Antegrade Sub-nailbed Approach for Minimizing Postoperative Nail deformities in Subungual Glomus Tumors

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Introduction

- Surgical removal of subungual glomus tumor of the distal phalanx is the only curative means of treatment
- In traditional surgical approaches such as the transungual approach, the nail plate is removed and the nail bed is incised to approach the mass; however, nail plate excision and nail bed incision may cause pain and subsequent nail plate deformities
- We report on a new surgical technique of "antegrade sub-nail bed approach" where the nail plate is preserved and the mass is approached by dissecting beneath the nail bed
- Benefits of this approach include minimal post-operative pain and good post-operative nail shape

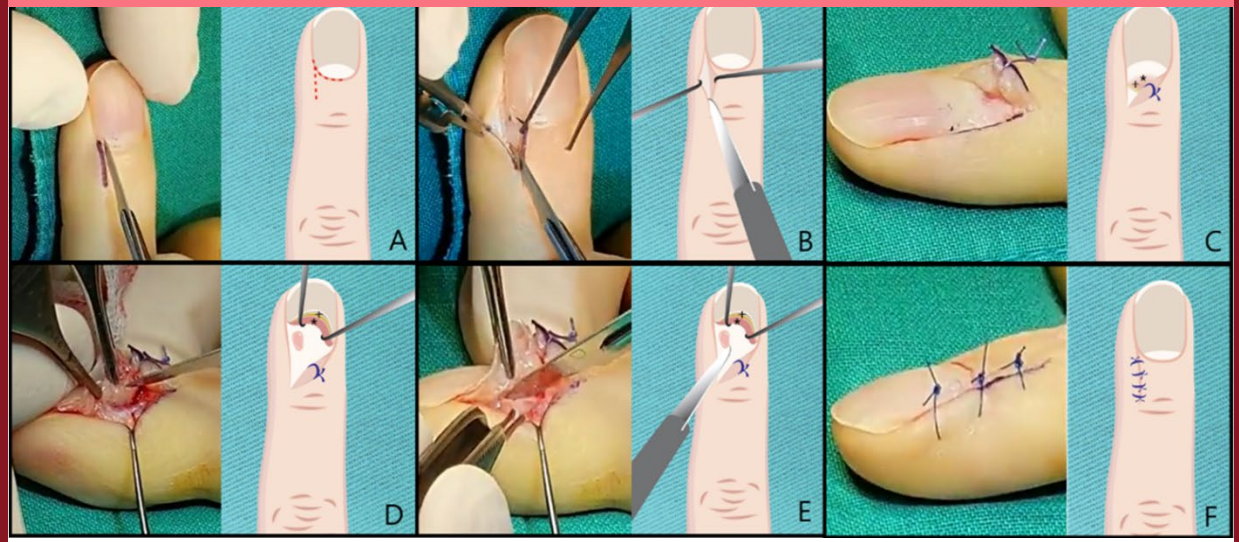
Methods

- Retrospective review of 32 cases treated with this approach
- Minimum of 1-year follow up
- Reviewed:
  - Post-op pain score (VAS) at 1-week post-op and at final f/u
  - Subjective grading by the patient as "satisfied" and "unsatisfied."
  - Objective grading by two orthopedic hand surgeons with respect to post-op nail shape as
    "excellent": improved after op
    "good": same as preop
    "poor": worsened after op

Results

- VAS
  at 1-week post op: 1.8
  at final f/u: 0
- Subjectively: 96.6% (n=31) "satisfied"
- Objectively:
  9.3% (n=3) "excellent"
  87.5% (n=28) "good"
  3.1% (n=1) "poor"

Figure



Operation technique. A. A longitudinal incision is made from the proximal corner of the nail fold B. Proximal skin flap is elevated C. The skin flap is further elevated until the proximal end of the nail bed and germinal matrix is fully exposed D. The proximal end of the germinal matrix, nail bed, and nail plate are elevated in one layer until exposure of the glomus tumor E. Tumor excision F. The germinal matrix, nail bed, and nail plate are placed back in their original positions repaired using 4-0 non-absorbable sutures. (Asterix indicates nailbed. Plus sign indicates germinal matrix.)

Conclusion

- This approach to subungual glomus tumor provides minimal post-operative pain, high patient satisfaction, and favorable cosmetic outcome with respect to nail shape by avoiding removal of nail plate and incision of the nail bed and germinal matrix

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