

Pavel Dulguerov<sup>a, b</sup>  
Marc M. Kerner<sup>b</sup>  
Francis Marchal<sup>a</sup>  
Willy Lehmann<sup>a</sup>

# Palatal Mucoperiosteal Free Graft: Another Reconstruction Option for Oral Defects

<sup>a</sup> Department of Otolaryngology – Head and Neck Surgery, Geneva University Hospital, Geneva, Switzerland;

<sup>b</sup> Division of Head and Neck Surgery, Department of Surgery, UCLA School of Medicine, Los Angeles, Calif., USA

.....  
**Key Words**

Cancer, squamous cell  
Mouth  
Reconstruction  
Palate mucosa  
Graft

.....  
**Abstract**

Traditional methods of repair for medium-size (3–5 cm) oral defects include allowing granulation, primary closure, skin grafts, and buccal mucosal grafts. Each of these methods has several disadvantages, and all tend to result in significant scar contracture and often lack sufficient bulk. In 10 patients, the defect left by resection of cancer lesions was reconstructed with a free palatal mucoperiosteal graft. In all patients, the grafts survived with little contracture, allowing for adequate tongue mobility. Because of the thickness of the palatal mucoperiosteum, local depressions typically associated with floor of the mouth defects could be avoided. The palatal donor site was left to granulate and recovered in 2–3 weeks with little residual deformity. In 4 patients a through-and-through resection of a floor of the mouth cancer was performed in continuity with a neck dissection. A palatal mucoperiosteal free graft was utilized exclusively in the reconstruction, without the development of salivary fistula.

.....

**Introduction**

Significant oral soft tissue defects generally result from the extirpation of malignant tumors, the main exceptions being ranulas [1] and floor of the mouth cysts [2]. In terms of reconstruction oral defects can be divided into two groups: a small defect group where the main goal is to reconstruct the missing mucosal surface, and a large defect group where soft tissue bulk is necessary to fill the defect. The large defect group can be further subdivided depending on the necessity to repair a bony defect. Satisfactory one-stage reconstruction of large defects is fre-

quently accomplished with regional pedicled flaps or free vascularized flaps [3, 4].

The repair of small (2–5 cm) floor of the mouth, alveolar ridge and anterior tongue defects can be accomplished by allowing wounds to heal by granulation alone, direct edge-to-edge reapproximation, skin grafts [5–7], mucosal grafts [8, 9], or local pedicled flaps [9, 10]. The split-thickness skin graft (STSG) has been the most frequently used repair method in these reconstructions [5]. STSGs are readily available in large surfaces, they allow for satisfactory tongue motion after healing [5, 11] and drape easily in order to recreate a lingual vestibule necessary for dental

