

Osteoplastic Reconstruction Of An Amputated Thumb

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INTRODUCTION:

An amputated thumb is a debilitating condition that renders the hand almost useless. A functional reconstruction is important especially in young active, working patients.

Goal of reconstruction includes, functional length, good aesthetics, stability and mobility, and if possible, preservation of sensation.

Toe to thumb transfer gives very good results but is technically demanding, and in our setting is not favored by our demographic. Osteoplastic reconstruction provides an acceptable result with less donor morbidity.

Possible technique includes the groin flap (2-stage) and the reverse radial forearm flap. Advantage of the latter includes patient is able to mobilize the arm with good wound care post operatively, and it enables additional lengthening of the thumb if so desired

REPORT:

We have a 30 year old man, elevator mechanic whose hand was stuck in the lift mechanism causing avulsion, amputation at the level of midshaft proximal phalanx of the left thumb approximately 9 months ago.

Our aim was to give the patient a meaningful length and acceptable aesthetics of the left thumb.

The thumb was quite short, only 1-2cm of stump is left of the proximal phalanx. We took a tri-cortical iliac crest graft, about 5 cm and k-wired it to the stump increasing its length to match the contralateral side.

We then lifted a reverse-flow radial forearm flap with the radial artery and its vena comitantes as the donor vessel, with pivot point at the wrist and wrap it around the reconstructed thumb.

The defect at the proximal forearm is covered with a split skin graft.

Post-operatively the reconstructed thumb is viable, despite being bulky. Further debulking can be done after the flap has settled down.

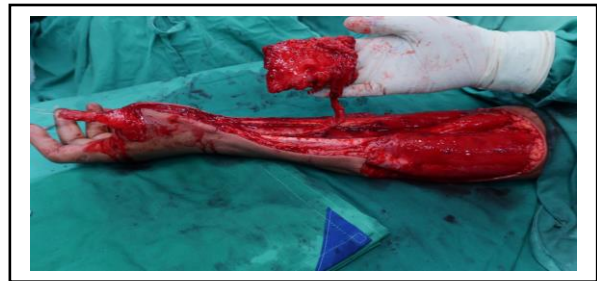


Figure 1: The reverse radial flap before being wrapped around the reconstructed thumb. Note the lengthening of the thumb.



Figure 2: Post closure of the flap

CONCLUSION:

Osteoplastic reconstruction via reverse radial forearm flap is a versatile technique that can provide a functional replacement of an amputated thumb

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