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Case Report

Glomus Tumour of Pinna: A Case Report

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Conflict of interest: Nil

Abstract:

Background: Glomus tumors are rare, benign vascular neoplasms arising from glomus bodies, most commonly found in the extremities. Their occurrence in the auricle, particularly the pinna, is exceptionally uncommon and often leads to diagnostic delays.

Case Report: We present the case of a 37-year-old female with a four-year history of a progressively enlarging, painful swelling on the right ear pinna. The lesion became ulcerated and prone to bleeding. Routine investigations were unremarkable. Surgical excision was performed under local anesthesia, preserving auricular cartilage. Histopathology confirmed the diagnosis of a benign glomangioma, characterized by acanthotic squamous epithelium, organoid vascular pattern, and uniform glomus cells with amphophilic cytoplasm.

Outcome: The patient had an uneventful postoperative course with complete resolution of symptoms and no recurrence. This is among the very few documented cases of glomus tumor in the pinna.

Conclusion: Clinicians should consider glomus tumors in the differential diagnosis of auricular swellings with pain and vascular features. Complete surgical excision provides both definitive diagnosis and effective treatment.

Keywords: Glomus tumor, Pinna, Auricle, Glomangioma.

Introduction

The glomus body, a neuromyoarterial structure that is involved in thermoregulation, is the site of rare, benign neoplasms known as glomus tumours. Their presence in the auricular region, particularly in the pinna of the ear, is exceedingly uncommon, despite their frequent occurrence in the subungual regions of fingers and digits [1,2]. These tumours are typically tiny, painful, and have a purplish appearance as a result of their extensive vascularity. Glomangiomas of the ear pinna are considered exceptional, with only a handful of documented cases in the literature. The rarity of their occurrence frequently leads to delayed diagnosis and difficulties in clinical management [3]. The auricular glomus tumours can manifest as excruciating nodules that are exacerbated by temperature changes or tactile stimuli, thereby resembling other vascular or dermatological lesions. Consequently, a histopathological examination is necessary to make a definitive diagnosis [4,5].

The temporal bone, particularly the jugular or tympanicum region, is the site of the majority of glomus tumours in the head and neck region. These tumours have been the subject of more extensive research and surgical treatment, with varying degrees of success and complexity [6]. Though glomus tumours of the auricle are histologically comparable to their more prevalent counterparts, their superficial location frequently enables surgical excision with minimal morbidity [7,8]. Contributing to a more comprehensive comprehension of the clinical presentation, diagnostic pitfalls, and surgical outcomes of pinna-based glomus tumours, this case report augments the restricted body of literature currently available.

Materials and Methods

Patient Presentation: A 37-year-old female presented with a gradually enlarging swelling on her right ear pinna, present for approximately four years. The lesion initially appeared the size of a peanut and

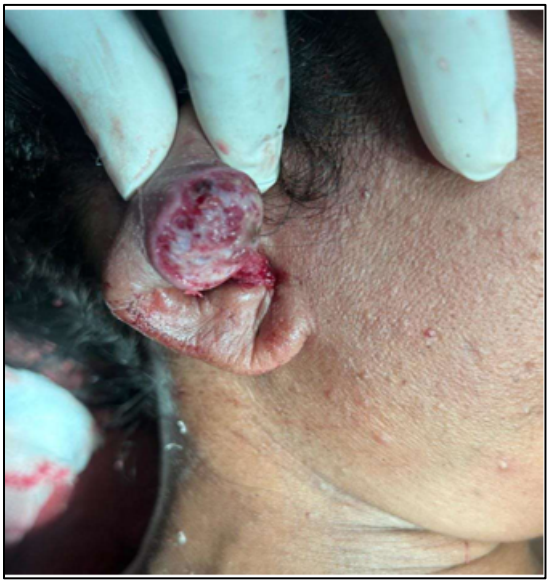
progressed to a final size of 1.5 cm × 1.5 cm × 1.0 cm. The patient experienced pain localized to the lesion, particularly exacerbated by cold exposure. She denied any history of trauma, piercing, or prior procedures near the affected area.

Clinical Examination: On examination, the lesion demonstrated ulceration with profuse bleeding. The overlying skin was breached, and the mass appeared vascular. There were no palpable regional lymph nodes.

Diagnostic Work-Up: Routine hematological investigations, including complete blood count and urine analysis, were within normal parameters. Serological tests were non-reactive, ruling out infectious or systemic causes.

Surgical Procedure: The lesion was surgically excised under local anesthesia. During the procedure, care was taken to preserve the underlying auricular cartilage. Hemostasis was meticulously achieved, and the wound was closed primarily without complications.

Histopathological Analysis: The excised mass was sent for histopathological examination. Microscopy showed an acanthotic squamous epithelial lining with rich vasculature arranged in an organoid pattern. The tumor comprised glomus-type round cells with distinct punched-out nuclei and amphophilic cytoplasm, consistent with a diagnosis of benign glomus tumor (glomangioma).



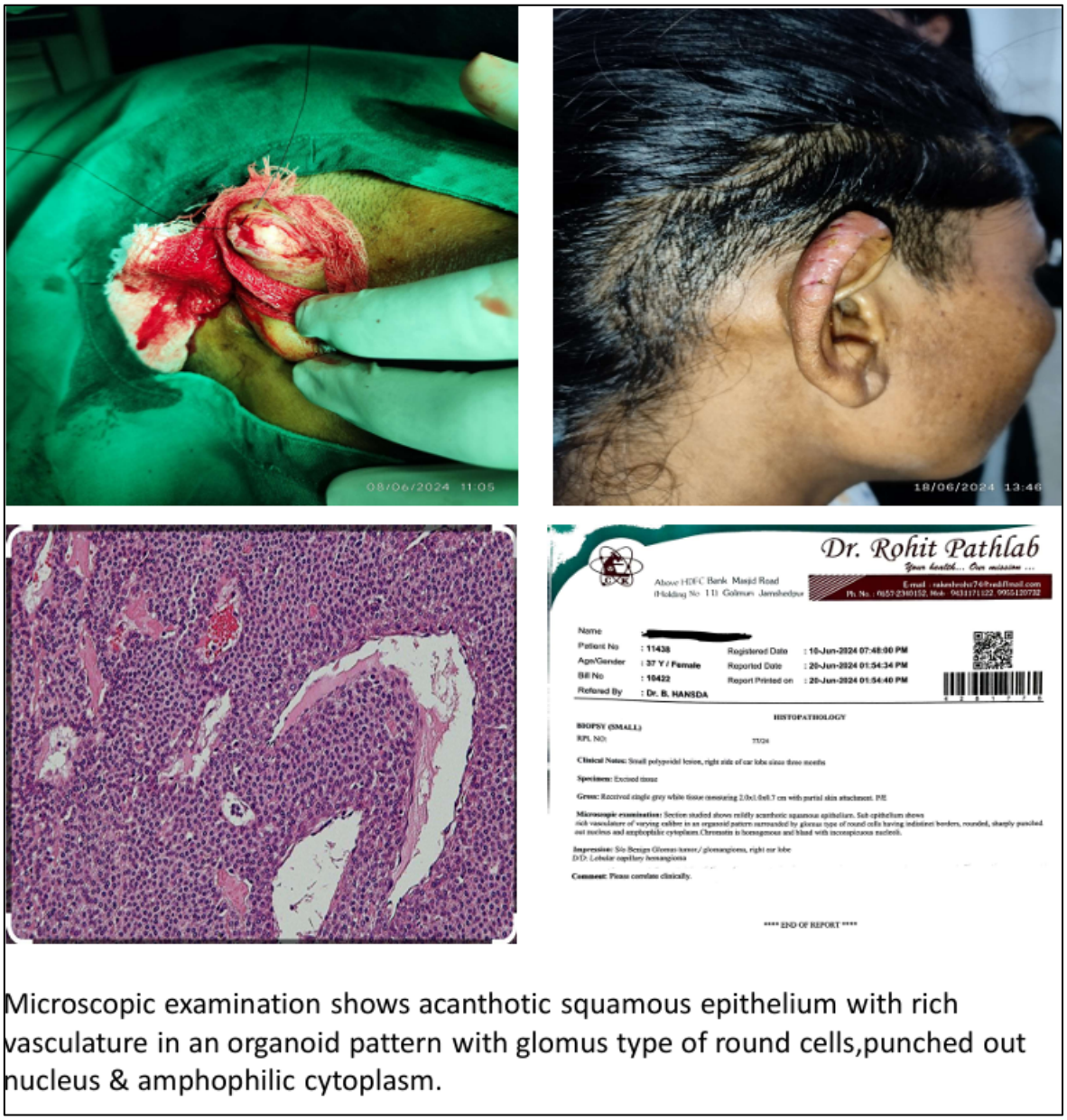
Results

The lesion on the right ear pinna was effectively excised under local anaesthesia. In order to painstakingly preserve the integrity of the auricular cartilage, the mass was meticulously dissected from the surrounding tissues during the surgical procedure. Hemostasis was successfully obtained intraoperatively, and the wound was primarily closed with fine sutures. There were no intraoperative complications, including nerve injury, excessive haemorrhage, or cartilage damage. The excised mass was well-circumscribed, firm, and measured approximately 1.5 cm × 1.5 cm × 1.0 cm. The patient's report of episodic haemorrhage was corroborated by the ulceration of the lesion's surface. The specimen was forwarded for a comprehensive histopathological examination.

The mass exhibited characteristics of a benign glomus tumour (glomangioma) upon microscopic examination. The histology revealed an acanthotic squamous epithelium that overlie a highly vascular tumour that is composed of round, uniform glomus cells arrayed in an organoid pattern. The tumour cells exhibited amphophilic cytoplasm and centrally located, punched-out nuclei. The lesion's vascular nature was substantiated by the presence of numerous small- to medium-sized blood vessels that were interspersed throughout. There were no mitotic figures, necrosis, or atypical features that were indicative of malignancy. The patient underwent meticulous postoperative monitoring and experienced a smooth recovery. The follow-up at two and four weeks demonstrated exceptional healing, with no indications of infection, hematoma, or recurrence. The pain symptoms, particularly those that were precipitated by chilly exposure, were entirely alleviated subsequent to the surgery. The cosmetic results were satisfactory, with minimal visible scarring and no structural deformity of the pinna.

Because of the rarity of glomus tumours in the auricular region, this case is particularly noteworthy. This may be the third reported instance of a glomus tumour arising specifically in the ear pinna,

according to a review of the available literature. The significance of early recognition and complete surgical excision for both diagnostic confirmation and symptom resolution is emphasised by the successful outcome in this case.



Discussion

Glomus bodies, thermoregulatory arteriovenous structures most frequently found in the digits, are the source of glomus tumours, which are uncommon benign vascular neoplasms. Only a small number of cases have been reported worldwide, making their presentation in the pinna extremely uncommon. Glomus tumours of the auricle are frequently misdiagnosed or mistaken for other cutaneous or vascular lesions because of their unusual location and vague symptoms. This study's example supports earlier findings that glomus tumours, despite being benign, can be quite uncomfortable and clinically concerning because of their vascularity and pain response to touch or cold stimuli. The gold standard of care is still surgical excision, which is typically curative, particularly for small, well-defined lesions like those in superficial regions like the pinna. Complete surgical excision under local anaesthesia had a positive outcome in our case with no recurrence, which is in line with previous results in cases of cranial glomus and auricular tumours.

Histologically, glomangiomas are made up of spherical cells that surround blood vessels with homogenous nuclei and amphophilic cytoplasm. These characteristics were seen in this instance [9]. In addition to relieving symptoms, early detection and surgical excision are essential for preventing

consequences like ulceration, secondary infection, and ongoing bleeding [10]. Auricular forms can be treated less invasively than glomus tumours, which are more commonly seen in the temporal bone (as glomus tympanicum or jugulare) and are typically treated with intricate neurosurgical techniques [11]. According to reports like those by Smith et al. [12] and Hirsch [13], total surgical excision provides minimal recurrence rates and long-term remission. The infrequency of glomus tumours in the pinna emphasises the necessity of raising awareness among pathologists and clinicians in order to prevent misdiagnosis and guarantee prompt, effective treatment [14.15].

Conclusion

Glomus tumours of the pinna are rare, benign vascular neoplasms with nonspecific symptoms including pain and bleeding, making diagnosis difficult. The differential diagnosis of chronic auricular swellings with cold sensitivity or ulceration should include glomangioma, as seen in this case. Surgical excision is the preferred treatment for diagnosis and symptom relief with minimal morbidity. Clinicians and histopathologists must be more attentive to detect and treat this rare but clinically relevant condition.

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