Facial Artery Musculomucosal Flap for Reconstruction of Partial Glossectomy Defects

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Abstract

Background: Reconstruction of partial glossectomy defects secondary to tumor excision has always been challenging because of the complexity of tongue function. Small to medium-sized glossal defects are often repaired with primary closure or with bulkier free flaps. However, these methods of reconstruction can lead to tethering and poor tongue mobility. We present use of the using the facial artery myomucosal (FAMM) flap for partial glossectomy defects. We propose the use of the FAMM flap for improved tongue function in the setting where the defect is too large for primary closure, but where free tissue transfer would provide coverage where the volume of the flap would interfere with tongue function.

Methods: We conducted a retrospective chart analysis of nineteen patients who underwent partial glossectomy with FAMM flap reconstruction. We examined tumor type and location, along with post-operative complications, functional outcomes, and need for further procedures. We then emailed all living patients with the MD Anderson Dysphagia Inventory and the University of Michigan Voice-Related Quality of Life Measure to better elucidate their overall functional outcomes with regard to speech and swallowing.

Results: Of the 19 patients, all flaps provided adequate coverage and there were no flap failures. Two patients had minor post-operative complications that easily resolved. All patients had intelligible speech and adequate swallowing capabilities. Almost all of the patients rated their quality of voice to be good, very good, or excellent, and they did not feel that their flap interfered with their feeding abilities.

Conclusion: The FAMM flap provides a good alternative to primary closure and split-thickness skin grafting for patients with small and medium-sized tongue defects after glossectomy. The flap is close in proximity to the defect, is of similar tissue composition, and produces good functional outcome. The FAMM flap provides an excellent alternative to partial glossectomy defects that are less than 50% of the total surface area of the tongue.

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