CASE REPORT

Transungual resection of subungual glomus tumour

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SUMMARY

Glomus tumours are benign soft tissue neoplasms. In this paper, we present a case with subungual glomus tumour. Transungual resection was performed to remove tumour. The patient was doing well 6 months after the surgery with no sign of recurrence or nail deformity.

BACKGROUND

Glomus tumours or glomangiomyomas are rare benign soft tissue neoplasms. It was first described by Barre and Masson in 1924.^{1 2} They originate from glomus bodies which function to regulate skin temperature by regulating capillary blood flow. They are most commonly localised in the hands. Other locations such as foot,³ hip,⁴ thigh,⁵ urethra⁶ and stomach⁷ have been reported. They are most commonly seen between the second and fourth decades. Most common symptoms include pain, tingling, burning sensation and cold hypersensitivity. Subungual glomus tumours are particularly challenging in terms of diagnosis and treatment.

CASE PRESENTATION

A 45-year-old female patient was presented to our clinic with a painful mass on the right hand thumb.

Figure 2 (A) Incision planning after nail removal. (B) Tumour is exposed with the nail bed incision. (C) Resection of the tumour. (D) Incisions are closed with polypropylene sutures.

Figure 1 MRI scan of the tumour. (A) Proton density fat saturated axial image. (B) Proton density fat saturated coronal image. (C) T1 postintravenous contrast axial image. (D) T1 postintravenous contrast coronal image. (E) Three-plane localiser axial image. (F) T1 sagittal plane image.

The patient had a 3-month history of complaints including cold sensitivity, severe pain and tenderness on the right hand thumb. Physical examination revealed very slight deformation and pinkish discoloration on the nail of right hand thumb. Pain was present with palpation.

INVESTIGATIONS

MRI on sagittal, axial and coronal plans with contrast was performed. MRI investigation revealed 5 mm wide and 2.5 mm thick mass under the nail bed which showed intense contrast enhancement. The mass was T1 hypointense and T2 hyperintense. Adjacent phalangeal bone was showing normal cortical and medullar signal intensity. Muscular structures and muscle-fascia separation were normal (figure 1).

TREATMENT

The surgery was performed under digital block and tourniquet. Nail was removed and nail bed was incised along the longitudinal axis. The mass underneath the nail bed was dissected and taken out for histopathological examination. Nail bed incision was repaired with a 6.0 polypropylene suture. The

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Figure 3 (A) Tumoural growth separated from the normal tissues with defined boundaries (H&E, ×40). (B) Glomus cells surrounded by vascular structures inside myxoid stroma (H&E, ×100). (C) Tumour composed of glomus cells with oval or round-shaped nuclei and narrow cytoplasm around vascular structures (H&E, ×200).

nail was reinserted on the nail bed as protecting layer. Dorsal skin incision was repaired with a 5.0 polypropylene suture (figure 2). The histological examination revealed glomus tumour (figure 3).

OUTCOME AND FOLLOW-UP

The patient was doing well 6 months after the surgery with no sign of recurrence or nail deformity.

DISCUSSION

Diagnosis of glomus tumours by physical examination alone can be difficult. Radiologically, they show solid, hypoechoic, non-specific mass in ultrasound scan. Hypervascularity can be detected in Doppler scan. This can be beneficial in the identification of this tumour. MRI has been reported as a useful method in differential and early diagnosis of the tumours as small as 2 mm.^{8 9} Glomangiosarcomas should be included in differential diagnosis. Subfascial localisation, presence of nuclear atypia, necrosis and high mitotic activity should be alarming in this regard.¹⁰

Subungual localisations possess a challenge in the management of glomus tumours. In our cases, transungual approach was used and nail bed was incised along its longitudinal axis not to disturb the nail growth. Subungual glomus tumours are treated with either transungual or periungual (lateral) approach.¹¹ Recurrence of the tumour is usually related to incomplete excision of the tumour. We believe that the periungual approach limits the access to the lesion, thus increases risk for recurrence. On the other hand, transungual approach has been associated with postoperative nail deformities.¹² We believe that vertical incision and careful repairing of the nail bed can prevent nail deformities associated with transungual approach.

Learning points

- Subungual glomus tumours can be resected via subungual or periungual approach.
- Periungual approach is preferred to reduce the risk of permanent nail deformity.
- Transungual approach can achieve better visualisation of the tumour with reduced risk of recurrence.

Contributors DA and GT have performed the surgery and have contributed in the planning of the report. MS has contributed in the writing of the manuscript and CL has provided the pathological examination.

Competing interests None declared.

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