Proceedings S.Z.M.C. Vol: 37(2): pp. 58-61, 2023. PSZMC-887-37-2-2023

Case Report

A Case of Glomus Tumor; Missed Diagnosis as Enchondroma For Previous 13 Years

[1]Shuja Uddin, [1]Zia Uddin, [1]Mubashir Farhan, [1]Adeel Hamid, [1]Rizwan ul Haq, [1]Hasnain Khalid, [1]Yousaf Gull, [1]Mian Muhammad Haneef

[1]*Department of Orthopedic Surgery, Lahore General Hospital, Lahore, Pakistan.*

ABSTRACT

Rare benign tumors called subungual glomus tumors that develop from the glomus body can cause sharp discomfort under the nail. This case involves a 38-year-old female patient who has been complaining of severe pain above her left thumbnail for 13 years. Under general anesthesia, a transungular technique was used to remove the tumor mass, and histology revealed a subungual glomus tumor. To lessen the damage and deformity to the nail bed, the tumor mass must be completely removed. To get the right diagnosis, it's crucial to consider specific clinical traits such as intense pain, regional soreness, and cold sensitivity. The diagnosis can be verified, and the tumor mass can be located with the use of a physical examination and imageology.

Keywords: Glomus tumor, subungual, surgical excision, diagnosis, pain

INTRODUCTION

Glomus tumor is a rare tumor arising from a neuromyoarterial glomus[1]. Which is an arteriovenous anastomosis functioning without an intermediary capillary bed. About 80% of the tumors are located in the upper extremities, especially subungual areas, accounting for about 2% of all hand tumors[2].Glomus tumors are closely related to hyperplasia of glomus bodies which are supposed to function in thermoregulation and blood circulation of the skin[3]. Glomus tumors require careful assessment for differential diagnosis to avoid misdiagnosed and unsuitable treatments, which may leave patients with years of chronic pain. Complete removal of the tumor mass is very effective to cure the pain and avoid recurrence. Typical glomus tumors present characteristic clinical features of excruciating pain, localized tenderness, and cold sensitivity. These features strongly indicate the diagnosis of a subungual glomus tumor. Imaging examinations such as magnetic resonance imaging (MRI) and ultrasonography have also been suggested to confirm the diagnosis.

CASE REPORT

A 38-year-old lady was hospitalized in January 2022 with the statement that she had an agonizing ache under her nail of left thumb for 13 years. Before the occurrence of symptoms, there was no trauma. Mild touches or cold stimuli would make it worse even when she was asleep, the agony tormented her. There were no pertinent prior medical conditions or family history. She experienced pain for a protracted period of time, which steadily worsened in recent years, but no prior medical facility was able to confirm an appropriate diagnosis. Instead, she was diagnosed as a case of enchondroma of the distal phalanx of the thumb.A physical examination revealed a prominent spot of sensitivity over the left thumb's nail bed. There were no obvious symptoms of Raynaud's syndrome. Putting the hand in cold water made the agony worse. Both Love and Hildreth's tests were positive. The location with the highest discomfort and the bluish discoloration was identified prior to surgery. The upper ulnar-sided subungual was the area where the discolored mass was found. The lesion was resected via a transungular route while the patient was under general anesthesia. First, a freer was used to separate the nails along the bilateral nail groove. The nail plate was removed, exposing a 4 mm mass that was subsequently entirely excised through a longitudinal incision over the nail bed. Throughout the entire process, the germinal matrix was dealt with the proper attention. There was a subungual glomus tumor, according to a later histological examination. Following the surgery, the patient underwent follow-up assessments one month and three months later. Despite a slight nail deformation, no recurrence was seen during the

most recent follow-up. After one year, the patient is fully functional with no pain and sensitivity during rest and working. The figures are shown below (Fig-1,2,3,4,5& 6).

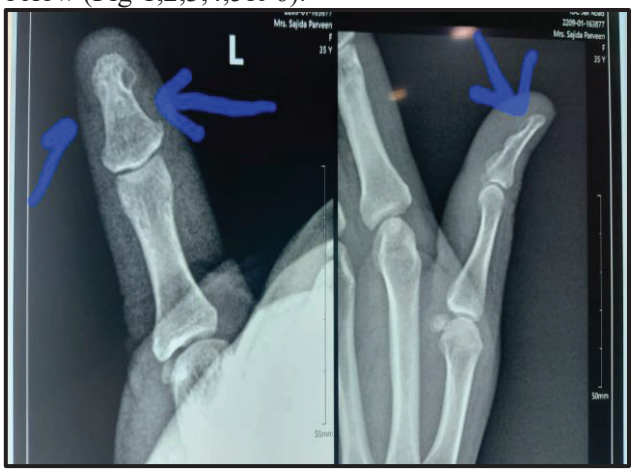

Fig-1: Radiograph of Distal Phalynx (AP&Lat View).

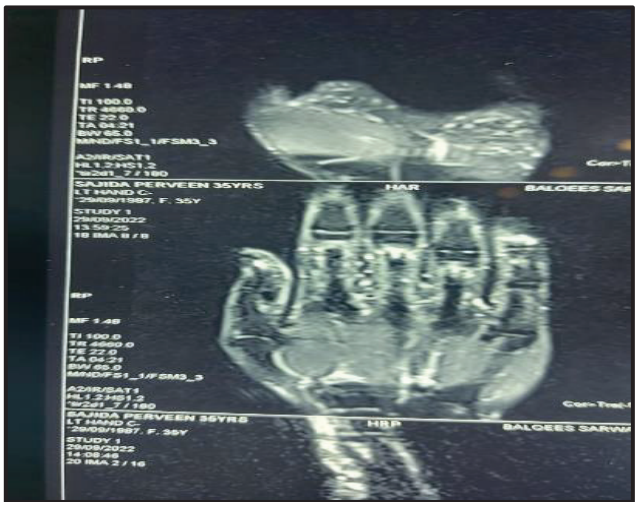

Fig-2: MRI of Hand.

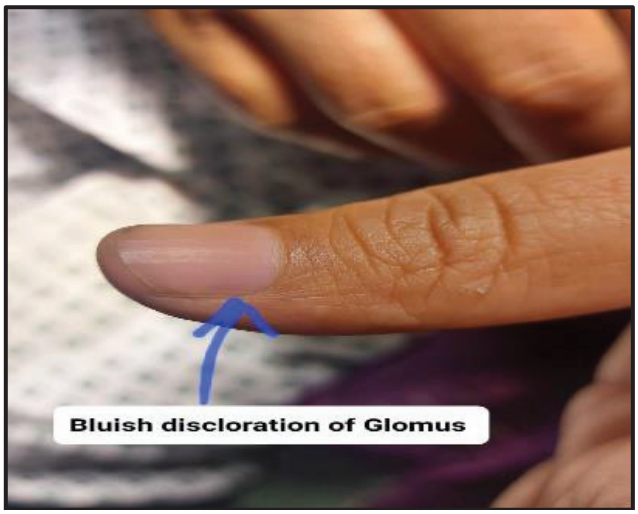

Fig-3: Bluish Discoloration Ulnar Side of Thumb Nail.

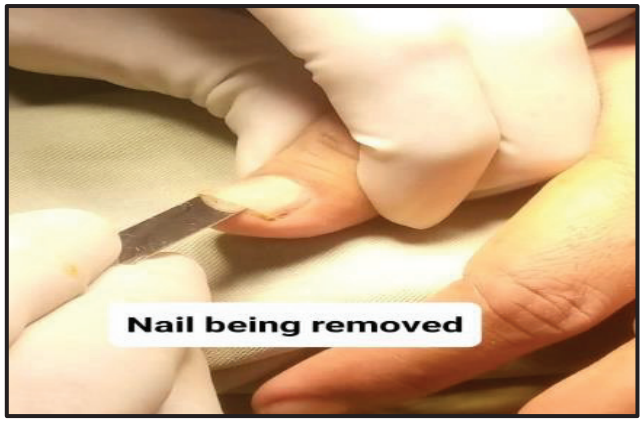

Fig-4: Nail Removed with Freer.

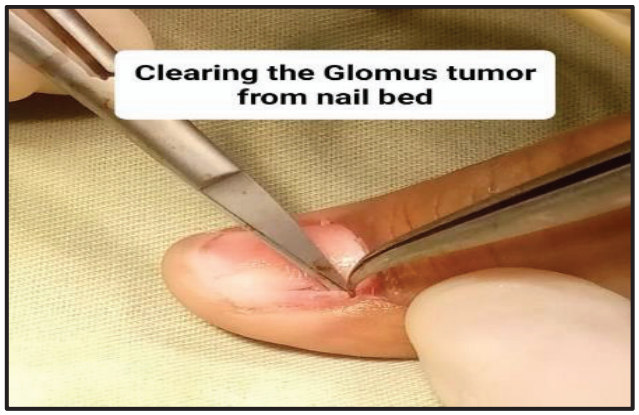

Fig-5: Longitudinal Incision over Glomus Tumour.

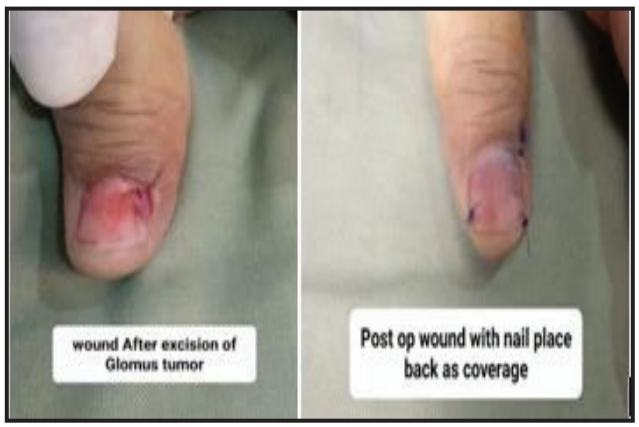

Fig-6: Post Op ,Nail Placed-Back Over The Nail Bed.

DISCUSSION

Glomus tumor is a rare benign tumor, whose pathological features were first described by Masson in 1924[2]. Glomus tumor is mainly caused by hyperplasia of the glomus body. Glomus bodies locate in the dermal retinacular layers and directly connect arteriovenous structures, consisting of an afferent artery, vascular anastomosis, venous pooling, intraglomerular reticulum, and capsular portion. Normal glomus bodies are found in the trunk, neck as well as extremities, which are

supposed to function in thermoregulation and blood circulation of the skin. Glomus tumors are difficult to diagnose, particularly as they are often small, and situated deep in the fingertip. The common characteristic in most series is the long duration of symptoms before the correct diagnosis and treatment. The delay of diagnosis in our case was 13 years.

Some of the various specialties involved in the care of our patients, as in most series, included primary care, dermatology, neurology, rheumatology, neurosurgery, orthopedics, and even alternative medical treatments[4,5,6,7]. The prescribed investigations were X-rays, ultrasonography, and MRI. And in all investigations, the lesion was misdiagnosed as an enchondroma lesion. Different treatments such as NSAID, opioids, and even antidepressants were given to the patient but the symptoms were not relieved.

The subungual lesions that need to be kept in mind during the evaluation of these patients include benign solid tumors (glomus tumor, subungual exostosis, soft-tissue chondroma, keratoacanthoma, hemangioma, and lobular capillary hemangioma), benign cystic lesions (epidermal and mucoid cysts), and malignant tumors (squamous cell carcinoma and malignant melanoma)[8,9]. The differential diagnosis for glomus tumor that needs consideration includes subungual angioleiomyoma, hyperplastic Pacinian corpuscles[10]. blue nevi, blue rubber bleb nevus syndrome, eccrine spiradenoma, Kaposi sarcoma, Maffucci syndrome, neurilemmoma, and venous malformations[11]. Radiologically, glomus tumors appear either as bone erosion or invasion depending on where it arises. A sclerotic border is presently owing to the slowly enlarging mass[12]. Love reported that localization of the tenderness to an area and the sizes of a pinhead were suggestive of a glomus tumor[13]. MR imaging has been shown to be highly sensitive, however, negative imaging studies do not rule out the presence of a small-sized tumor, and investigation should proceed with surgical exploration in the setting of a well-established clinical suspicion[8,15]. The treatment of glomus tumor is surgical[14,16]. In our case, complete excision of the tumor was done even from the scalloping bone, and the pain was totally relieved on all follow-up and no recurrence occur in the latest follow-up. The patient has left all types of analgesics and antidepressants as prescribed previously from other setups.

CONCLUSION

The glomus tumour is frequently missed when it scallops the distal phalanx, mimicking as another benign lesion. So clinical examination is mainstay for diagnosis and definite treatment excision.

REFERENCES

1. Saaiq M. Presentation and management outcome of glomus tumors of the hand. Arch Bone Jt Surg. 2021;9:312-8.
2. Gombos Z and Zhang PJ. Glomus tumor. Arch Pathol Lab Med 2008; 132:1448-1452
3. Anakwenze OA, Parker WL, Schiefer TK,Inwards CY, Spinner RJ, Amadio PC. Clinical features of multiple glomus tumors. Dermatol Surg.2008;34:884-90.
4. (Mathew A. Glomangiomas: Are they rare tumours or rarely diagnosed? Internet J Hand Surg 2012;3. [cited 2018 Oct 22];3(2). Available from: http://ispub.com/IJHS/3/2/13861.
5. Schiefer TK, Parker WL, Anakwenze OA, Amadio PC, Inwards CY, Spinner RJ. Extradigital glomus tumors: A 20-year experience. Mayo Clin Proc 2006;81:1337-44.
6. Shin DK, Kim MS, Kim SW, Kim SH. A Painful glomus tumor on the pulp of the distal phalanx. J Korean Neurosurg Soc 2010;48:185-7
7. Acar E. Surgical treatment outcomes of glomus tumor of the finger. Hand Microsurg2017;6:125-9.)
8. Samaniego E, Crespo A, Sanz A. Key diagnostic features and treatment of subungual glomus tumor. ActasDermosifiliogr 2009;100:875 82
9. Baek HJ, Lee SJ, Cho KH, Choo HJ, Lee SM, Lee YH, et al. Subungual tumors: Clinicopathologic correlation with US and MR imaging findings. Radiographics2010;30:1621 36.
10. Wortsman X, Jemec GBE, Role of high-variable Frequency ultrasound in preoperative diagnosis of glomus tumors; Apilot study. Am J Clin Dermatol,2009;10;23-7.
11. 15. Meyerle JH, Spillane EL. Dermatologic manifestations of glomus tumor: Background. Pathophysiol Epidemiol 2016 Sep 8 [cited 2018 Oct 20].Available from:http://emedicine.medscape.com/article/1083405-overview.
12. Glomus Tumor [Internet].[cited 2018 Oct 18]. Availablefrom:https://www.scribd.com/document/83390508/ Foot-Ankle-Bone-Tumors.
13. Montandon C, Costa JC, Dias LA, Costa FHAA, Costa ACM, Daher RT, et al. Subungual glomus tumors: Imaging findings. Radiol Bras. 2009;42:371–4.
14. Rosner IA, Argenta AE, Washington KM. Unusual volar pulp location of glomus tumor. PlastReconstr Surg Glob Open 2017;5:e1215.
15. Aicha EA, Zakia D, Sara E, Hanane B, Fz M. Glomus tumor is not always digital: Case report. J Med Care Res Rev. 2020;3:331–2

16. Mortada H, AlRabah R, Kattan AE. Unusual location of pulp glomus tumor: A case study and literature review. Plast Reconstr Surg Glob Open. 2022;10:e4206.

The Authors:

Dr. Shuja Uddin,
Consultant Orthopedic Surgery,
Department of Orthopedic Surgery,
General Hospital, Lahore, Pakistan.

Dr. Zia Uddin,
Consultant Orthopedic Surgery,
Department of Orthopedic Surgery,
General Hospital, Lahore, Pakistan.

Dr. Mubashir Farhan,
Consultant Orthopedic Surgery,
Department of Orthopedic Surgery,
General Hospital, Lahore, Pakistan.

Dr. Adeel Hamid,
Consultant Orthopedic Surgery,
Department of Orthopedic Surgery,
General Hospital, Lahore, Pakistan.

Dr. Rizwan Ul Haq,
Consultant Orthopedic Surgery,
Department of Orthopedic Surgery,
General Hospital, Lahore, Pakistan.

Dr. Hasnain Khalid,
Registrar Orthopedic Surgery,
Department of Orthopedic Surgery,
General Hospital, Lahore, Pakistan.

Dr. Yousaf Gull,
Consultant Orthopedic Surgery,
Department of Orthopedic Surgery,
General Hospital, Lahore, Pakistan.

Dr. Mian Muhammad Haneef,
Professor of Orthopedic,
Department of Orthopedic Surgery,
General Hospital, Lahore, Pakistan.

Corresponding Author:

Dr. Shuja Uddin,
Consultant Orthopedic Surgery,
Department of Orthopedic Surgery,
General Hospital, Lahore, Pakistan.
Email: drshujauddin111@gmail.com