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Title

Transverse Eponychial Flap (TEF) – a new method for nail bed lengthening and fingertip reconstruction

Purpose

To investigate the effectiveness of TEF in lengthening nail bed and fingertip reconstruction.

Method

Fingertip amputations at proximal nail bed level underwent TEF reconstruction. The TEF is an eponychial flap with pedicle on either side. The quantitative measure of nail bed, perionychial tissue, TEF nail bed length gained were accounted. Qualitative anatomical and functional characteristics of reconstructed nail complex pulp were assessed individually and with respect to the respective contralateral digit. Patients' overall opinion about their satisfaction with the results were also graded.

Results

5 of 10 digits has been assessed with follow up period from 8 to 13 months till date. The average nail bed length gain achieved was 4mm and 29.50% with respect to contralateral digit. On average, new nail shape had mixed quality, length 46% of the contralateral digit, and majority with decreased luster. The average 2 point discrimination was 4.4mm and pain score on pinch was 1.1. All reconstructed pulp were hyperesthetic. On the contrary, the TEF was hypoesthetic in one patient. All patients expressed satisfaction about the preservation of the nail apparatus with their graded opinion of 61% on average. No flap necrosis was noted.

Conclusion

One of the patients rightly said that "nail is the jewel of the finger" and TEF has been one of the good procedure to have dual function of preserving the nail complex as well as helping in reconstruction of the finger defect.