

Painful subungual glomus tumour of the left thumb

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DESCRIPTION

A 32-year-old woman presented with a 1-year history of severe paroxysmal pain, point tenderness and sensitivity to cold in her left thumb. On examination, a faint bluish lesion in the middle, radial subungual region of the left thumb was observed (figure 1A). Love's pin test was positive when pressure was applied with a pencil tip or pinhead on the lesion. She experienced excruciating pain, whereas pressure applied slightly to one side of it elicited no pain. We suspected a vascular tumour and exploratory surgery was performed by a dorsal, transungual approach. After complete removal of the nail plate, a reddish-blue lesion was evident at the nail bed (figure 1B). Histopathological examination demonstrated an encapsulated, well-defined mass to be a glomus tumour, which comprised multiple vascular channels lined by endothelial cells and aggregates of uniform round or slightly polygonal cells with sharp cellular borders and eosinophilic cytoplasm. The perivascular myoid tumour cells were embedded in the collagenous stroma as solid sheets or a thin layer around vascular spaces (figure 1C). The patient's symptoms including exquisite pain, point tenderness and cold hypersensitivity resolved completely within several weeks after surgical excision. There was no recurrence of the tumour at 2 years' follow-up.

A glomus tumour is an enigmatic, painful tumour that is rarely seen and represents a proliferation of the normal capsular-neural glomus apparatus.¹ The classic history is of paroxysmal pain, focal tenderness and cold sensitivity. The mechanism of pain may be attributed to contraction of myofilaments in response to temperature changes, leading to an increase in intracapsular pressure.² The typical presentation is a solitary nodule in the subungual or periungual area of the distal phalanx. Clinical tests, such as Love's pin test, cold sensitivity test and Hildreth's test, are useful in diagnosing glomus tumour.³ A positive Love's pin test consists of applying pressure over the suspected area with a pinhead, which elicits exquisite localised pain. Cold sensitivity test provokes increased pain when the finger is exposed to cold water or an ice cube. Hildreth's test produces a reduction in pain and tenderness after applying a tourniquet proximal to the lesion. Once the pressure cuff is released, there is a sudden return of pain to the affected area. The differential diagnosis includes subungual exostosis, neuroma, ganglion, inclusion cyst and melanoma.⁴ Painful skin lesions also include blue rubber bleb naevus, eccrine spiradenoma, neuroma, angioli-poma, leiomyoma, dermatofibroma, squamous cell carcinoma and other malignancies.⁵ The primary treatment of choice is surgical removal. When

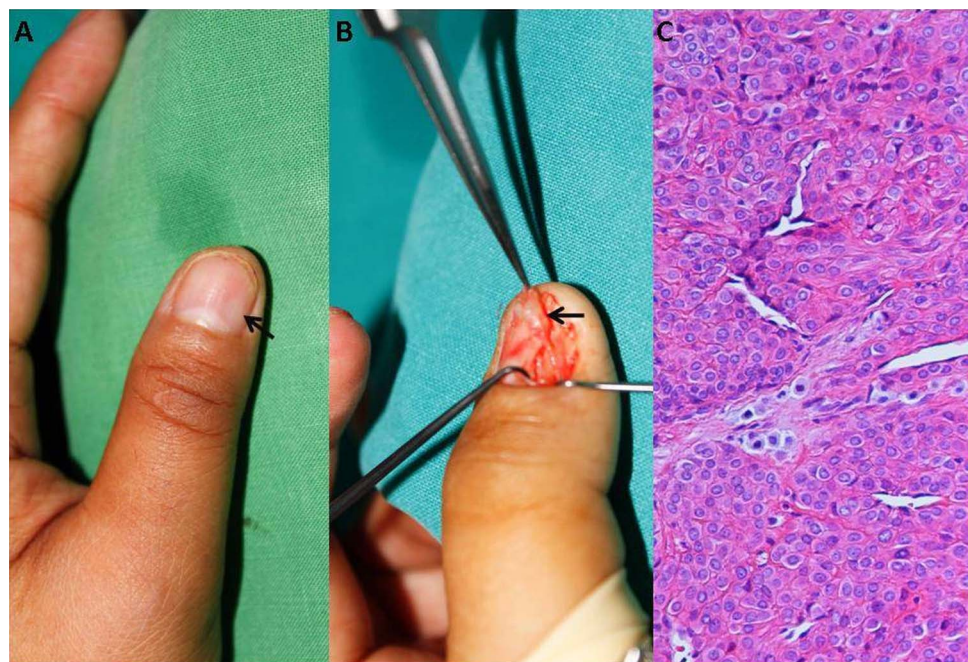


Figure 1 (A) The bluish discoloration of subungual glomus tumor of the left thumb (arrow). (B) Intraoperative photograph of the glomus tumor in its in situ location (arrow). (C) Histopathology revealed multiple vascular channels lined by endothelial cells and aggregates of round cells with darkly stained round to ovoid nuclei and eosinophilic cytoplasm (H&E stain, $\times 400$).



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making a differential diagnosis of unexplained excruciating pain, temperature sensitivity and severe point tenderness in the finger, glomus tumour must be taken into account.

Learning points

- ▶ Glomus tumour is an enigmatic, painful tumour representing a proliferation of the normal capsular-neural glomus apparatus.
- ▶ The classic history of glomus tumour is excruciating paroxysmal pain, severe point tenderness, and cold sensitivity.
- ▶ The mechanism of pain may be attributed to contraction of myofilaments in response to temperature changes, leading to an increase in intracapsular pressure.

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