

Pedicle Lengthening Technique Utilizing Retrograde Inflow for the Groin Lymph Node Flap

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BACKGROUND: In harvesting the groin lymph node flap, the presence of lymph nodes in close proximity to the femoral vessels can prove challenging. To increase arterial pedicle length and decrease the chance of lymph node and/or vascular injury, retrograde arterial inflow may be used. The purpose of this study was to review our groin lymph node flap experience of over the past 26 years and present the feasibility and results of utilizing this retrograde inflow technique.

METHODS: A retrospective review was performed of all patients who underwent a groin lymph node flap for the treatment of lymphedema from 1988 to 2014. Cases employing a retrograde arterial inflow technique (Figure 1) and traditional antegrade venous drainage were critically evaluated. Patient demographics, indications, flap characteristics, and perioperative details were reviewed.

RESULTS: Fifty patients underwent groin lymph node flap transfer, 15 (30%) of which had the retrograde inflow technique performed. The average length of the superficial circumflex iliac artery (SCIA) retrograde inflow pedicle was 2.4cm (range 2.0 to 3.0cm). The flap survival rate was 93%, representing one flap failure due to unsalvageable venous congestion. The overall complication rate was 7%. The mean diameter of the distal part of the superficial circumflex iliac artery was 0.8mm (range 0.7-1.0 mm), which was comparable to the mean luminal diameter of the traditional pedicle at the proximal origin from the femoral artery (0.9mm; range 0.7-1.0mm). Mean follow-up was 16 years (range, 1 to 26 years).

CONCLUSIONS: The use of a retrograde arterial inflow technique in groin lymph node flap harvest is technically feasible and safe. The retrograde technique aids in reliable harvest and transfer of the flap in the difficult situation where lymph nodes are adjacent to the femoral artery.

LEGENDS:

Figure 1. Illustration of lymph nodes close to the femoral artery and a consequently short SCIA pedicle for the groin lymph node flap (upper pane). Pedicle lengthening and use of funnel technique to improve flap reliability (lower pane).