

Fingertip Reconstruction with Adipofascial Island Flap

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Disclosure/Financial Support: None of the authors has a financial interest in any of the products, devices, or drugs mentioned in this manuscript.

INTRODUCTION: The fingertip reconstruction requires durable coverage, with good color and contour, so that, adequate coverage of the fingertip wounds is often a demanding problem for hand surgeons.¹ Fingertip defects with bone exposure should be covered as promptly because of its chance of infection and bone desiccation.² Adipofascial flap is one of the methods covering soft tissue defect at fingertip. This study is designed to introduce the new method of fingertip reconstruction using a pedicled adipofascial island flap.

MATERIALS AND METHODS: From August 2014 and June 2015, 8 patients with bone-exposed fingertip soft tissue defect were treated. At first, we dissected subdermal layer of undamaged area and elevated adipofascial flap based on branches from terminal arch of digital arteries. After that, we sacrificed one side of terminal arch of digital artery, which becomes island flap pattern with comparatively longer pedicle, and transposed the flap onto the bone exposure area. The remaining skin layer of the donor site was sutured primarily. 3 weeks after the surgery, split thickness skin graft was performed on the adipofascial flap as the second stage of the procedure.

RESULTS: The 8 patients ranged in age from 30 to 62 years old; seven males and one female with injuries at fingertip. Mean follow-up period was about 8 months.

All the adipofascial island flaps survived completely and provided excellent soft tissue coverage, and all the skin grafts were taken well. There were no complications, such as infection or re-exposure of bone. And the donor site showed no significant morbidities, such as hematoma and dehiscence. During the follow-up period, there was no atrophy and the appropriate soft tissue padding was provided. All patients were satisfied with round fingertip contour.

CONCLUSION: The adipofascial island flap provides an excellent option because of the simplicity of procedure. Other advantages are constant anatomic pedicle of the flap, minimal donor site morbidity and one operative field. This flap can be performed within one digit, which benefits covering the defect with bone exposure immediately without any preparation of other donor site. We consider that the adipofascial island flap is another reliable and useful method for the fingertip reconstruction.

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