Importance of radiological imaging in a case of subungual glomus tumour

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DESCRIPTION

A 33-year-old woman presented with paroxysms of intense pain over the tip of the right middle finger of 2-year duration. Clinical examination revealed acute tenderness in the nail bed.

Radiograph of the middle finger revealed focal scalloping of the bony cortex along lateral aspect of terminal phalanx (figure 1A). Ultrasound and duplex imaging showed a small oval homogeneously hypoechoic lesion within the subungual soft tissue of the nail bed (figure 1B) with intense internal vascularity (figure 1C) and arterial waveforms (figure 1D) consistent with a vascular tumour. On MRI the lesion was isointense (to muscle) on T1 (figure 2A), hyperintense on T2 (figure 2B) and showed intense homogeneous postcontrast enhancement (figure 2C–E). These modalities also helped in precise localisation of the lesion in the dorsolateral aspect of the terminal phalanx. Following the localisation, surgery was performed with complete excision of the lesion. Histopathology of the lesion showed numerous vascular channels that were surrounded by aggregates of round epithelioid cells

containing eosinophilic cytoplasm confirming it as a glomus tumour (figure 3).

Glomus tumours are rare benign hamartomatous lesions found in the reticular areas of the hand.¹ About 75% of these tumours are seen in the hands and up to 65% in the tips of the digits. Although numerous clinical tests help in suspecting these lesions, they may still go undetected due to their small size leading to delay in diagnosis.² Hence imaging plays an important role in their detection. Plain radiograph may or may not show any abnormality, especially when the lesion is very small. Ultrasound and MRI form excellent imaging modalities for detection and characterisation of the lesion as shown in this case. These modalities are also very helpful in precise localisation of the small lesion, which is imperative for the meticulous surgical planning that aids in complete removal of the lesion, and in avoiding recurrence and nail deformity. In relatively larger lesions that are clinically obvious, imaging helps in detecting the bony invasion, which is again important for the surgical decision.³

Figure 1 Radiograph of right middle finger (A) showing focal scalloping of lateral aspect of terminal phalanx with no obvious soft tissue component or bone destruction. Grey scale ultrasound image from the lateral aspect (B) showing a small oval homogeneously hypoechoic lesion in the subungual soft tissue. On colour Doppler (C) the lesion showing intense internal vascularity. Pulse wave Doppler (D) showing arterial waveforms.

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Figure 2 The lesion is homogeneously isointense on T1 (A), hyperintense on T2 (B) and showing homogeneous enhancement in postcontrast images (C–E). These images are precisely localising the lesion along the dorsolateral aspect of the phalanx.

Figure 3 Histopathological section showing numerous vascular channels that are surrounded by aggregates of round epithelioid cells containing eosinophilic cytoplasm confirming it as a glomus tumour.

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Competing interests None.

Patient consent Obtained.

Learning points

- ▶ Glomus tumours are rare benign hamartomatous lesions found in the reticular areas of the hand. About 75% of these tumours are seen in the hands and up to 65% in the tips of the digits.
- ▶ Ultrasound and MRI form excellent imaging modalities for detection and characterisation of glomus tumours as clinical detection may fail in these small lesions.
- ▶ These modalities are also very helpful in precise localisation of the lesion, which is imperative for the meticulous surgical planning that aids in complete removal of the lesion, and in avoiding recurrence and nail deformity.

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