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CASE REPORT

Glomus tumour of the hand: a case report and review of the literature

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ABSTRACT

Glomus tumours are uncommon benign lesions, constituting 1-5% of all soft tissue neoplasia of the hands. It was first described in 1812 by Wood as painful subcutaneous nodules. The most common site for this tumour is subungual region and affects females more frequently than males. It commonly presents as pain and pinpoint tenderness and cold sensitivity.

Being a rare tumour, its diagnosis is often delayed and cause undue anxiety to the patients. We present a case a of left index finger glomus tumour, which remained undiagnosed for many years, after being seen by multiple clinicians.

Keywords: Glomus Tumour; Magnetic Resonance Imaging; Nails; Pain.

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INTRODUCTION

Glomus tumours are benign, rare, vascular neoplasm arising from glomus body found in reticular dermis.[1] The glomus body normally functions to regulate blood flow in cutaneous vessels.[2] Although glomus tumours can be found in various locations, most common site is distal phalanx in subungual region.[2] Females are affected more than males.[3]

The exact aetiology of glomus tumour largely remains unclear.[4] Patients commonly present with a slightly raised, bluish or pinkish red, painful small nodule. It often deforms, discolours, and elevates the nail.[2,5] Majority of patients present with typical symptoms, but still its diagnosis is often delayed due to lack of sensitization of this disease among clinicians.[2,5] There are three tests which helps in diagnosing these tumours.[6] In Love's Pin Test, pressure is applied to the suspected area with a pinhead, which will cause exquisite pain.[1,6] Second test is Hildreth's Test, in which a tourniquet is applied along the arm to induce a transient ischaemia. The test is positive if pain ceases from the affected area.[5] In the third test, which is the Cold Sensitivity Test, cold water or an ice cube is applied to the affected area.[7] The patients with glomus tumour would feel increased pain in the affected area. Imaging (Ultrasound, CT scan or MRI) is required in cases with equivocal findings or suspected bone erosion.[7,8]

CASE REPORT

A 36 years old female with no prior comorbids presented to Surgical Outpatient Department at Rehman Medical Institute, Peshawar, in November 2019, with long standing history of left ring finger pain. She had been examined by many doctors previously and advised nonspecific symptomatic treatment. Her symptoms were not improving, moreover she developed peptic ulcer due to prolonged use of analgesics. Clinical examination revealed acute pinpoint tenderness of left ring finger with no visible deformity or skin changes (Figure 1A). Love's Pin Test and Hildreth's Test were both positive.

Clinical diagnosis of glomus tumour was made, MRI was advised, showing a well circumscribed hyperintense lesion in fat saturated T2 weighted images in the distal tip of left ring finger suggestive of glomus tumour. The lesion was managed with surgical excision in toto under digital block and tourniquet cover. Transungual approach was taken, and lesion was completely excised (Figure 1B).

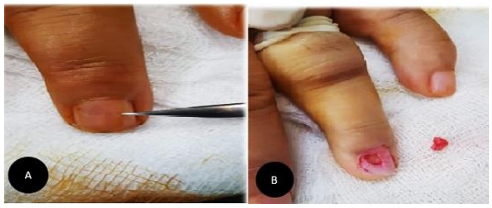

Figure 1: (A) Glomus tumour clinically pointed as purple nodule in nail bed pointed by scissor. (B) Nail bed after surgical excision of tumour.

The nail bed was approximated, specimen sent for histopathological examination, and confirmed to be glomus tumour (Figure 2A&B).

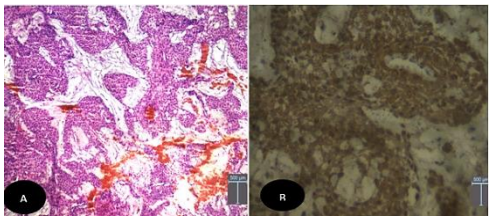

Figure 2: (A) H&E stain. Histopathological appearance of glomus tumour, showing fibro-collagenous vascular tissue and bland looking glomus cells. (B) Reticulin stain. Nests of bland looking cells with rounded nuclei, inconspicuous nucleoli, and scanty cytoplasm.

The patient was symptom free after surgery and developed no nail deformity or recurrence in up to two years of follow up.

DISCUSSION

Glomus tumours are generally considered diagnostically challenging because they are rare, may present with atypical symptoms, and clinicians are not acclimatized to this possibility.[1,3] These tumours are hamartomas that arise from the neuromyoarterial cells of glomus apparatus in reticular dermis.[9] The most common locations for these tumours are subungual and only small percentage of cases are reported in the finger pulp.[2] These tumours can be solitary or multiple, with former usually presenting as a painful lesion that later presents as a painless swelling.[3,10] Exact aetiology remains unclear. However, females, young age and trauma has strong preponderance for this condition.[5,10] Glomus tumour commonly presents as small, pinkish-red and painful nodule.[10] Clinically, it manifests as a triad of cold intolerance, pain and pinpoint tenderness.[5]

Although our patient presented with typical features of glomus tumour, lack of awareness of this clinical entity among general practitioners led to delay in diagnosis.[5] Generally, the diagnosis is clinical and further supported by clinical tests; Love's Pin, Hildreth's and Cold Intolerance tests aids in reaching the diagnosis.[10] However, clinically unclear, and ambiguous cases need radiological evidence to support a diagnosis.[7]

Radiographs of glomus tumour with bony involvement may reveal scalloping of cortex in subungual lesions with erosive changes.[9,11] Ultrasonography is a cost-effective modality and can reveal pinpoint location and size.[8,11] MRI has high sensitivity and specificity for diagnosing this condition. Pathognomic features on MRI are low signal intensity on T1-weighted images, hyperintensity on T2-weighted images and enhancement on T1-weighted images after Gadolinium injections.[7,12] Complete surgical excision is a treatment of choice with curative intent for these tumours and approach to tumours depends on their location, with utmost care taken to avoid recurrence, which is inevitable in incomplete or partial excision.[7,11]

CONCLUSION

Although the glomus tumours are rare benign condition, diagnosis is often missed even in patients who present with typical sign and symptoms. Therefore, awareness among general practitioners of this disease and high index of suspicion is required for timely diagnosis to avoid delay in treatment.

REFERENCES

1. Morey VM, Garg B, Kotwal PP. Glomus tumours of the hand: review of literature. J Clin Orthop Trauma. 2016;7(4):286-91.
2. Santoshi JA, Kori VK, Khurana U. Glomus tumor of the fingertips: A frequently missed diagnosis. J Family Med Prim Care. 2019;8(3):904.
3. Jouari OE, Gallouj S, Elloudi S, Senhaji G, Rimani M, Mernissi FZ. A painless glomus tumor: a case report. J Med Case Reports. 2018;12(1):1-4.
4. Vieira L, Pereira P, Nunes B, Matos R, Sousa A, da Silva MR. Glomus Tumor: "A-Not-So-Rare" cause of chronic shoulder pain - a case report and literature review. Case Rep Orthop. 2021;2021.
5. Sha I, Edwin A, Shah N, Cini R. Glomus tumour: A review of clinical presentation and treatment. Arch Int Surg. 2020;10(2):52.
6. Yu Y-H, Lee C-H, Lin S-H. 15240 Modified transungual approach with nail preservation for subungual glomus tumor: a 13-year evaluation and experience in a medical center in Taiwan. J Am Acad Dermatol. 2020;83(6):AB32.
7. Bargon CA, Mohamadi A, Talaei-Khoei M, Ring DC, Mudgal CS. Factors associated with requesting magnetic resonance imaging during the management of glomus tumors. Arch Bone Joint Surg. 2019;7(5):422.
8. Sechi A, Alessandrini A, Patrizi A, Starace M, Caposiena Caro RD, Vara G, et al. Ultrasound features of the subungual glomus tumor and squamous cell carcinomas. Skin Res Technol. 2020;26(6):867-75.
9. Mitchell A, Spinner RJ, Ribeiro A, Mafra M, Mouzinho MM, Scheithauer BW. Glomus tumor of digital nerve: case report. J Hand Surg. 2012;37(6):1180-3.
10. Pangtey T, Chaudhary R, Dharmshaktu GS. Painful pulp space of a pinky finger: A report of glomus tumor at an unusual site. J Family Med Prim Care. 2020;9(8):4425.
11. Moon SE, Won JH, Kwon OS, Kim JA. Subungual glomus tumor: clinical manifestations and outcome of surgical treatment. J Dermatol. 2004;31(12):993-7.
12. Grover C, Jayasree P, Kaliyadan F. Clinical and onychoscopic characteristics of subungual glomus tumor: a cross-sectional study. Int J Dermatol. 2021;60(6):693-702.