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CASE IMAGE

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A rare soft tissue tumor of the big toe: Superficial acral fibromyxoma

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Abstract

Superficial acral fibromyxoma (SAF) is a rare and benign soft tissue tumor that has a predilection to develop in acral sites. Its treatment is surgical excision. Follow-up is recommended due to the risk of recurrence. The purpose of this case is to raise awareness of this recently described neoplasm.

KEYWORDS

acral extremities, fibromyxoma, immunohistochemistry, soft tissue tumor

1 | CLINICAL IMAGE

A 54-year-old previously healthy man presented with a five-year history of a slow-growing fungating mass arising on his right great toe. Physical examination revealed a large distal phalangeal mass. CT scan demonstrated a well-delimited dense soft tissue mass of the distal phalanx (Figure 1A). MRI showed a subcutaneous, lobular hypervascularized nodule (T2 hyperintense, T1 hypointense) measuring 27 × 21 × 35 mm (Figure 1B,C). Surgical excision of the tumor was performed. Grossly, the lesion had a firm consistency, with whitish compact areas alternating with gelatinous ones (Figure 1D). Microscopically, there was a poorly circumscribed richly vascular multilobulated myxoid mass subdivided by bands of dense fibrous tissue located in the dermis (Figure 2A,B). The cells were uniform, with the appearance of bland fibroblastic-type cells that were slightly stellate (Figure 2C,D).[1,2] Alcian blue stain highlighted the myxoid matrix (Figure 3A). Giemsa stain revealed the presence of numerous mastocytes (Figure 3B). The immunohistochemical study demonstrated the positivity of the neoplastic cells for CD34 (Figure 3C) and CD99 (Figure 3D) and negativity for EMA and S100. The diagnosis was consistent with a superficial acral fibromyxoma. Postoperative course was uneventful. Although rare, surgeons should be aware of SAF, its presentation, and its benign clinical course.[1,2]

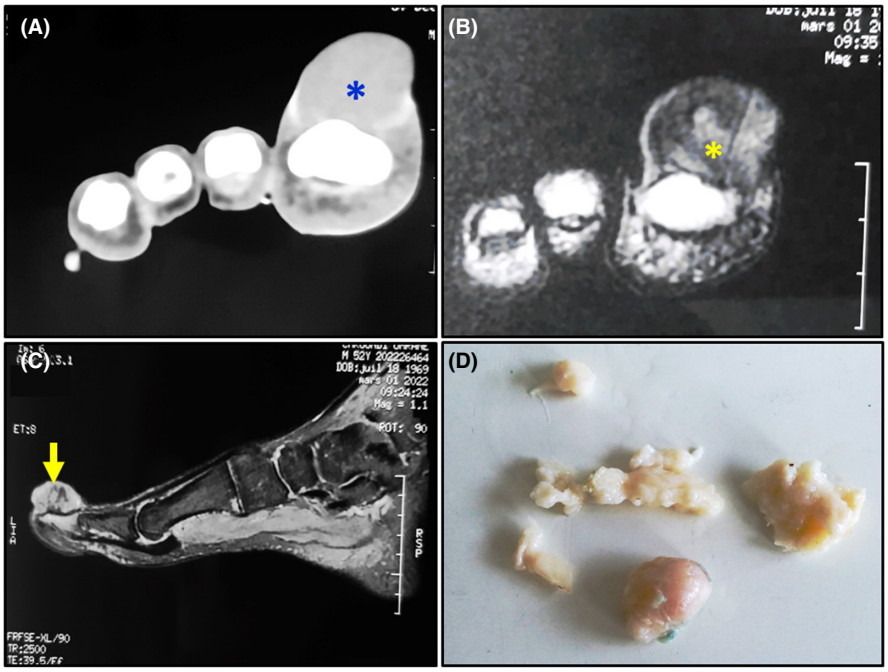

FIGURE 1 (A) Axial CT scan showing a well-delineated dense soft tissue mass of the distal phalanx of the great toe (blue asterisk). (B) MRI findings: Axial T1 MRI demonstrating a hypointense soft tissue mass of the distal phalanx of the great toe (yellow asterisk). (C) MRI findings: Sagittal T2-weighted image sequences demonstrating a hyperintense T2 soft tissue mass of the distal phalanx of the great toe (yellow arrow). (D) Macroscopic findings of superficial acral fibromyxoma. The excised tumor had a firm consistency, with whitish compact areas alternating with gelatinous ones.

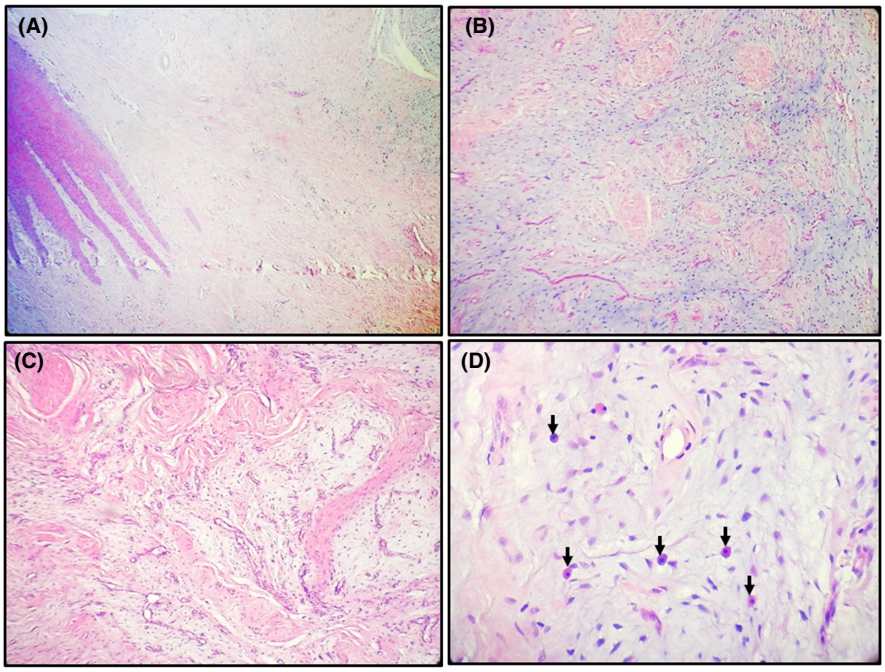

FIGURE 2 (A) Microscopically, there was a poorly circumscribed, subcutaneous unencapsulated, multilobulated myxoid mass subdivided by bands of dense fibrous tissue (Hematoxylin and eosin, magnification 40×). (B) Histologically, the tumor exhibited a proliferation of stellate-shaped and spindle fibroblast-like cells surrounded by a myxo-collagenous matrix. Increased microvasculature was present (Hematoxylin and eosin, magnification 200×). (C) The tumor is composed of bland, spindle-shaped or stellate cells in a myxoid and collagenous stroma with numerous small vascular channels (Hematoxylin and eosin, magnification 200×). (D) Higher magnification showing stellate-shaped or spindle cells without significant nuclear pleomorphism or mitotic figures. Numerous mastocytes were identified within the myxoid matrix (black arrows).

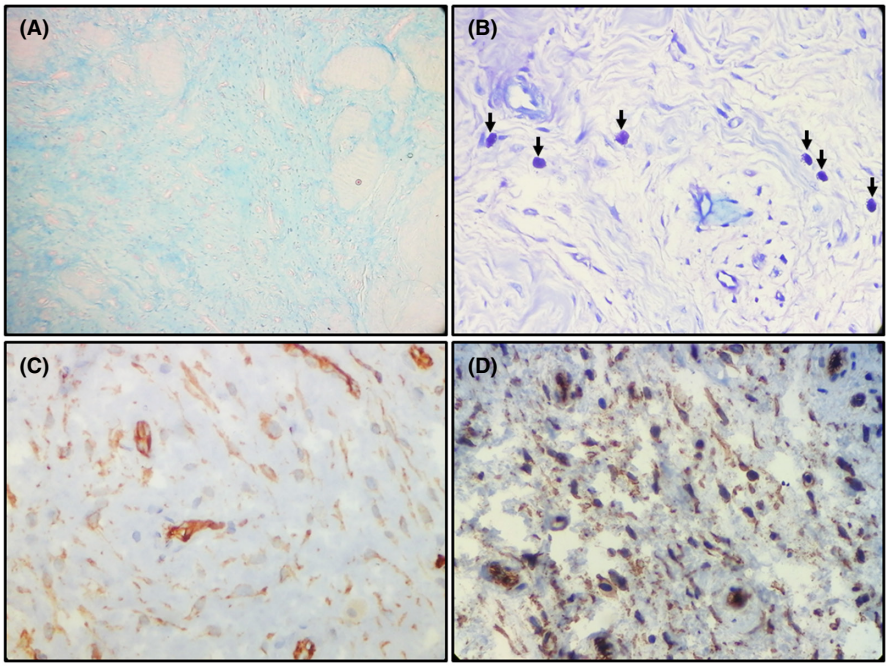

FIGURE 3 (A) Alcian blue special stain highlighting the myxoid matrix of the tumor (Alcian blue 40×). (B) Giemsa special stain highlighting the mast cells (black arrows) (Giemsa stain, magnification 400×). (C) Immunohistochemistry demonstrating strong staining with CD34 (brown staining) (Immunohistochemistry, magnification 400×). (D) Immunohistochemistry demonstrating strong staining with CD99 (brown staining) (Immunohistochemistry, magnification 400×).

AUTHORS' CONTRIBUTIONS

Dr Faten Limaiem prepared, organized, wrote, and edited all aspects of the manuscript. **Dr Faten Limaiem** prepared all of the histology figures in the manuscript. **Pr Anis Teborbi** participated in the conception and design of the study, and the acquisition of data, analysis, and interpretation of the data. Both authors read, edited, and approved the final version of the manuscript. All authors contributed equally to preparing the manuscript and participated in the final approval of the manuscript before its submission.

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CONFLICT OF INTEREST

None declared.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

ETHICAL APPROVAL

All procedures performed were in accordance with ethical standards. The examination was made in accordance with the approved principles.

CONSENT

Written informed consent was obtained from the patient to publish this report in accordance with the journal's patient consent policy.

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