使用雙皮瓣橈前臂自由皮瓣於舌癌重建手術之三度空間設計

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A novel 3-D design of double-paddle free radial forearm flap for tongue reconstruction after hemiglossectomy

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Purpose:
Our purpose was to develop a reconstruction that maximizes the mobility of the remaining tongue, maintains the volume to effectively obliterate the oral cavity and to develop a functional outcome measurement to speech and swallowing attributes.
Materials and Methods:
From July 2010 to June 2012, there were eleven patients with advance stage tongue cancer who were treated with hemiglossectomy and one-stage reconstruction with double-paddle RFFF by the same team of head and neck surgeons and plastic surgeons. The shape and size of the double-paddle RFFF were designed based on the size of the tongue defect and the floor-of-mouth defect. The forearm flap was divided into two sub-unit, tongue sub-unit and the floor-of-mouth subunit. The inset of the flap was according to reconstructive principles and we designed a Z-palsty in the tongue base. Outcome measures included major and minor complications, speech and swallowing assessment.
Results:
The mean flap area was 58.4cm^2 (range, 45-87 cm^2). There are no major complications, no flap salvages, and no flap losses. Of the 11 patients, 8 patients undergo functional assessment. Almost all patients could tolerate liquid diet well (7/8), even semisolid diet (6/8). In all patients, articulation was good enough that they were able to perform normal daily activities.
Conclusion:
The result was comparable to other reconstructive designs available for ablative tongue and floor-of-mouth defects. Techniques such as sub-unit design and tongue base Z-plasty have not previously been documented in the literature for tongue reconstruction. We describe a novel double-paddle free radial forearm flap design for tongue reconstruction that results in good speech and swallowing function and improves the quality-of-life.