Digital Fibromyxoma Of The Hallux Nail Bed: A Case Report

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Background

A rare finding, digital (acral) fibromyxoma is a distinctive soft tissue tumour associated with the toes, fingers and nail beds. This benign tumour is typically painless and slow growing.

A 29-year-old male presented to a university podiatry clinic, complaining of a slow growing mass under the right hallux nail (Fig. 1). The growth was mostly asymptomatic except for mild discomfort in footwear. The clinical appearance of the tumour resembled a subungual exostosis, but on examination the mass was not deemed to be osteophytic.

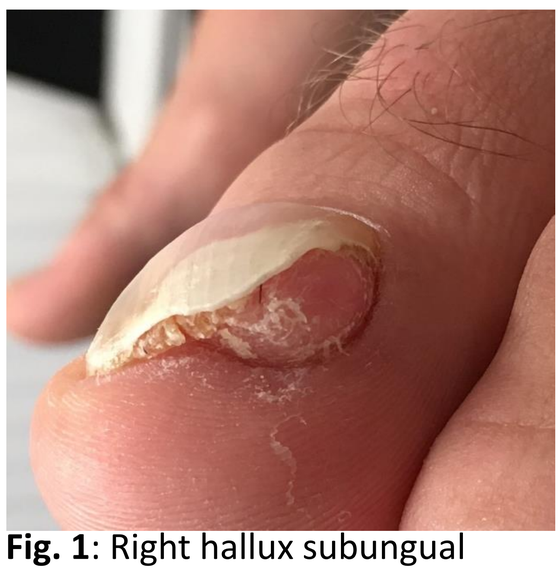


Fig. 1: Right hallux subungual tumour

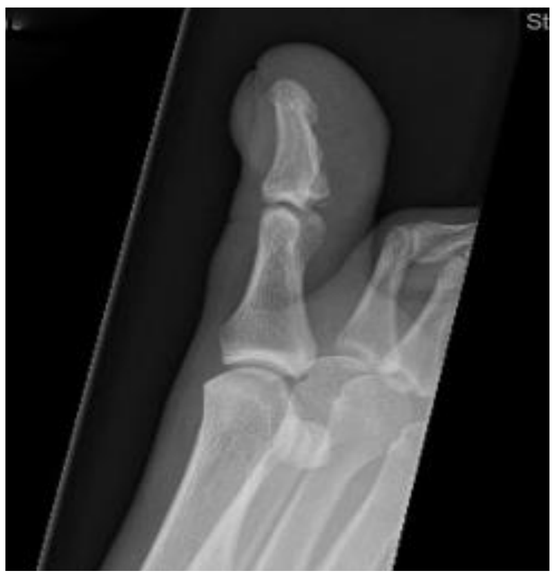


Fig. 2: Radiographic appearance

An x-ray referral was arranged (Fig. 2) and the report confirmed no significant bony protuberance in the hallux. This supported clinical diagnosis that this was not an exostosis, but instead a soft-tissue neoplasm. The slow growth rate and well-defined appearance was suggestive of a benign fibromyxoma, despite being rare in this location.

Following pre-operative assessment, the patient was scheduled for total nail avulsion (TNA) surgery with view to excising the subungual tumour and confirming diagnosis. Vascular and neurological findings were unremarkable and there were no contraindications to surgery. The surgical practitioner, a Podiatrist and Senior Lecturer, had recently undertaken extended scope training in Skin Surgery and the procedure was performed at the university teaching clinic.

Methodology

Following successful analgesia with Mepivacaine Hydrochloride (Scandonest 3% plain), and TNA, a semi-solid spherical mass was exposed. Longitudinal excision through the lesion revealed a well-circumscribed neoplasm which macroscopically resembled connective tissue.

On revealing the depth of the lesion and confirming no cartilage or bone involvement, the mass was excised in two halves using a 15 blade and skin forceps (Fig. 3). Any remaining fibrotic debris was curetted from the nail bed.

Fig. 3: Surgical approach

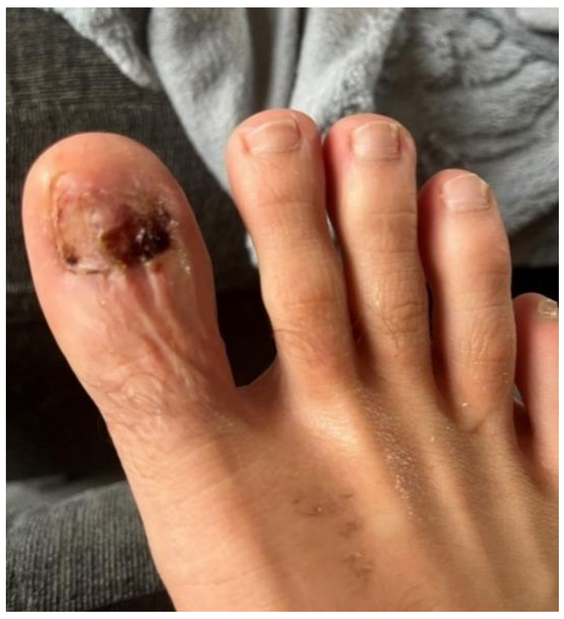
The excised specimen was sent for histopathology analysis (Fig. 4). The wound was dressed using Bactigras®, Melolin, sterile gauze and a retention bandage. A post-operative advice sheet was issued and explained. The wound was reviewed and redressed in 24 hours.

Fig. 4: Biopsied tissue in formalin pot

Results

Microscopy revealed a circumscribed but nonencapsulated dermal tumour measuring 20x10x5mm and 18x10x5mm, comprising of bland spindle and stellate cells within a myxoid stroma and with prominent vessels. There were no malignant features, but margins were not clear of the tumour. In view of histopathological features and immunochemistry findings (Positive staining: CD34 stains blood vessels and lesional tissue, SMA stains blood vessels only. Negative staining: CD99, S100, BCL2, EMA), the lesion was confirmed as Digital Fibromyxoma.

The patient was reviewed at 3 weeks (Fig. 5), 7 weeks (Fig. 6) and 12 weeks. The wound healed successfully by secondary intention.



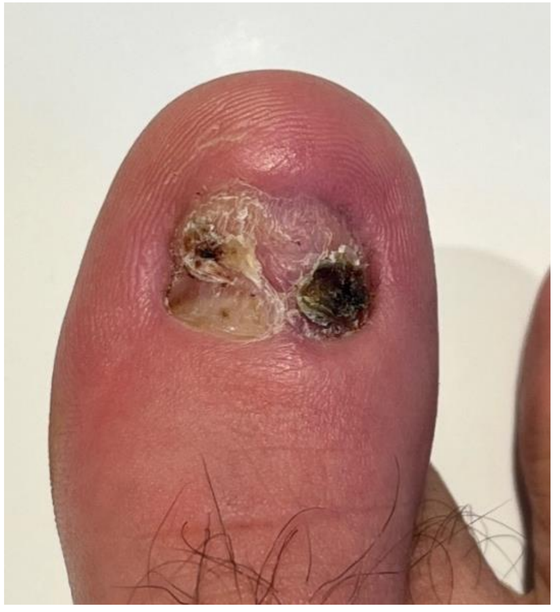


Fig. 5 (left): Post-op healing at 3 weeks. **Fig. 6 (right):** Post-op healing at 7 weeks. *Photographs taken by patient.*

Discussion & Conclusion

Superficial digital fibromyxoma is a rare, fibromyxoid tumour commonly located in the hands and feet. It presents as a slow-growing, nodular tumour commonly of the subungual or periungual region of toes (1). The clinical presentation of the lesion, age and gender of the patient, and histological features support this diagnosis (2). This case demonstrates the benefit of this surgical approach in identifying a rare benign tumour and ruling out a more concerning diagnosis such as fibromyxoid sarcoma. Recurrence may occur in 24% of cases (3) and therefore follow up of the case continues. Currently regrowth of the tumour has not been observed.

This case highlights the benefits of extended scope skin surgery training for podiatrists, enabling prompt diagnosis and management of cutaneous lesions, whilst reducing referral waiting times.

With thanks to Mr Ian Reilly for his mentorship of this case.
Written consent was obtained for all images.

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