

Bi-pedicle Pre-expanded Forehead Flap for Facial Subunits Reconstruction

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INTRODUCTION: The reconstruction for facial complex defect involved two subunits is always a tough problem for plastic surgeons because its extraordinary identity and the difficulties to find the ideal donor site with perfect matching tissues. Based on the facial aesthetic subunits theory emphasized by Menick,¹ when a large defect involving more than one subunit occurred, to replace as each subunit rather than simply patching the entire defect often gives a superior result. The forehead flap is acknowledged as the best donor site for nose and other facial part reconstruction because of its ideal color and texture. In this paper, the authors suggest a Bi-pedicle Pre-expanded Forehead Flap to overcome and improve the disadvantages of the forehead flap.

MATERIALS AND METHODS: From clinic practice and review of the literature, the authors design Bi-pedicle Pre-expanded Forehead Flap in 5 complex facial defect patients based on the special anatomy of supratrochlear artery. One side was for total nasal reconstruction, and the other for upper lip. The procedures included extended forehead skin expansion, single-stage nasal contouring and subunit plasty, pedicle division and restoration, and flap decoration.

RESULTS: This improved flaps designing were applied in 5 cases with follow up. In all cases, flaps were survived with similar quality to the other part of face, and all patients were satisfied with their new appearance.

CONCLUSION: Bi-pedicle Pre-expanded Forehead Flap application in complex facial defects with two subunits reconstruction would be a new and ideal choice for the plastic surgeons. It provides the similar color, thickness, texture, pliability reconstruction with reliable blood supply and adequate tissue, without extra donor site, extra expansion time and less tolerance to the patients. What is more important, it provides the coverage according to the facial aesthetic subunits conception which leading to a better result and ideal appearance.

REFERENCES:

1. Burget GC, Menick FJ. The subunit principle in nasal reconstruction. *Plast Reconstr Surg.* 1985;76:239-247.