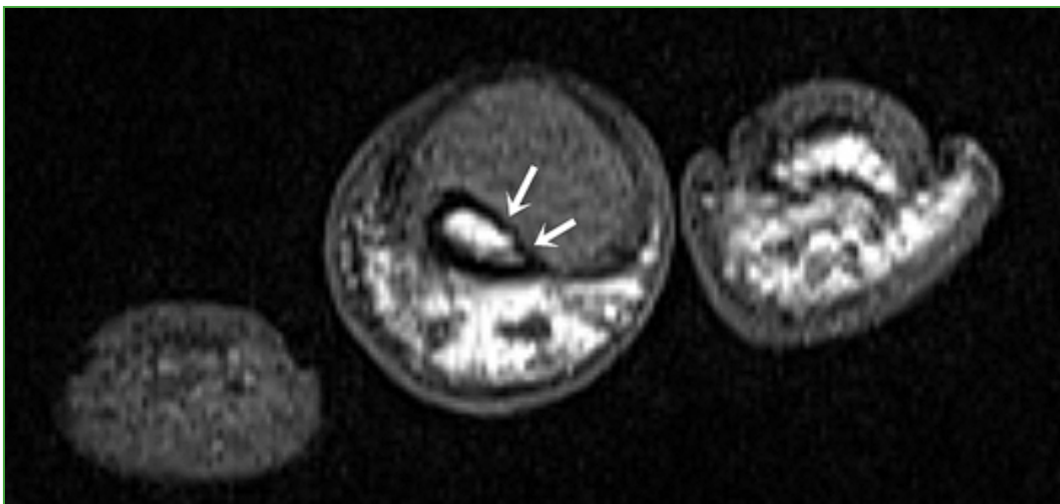


Figure 9. Axial slice of T1-weighted image [627/15]. This plane shows thinning and remodeling of cortical bone next to the tumor (white arrows).

Conflict of interest: Authors claim they do not have any conflict of interest.

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