



Innovations

Suture-free nail plate fixation post-transungual excision of glomus tumor

Sunil Kumar Gupta¹, Divyanshu Deshmukh¹, Shiwangi Rana¹, Kavita Swami¹

¹Department of Dermatology, Venereology and Leprology, All India Institute of Medical Sciences, Gorakhpur, Uttar Pradesh, India.

***Corresponding author:**

Divyanshu Deshmukh,
Department of Dermatology,
Venereology and Leprology,
All India Institute of Medical
Sciences, Gorakhpur,
Uttar Pradesh, India.

divya.deepdeshmukh@gmail.com

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ABSTRACT

Glomus tumors are rare benign neoplasms of the digits arising from glomus bodies. Transungual excision is the preferred approach for the complete removal of subungual glomus tumors. However, secure repositioning of the nail plate following excision remains technically challenging. We describe a simple, minimally traumatic technique for nail plate fixation following transungual glomus tumor excision. We performed this technique in two patients.

Keywords: Cyanoacrylate fixation, Glomus tumor, Nail surgery, Transungual excision

PROBLEM STATEMENT

Subungual glomus tumors are rare benign neoplasms of the digits arising from glomus bodies. They can be excised through transungual or periungual approach.¹ Transungual approach offers better access for the complete removal of subungual glomus tumors.² However, repositioning the nail plate following the glomus tumor excision remains a technical challenge. Conventional fixation methods using fine non-absorbable sutures can be cumbersome, time-consuming, and may cause additional trauma to the nail bed. Suturing can distort the anatomical alignment of the nail plate and requires later removal, adding to post-operative discomfort. A faster, minimally traumatic, and reliable method for nail plate stabilization would therefore be beneficial.

RECOMMENDED SOLUTION

We utilized medical-grade cyanoacrylate adhesive to secure the nail plate after transungual excision of a glomus tumor. Written informed consent was obtained from the patient. Under all aseptic precautions, a digital block was given. Digital tourniquet was used to maintain an avascular surgical field. In one patient, partial nail avulsion was done, followed by excision of the glomus tumor [Figures 1a-c]. In another patient, the entire nail plate was separated from the nail bed due to tumor location and the need for optimal visualization to ensure complete excision. An oblique incision was given on either side of proximal nail fold, followed by excision of glomus tumor by giving a longitudinal incision on the nail bed and meticulous dissection. Once the lesion was removed, nail bed was sutured using vicryl 6-0, and the nail plate was repositioned accurately over the nail bed. Instead of sutures, a thin layer of cyanoacrylate adhesive was applied along the proximal and lateral nail folds,

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Figure 1: (a) Cyanoacrylate glue being applied along the nail fold for suture-free fixation of the nail plate after excision of a glomus tumor through transungual approach. (b) Medical-grade cyanoacrylate adhesive used for the technique. (c) One-week post-operative follow-up image demonstrating adequate healing.

resulting in instantaneous fixation [Figures 2a-d]. The adhesive acted both as a splint and an external seal, providing stable anchoring without the need for suturing. In addition, cyanoacrylate fixation provided a cleaner post-operative appearance, making the nail unit esthetically more appealing compared with traditional suturing.³ The patients were followed up at 1 week, 1 month, and 3 months postoperatively. The post-operative course was uneventful. There was a significant reduction in pain, with no nail plate displacement and smooth subsequent nail growth. There was no evidence of recurrence or nail plate deformity during the follow-up period. Cyanoacrylate adhesive has been previously utilized in various cutaneous surgical procedures.⁴ It can provide a convenient alternative to conventional suturing for nail plate fixation in these cases, with better esthetic acceptance compared to conventional suturing. This technique serves as a quick, cost-effective, and minimally traumatic alternative for nail plate fixation following transungual excision of a glomus tumor.

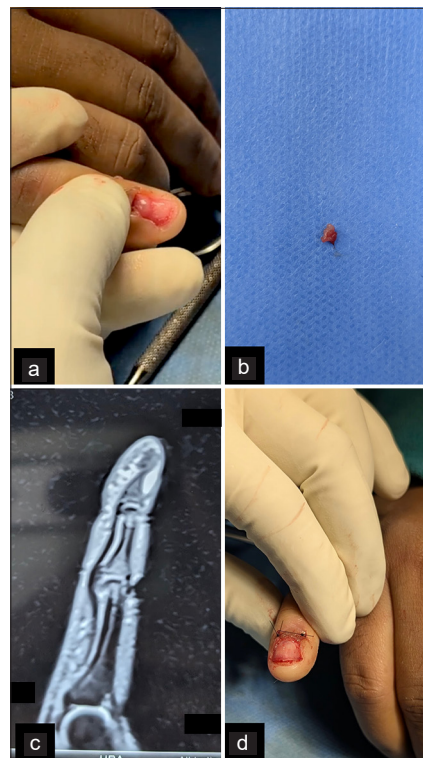


Figure 2: (a) Intraoperative image of the tumor over the proximal aspect of the nail bed after separation of nail plate from the nail bed. (b) Excised tumor following the procedure. (c) Magnetic resonance imaging of the subungual glomus tumor. (d) Post-operative image after suture-free fixation of nail plate using cyanoacrylate glue.

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Declaration of patient consent: The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given consent for their images and other clinical information to be reported in the journal. The patient understands that the patient's names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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