EP-010

두경부암 재건술에서 유리 조직 이식을 이용한 새로운 미세혈관 문합

(Efficacy of a novel microvascular anastomosis)

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Purpose:

Head and neck reconstruction using free tissue transfer remains technically demanding, particularly when recipient vessels are compromised or sacrificed during oncologic resection. Discrepancies in vessel position and caliber during venous anastomosis often require vein grafting or end-to-side techniques, increasing operative complexity and the risk of venous congestion. We introduce a novel microvascular anastomosis method, the "sleeve tailoring technique," designed to optimize pedicle geometry and facilitate tension-free anastomosis.

Methods:

Head and neck reconstruction using free tissue transfer remains technically demanding, particularly when recipient vessels are compromised or sacrificed during oncologic resection. Discrepancies in vessel position and caliber during venous anastomosis often require vein grafting or end-to-side techniques, increasing operative complexity and the risk of venous congestion. We introduce a novel microvascular anastomosis method, the "sleeve tailoring technique," designed to optimize pedicle geometry and facilitate tension-free anastomosis.

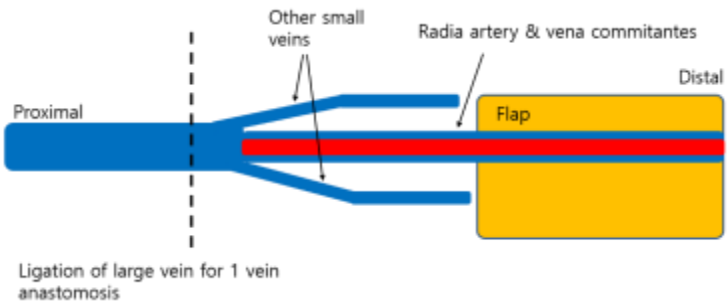

Figure 1.

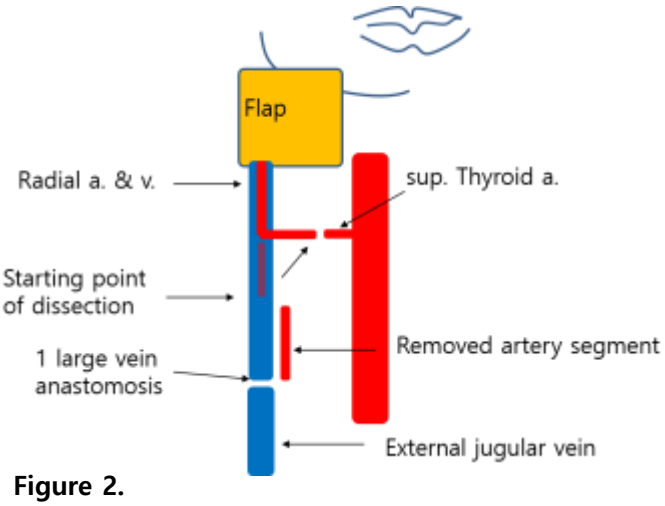

Figure 2.

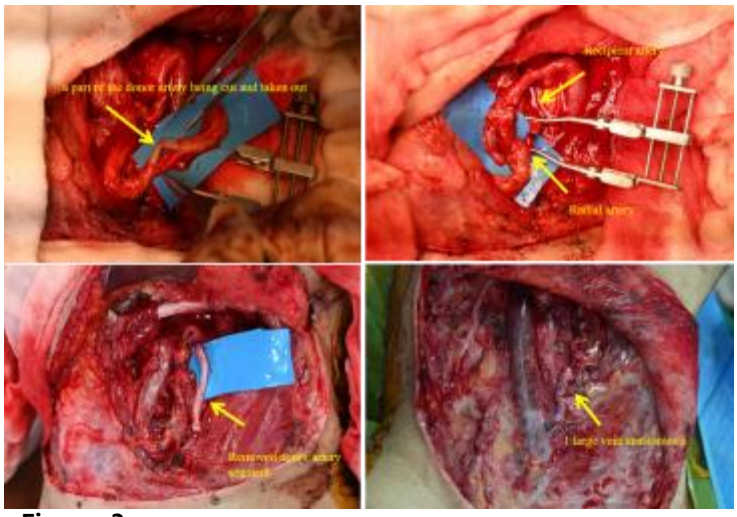

Figure 3.

Results:

Complication rates were low and comparable between groups. Leakage occurred in 15.4% of conventional cases and 9.2% of sleeve cases (p = 0.3612). Total flap loss occurred in 2.6% and 2.3%, partial flap loss in 0% and 2.3%, and microvascular compromise in 0% and 0% of conventional and sleeve groups, respectively (all p = 1.0000).

Conclusions:

The sleeve tailoring technique offers a safe and versatile option for microvascular anastomosis in head and neck reconstruction. By allowing precise control of arterial length and pedicle orientation, it helps minimize tension, vessel kinking, and spatial mismatch without increasing flap-related morbidity.

Category	Conventional, n/N (%) [N-39]	Sleeve, n/N (%) [N=87]	p-value
Total flap loss	1/39 (2.6%)	2/87 (2.3%)	1.0000
Partial flap loss	0/39 (0.0%)	2/87 (2.3%)	1.0000
Leakage	6/39 (15.4%)	8/87 (9.2%)	0.3612
Surgical revision	4/39 (10.3%)	7/87 (8.0%)	0.7371
Microvascular compromise	39/39 (100.0%)	87/87 (100.0%)	1.0000

Table 1.