

## Reconstruction of Oral Cavity with Radial Forearm Free Flap : Functional Aspects and Flap Design

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**Objective :** To evaluate the nature of flap and functional outcomes of radial forearm free flap (RFFF) for the reconstruction of oral cavity and oropharynx and analyzed the usefulness of the flap.

**Material and Method :** Retrospective review of reconstructive surgery for oral and oropharyngeal cancers using RFFF from August 1994 to December 2005. One hundred six consecutive patients with oral and oropharyngeal cancers who underwent a reconstructive surgery using RFFF. Clinical factors and functional evaluation were analyzed by the modified barium swallow (MBS) test (n=73) and speech-language assessment (n=23).

**Result :** There were 90 men and 16 women and the average age was 56.2. The designs of free flap were unilobed shape in 25 cases and 52 bilobed, 13 trilobed, 15 tetralobed

and 1 pentalobed shape according to the defects. The average size of flap was 61.0 cm<sup>2</sup>. MBS results showed 32 out of 73 patients (43.8%) had no aspiration. Only two patients (1.8%) had maximum aspiration. Twenty-four patients (32.9%) had oral residue and 4 patients (5.5%) had velopharyngeal insufficiency. In speech evaluation, 20 out of 23 patients (87.0%) showed more than 50% accuracy of precise consonants. Speech intelligibility was satisfactory in all cases (excellent in nineteen patients and moderate in four) and only one patient had severe hypernasality.

**Conclusion :** We could confirm that the RFFF by the various design is an excellent reconstructive method for the restoration of the function in the reconstruction of the oral and oropharyngeal defects.