

Free Mucosa Graft From the Lateral Tongue for Reconstruction of Intraoral Buccal/Lip Mucosal Defects After Tumor Resection

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Objectives: To develop a functional and morphologic reconstruction for intraoral buccal/lip mucosal defects after tumor resection.

Study Design: A prospective clinical series.

Methods: From November 2003 to July 2006, 32 patients underwent free tongue mucosa graft reconstruction after resection of buccal or lip tumors. Graft validity and acceptability, donor site morbidity, and postoperative articulation and swallowing functions were evaluated.

Results: Regular postoperative follow-up for at least 6 (mean, 18.5; range, 6–38) months revealed good functional outcomes and satisfactory cosmetic results of grafts at recipient sites in 29 of 32 (90.6%) patients. There were minimal to mild postoperative pain and minor complications at the donor sites. Mouth opening width was preserved, and all patients could tolerate either soft or regular diets. None of the patients had postoperative functional deficiencies involving articulation, swallowing, mastication, or sense of taste.

Conclusion: This study demonstrated that free mucosa grafts from the lateral tongue are an excellent alternative for reconstruction of buccal/lip mucosal defects after tumor resection.

Key Words: Free tongue mucosa graft, split-thickness skin graft, buccal/lip mucosal defects, articulation.

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INTRODUCTION

Various types of techniques have been used for functional and morphologic reconstruction of intraoral buccal/lip mucosal defects after tumor resection. The selection of reconstructive techniques depends on the size of the intraoral mucosal defect and the preference of the surgeon

and may include skin graft, buccal fat pad flap, and regional or free flap.

Although the buccal fat pad flap is simple to use for soft tissue defects, with low morbidity and failure rates, it can cover only posterior defects of the buccal mucosa.^{1,2} In addition, it is not a “free” reconstructive method.

Resurfacing for intraoral mucosal defects to reconstruct and restore epithelial continuity is a simple, effective, and timesaving procedure, and various types of grafts, allografts, and synthetic materials have been used to achieve this goal. The suitability of graft resurfacing for intraoral mucosal defects depends on its ability to create conditions for primary reepithelialization, promote wound healing, and minimize developments of granulation tissue, fibrosis, and wound contraction. In addition, these grafts must be able to adequately cover defects to prevent microbial infection, excessive fluid loss, and foreign body contamination.

Full-thickness skin grafts are only suitable for small defects because their donor sites must be closed primarily. The split-thickness skin graft (STSG) has become one of the most widely used in intraoral resurfacing during reconstructive procedures. However, several limitations and weak points of this graft have been reported, including unpredictable scarring and contracture of the graft and mismatched colors and contours over the recipient sites. Donor site morbidities including pain, infection, fluid loss, and complex postoperative care are also frequently associated with an STSG.^{3,4}

Rhee et al.⁵ reported the use of a commercially available acellular dermal matrix as an alternative to STSGs to prevent scarring or contracture of the STSG and avoid the morbidity associated with graft harvesting. It is well known as a basic tenet of reconstructive surgery that it should be accomplished with similar tissue rather than allografts or synthetic materials whenever possible.

Intraoral mucosa grafts are currently extensively used in clinical practice. The buccal mucosa graft has increased in popularity recently because of its high feasibility, good functional outcome, and low morbidity of the reconstruction site.^{6,7} Use of buccal mucosa grafts have also been reported in laryngeal reconstruction and conjunctivodacryocystorhinostomy.^{8,9} In addition, the use of

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