

Lower Medial Thigh Perforator Flap: The New Innovation for Head and Neck Reconstruction

Mario F. Scaglioni MD, Pao-Jen Kuo MD*, Pao-Yuan Lin MD, Yen-Chou Chen MD, Yur-Ren Kuo MD, PhD*

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

INTRODUCTION: Free tissue transfer has become a popular procedure for head and neck defect reconstruction. However, the choice of optimal flap remains challenging especially in recurrent cancer cases involving multiple surgical resections. Here, we describe the novel lower medial thigh perforator (LMTP) flap that can be used reliably to reconstruct head and neck defects in such a difficult situations.

MATERIALS AND METHODS: The perforators of the LMTP flap were detected at the distal third of a line drawn from the midpoint of the inguinal ligament to the medial upper border of the patella. The majority of the perforators originated from the superficial femoral vessels piercing the vastus medialis muscle. Total 15 patients utilizing the LMTP flap for head and neck reconstruction.

RESULTS: Regarding the type and number of perforators, an average of 1.46 sizable perforators (range: 1 to 2) were recorded during the dissections. In addition, the majorities (80%) of the perforators were musculocutaneous that penetrated the vastus medialis muscle, and the other 20% were septocutaneous between the sartorius and the vastus medialis muscle. The average pedicle length was 8.2 cm, and the mean artery size in the flap pedicle was 1.95 mm. All of the flaps survived, except one, which failed due to venous thrombosis. Another flap developed venous thrombosis and was successfully salvaged by performing a venous thrombectomy. No arterial thrombosis was recorded. All donor sites were closed primarily except for one skin graft, and no major complications were encountered.

CONCLUSION: The LMTP flap represents a pliable solution with constant vascular anatomy and low donor-site morbidity. It could be an alternative for the reconstruction of the head and

neck defect.

REFERENCES:

1. Pan W-R, Taylor GI. The angiosomes of the thigh and buttock. *Plast Reconstr Surg*. 2009;123(1):236-249.
2. Scaglioni MF, Kuo Y-R, Yang JC-S, Chen Y-C. The posteromedial thigh (PMT) flap for head and neck reconstruction: anatomical basis, surgical technique and clinical applications. *Plast Reconstr Surg*. 9000;PRS Online First.
3. Kuo Y-R, Jeng S-F, Kuo M-H, Liu Y-T, Lai P-W. Versatility of the free anterolateral thigh flap for reconstruction of soft-tissue defects: review of 140 cases. *Ann Plast Surg*. 2002;48(2):161-166.

FIGURE LEGEND:

Figure 1. The right lower medial thigh perforator (LMTP) flap based on one perforator.

Table 1. Summary of the patients receiving lower medial thigh perforator (LMTP) flap reconstruction.