Partial Palatal Split Palatoplasty

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A *partial palatal split* technique is described for use with superiorly based pharyngcal flap palatoplasties. This procedure allows (1) increased facility in dissection, (2) precision in the design of the flap for lateral port control, and (3) construction of a one-piece nasomucosal lining flap in comparison to the standard *complete palatal split* technique.

Introduction

The superiorly based pharyngeal flap is the standard method for the correction of velopharyngeal incompetence. Among several theoretical reasons for its effectiveness, the most important is the obturating effect on oronasal air flow.

It is well recognized that all unlined soft tissue flaps, including pharyngeal flaps, tend to "tube" themselves as the raw surfaces contract along the longitudinal axis. The tubing process narrows an unlined pharyngeal flap and compromises its obturating effect.

Except in unusual anatomic situations or in the presence of excessive scarring, superiorly based pharyngeal flaps have been lined by turning down nasomucosal flaps based on the free border of the soft palate. Exposure for accurate dissection of such a nasomucosal flap is difficult without splitting the soft palate. The usual technique for dissection of a nasomucosal flap includes a complete splitting of the soft palate along its mid-longitudinal axis followed by horizontal separation of the nasal and oral surfaces of the hemisoft palate. After insertion of the pharyngeal flap into the palate, the two halves of the lining nasomucosal flap must be resutured in the midline as well as sutured to the lateral edges of the pharyngeal flap.

Technique

The soft palate is *partially* split through a midline incision extending from the posterior edge of the hard palate to a point 2–3 mm. proximal to the base of the uvula. (The uvula

is not incised) [Figure 1, upper left]. The incision is made through the levator muscle and scar tissue until the nasal submucosa is reached. With the nasal side of the soft palate intact and, therefore, stabilized, dissection in



FIGURE 1. P. F. = Pharyngeal flap; N. I. F. = Nasal lining flap; P. N. S. = Posterior nasal spine; L. V. P. = Levator veli palatine.

the horizontal plane laterally can be accomplished with ease [Figure 1, upper right].

Under direct vision, the nasomucosal flap can be precisely cut to correspond to the shape of the pharyngeal flap. This approximation of size minimizes unlined areas along the edges

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of the flap and reduces the subsequent contracture (with increase in size of the lateral portals). After the anterior and lateral incisions are made, the lining flap can be swung down into the oropharynx ([Figure 1, lower left]. The lining flap thus produced is uniform in thickness and *in one piece*.

The pharyngeal flap is attached to the soft palate, at the posterior margins of the hard palate, by horizontal mattress sutures. The *one-piece* nasomucosal lining flap is then sutured to the bucco-pharyngeal fascia and laterally to the corresponding margins of the pharyngeal flap to insure attachment and more precise control of lateral portal size [Figure 1, lower right].

The mucosal surface of the soft palate and the levator muscle are approximated with simple sutures, every other one of which is passed through the fibers of the superior constrictor muscle portion of the pharyngeal flap.

Summary

A partial palatal split technique is described for use with superiorly based pharyngeal flap palatoplasties. This technical modification produces an intact, one-piece, precisely designed nasomucosal lining flap. This technique allows (1) increased facility in dissection and (2) precision in the design of the flap for lateral port control. The procedure obviates an extra suture line in the lining flap, as is necessary in the standard *complete* palatal split technique.