

Peroneal Flap in Tongue Reconstruction

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Options for Tongue Reconstruction(I)

- **Maintain mobility**
 - ✓ Infrahyoid myofascial flap
 - ✓ Medial sural artery perforator flap
 - ✓ Radial forearm flap
 - ✓ Ulnar forearm flap
 - ✓ Anterolateral thigh flap

Options for Tongue Reconstruction(II)

- **Provide bulk**

- ✓ Rectus abdominis myocutaneous flap
- ✓ Latissimus dorsi myocutaneous flap
- ✓ Pectoralis major myocutaneous flap
- ✓ Trapezius island flap
- ✓ Anterolateral thigh flap

Objective

- To present the peroneal flap as a feasible option for tongue reconstruction

Material and Methods (I)

- From 1996 to 2013, 43 peroneal flaps for tongue reconstruction
- Depending on the size and location of defect:
 - 24(56%) pure cutaneous flaps
 - 19(44%) myocutaneous flaps
 - ✓ 5 carry soleus m.
 - ✓ 14 carry flexor hallucis longus m.

Material and Methods (II)

- Functional evaluations:
 - ✓ Speech: 4=normal, 3=intelligible, 2=slurred, 1=tracheostomy required
 - ✓ Diet: 4: normal, 3=soft, 2=liquid, 1=NG tube
- Cosmetic evaluations:
 - ✓ 4=excellent, 3=good, 2=fair, 1=poor

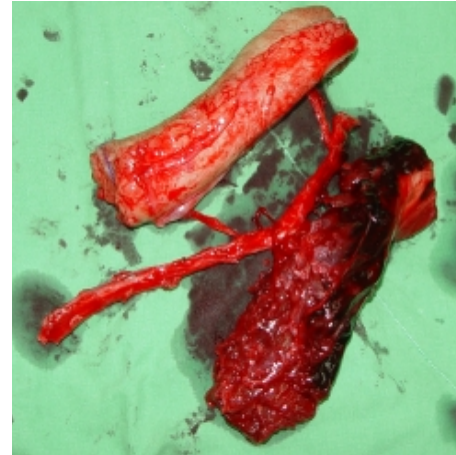
Results

- Flap failure: 3/43 (7%)
- Postoperative complications: partial necrosis 1/43(2.3%), fistula formation 1/43(2.3%)
- Functional outcomes (9 p'ts, F/U:31mos)
 - ✓ Speech: 3.2 ± 0.67
 - ✓ Diet: 3.1 ± 0.78
- Cosmetic outcome: 3.3 ± 0.87

Case 1



preop



Peroneal flap



postop

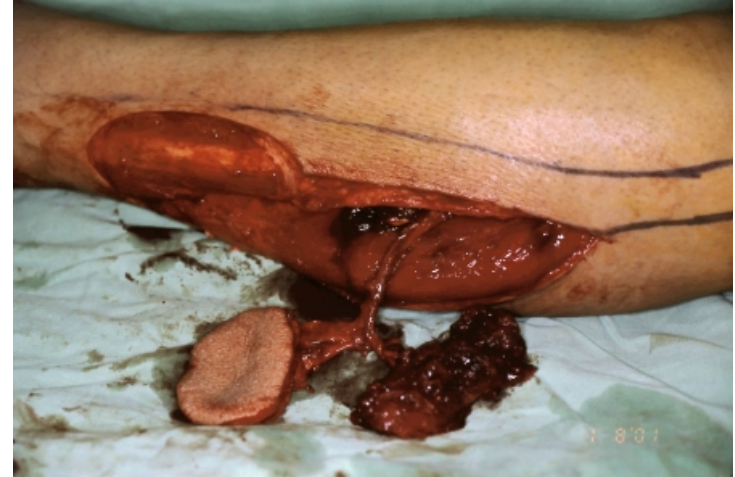


F/U at 6 wks

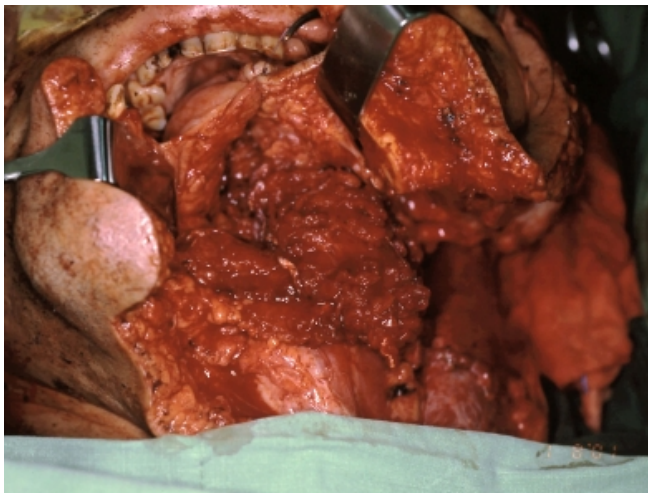
Case 2



preop



Peroneal flap with a muscle bulk



The muscle used as defect filler



F/U at 3 wks

Case 3



preop



Peroneal flap



F/U at 2.5wks



F/U at 3 mos

Conclusions

- For a hemiglossectomy defect, a thin and pliable peroneal flap --> maintain mobility
- A peroneal flap with muscle → provide additional bulk to fill the adjacent defect

Significance of the study

- Peroneal flap is a feasible option for tongue reconstruction