Furlow Palatoplasty–Double Opposing Z-Plasty

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FURLOW PALATOPLASTY

Successful treatment of cleft palate depends on an understanding of the anatomy and physiology of the palate. The repair should take into account not only the creation of an anatomical barrier between the nasal and the oral cavity, but also provide an environment in which comprehensible speech can be produced.

Furlow, (1986)¹ has described a technique for palatoplasty combining the principles of mucosal lengthening with creation of an intact muscular sling in the palate with double opposing Z-plasty. On the soft palate, mirror image Z-plasties are drawn, one for the nasal musoca and the other

oral flaps, the nasal flaps are developed and closed first (Fig.2). The oral flaps are then approximated. The defect created usually closes readily. The closure lines of the two soft plate layers do not overlap, minimizing the potential for contracture¹. Also, this repair permits closure of the hard palate without lateral incisions. Furlow (1986)¹ reported a 90% rate of velopharyngeal competence postoperatively in 22 patients, with the speech of the other 10% rated as only mildly incompetent. Spauwen (1992)³ reported 100% velopharyngeal competence in ten patients compared with five of ten patients in a group using the von Langenbeck procedure. The effect of the repair

Fig.1
Elevation of oral flaps with muscle in left flap.

for the oral mucosa (Fig.1). In both cases the anteriorly based flap contains mucosa only, and the posteriorly based flap contains the levator muscle and musoca. Following dissection of the

on eustachian tube function could be either positive or negative, since the levator muscular sling and the portion of the tensor palatini that was inserted on the posterior palate are

Fig.2

Closure of nasal layer with retrodisplacement of levator muscle

reconstructed in this procedure, but the lateral surgical trauma of the Z – plasty flaps extends very close to the eustachian tube¹. A complete evaluation of this technique depends on long-term effects of the surgery on maxillary growth (Gage-White, 1993)².

The best indications for this repair are in clefts restricted to the soft palate only. In a cleft with a width greater than 1 cm., the incidence of fistulization at the junction of hard and soft palate increases, as with any palatoplasty. In clefts of the soft palate and submucous clefts, this new procedure with such excellent speech results is welcome, although long-term results are awaited.

References

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3. Spauwen PHM (1992) : Cleft palate repair : Furlow versus von Langenbeck. *J. Craniomaxillofacial Surgery* 20 : 18-20.

CONFERENCE NEWS

The 17th Annual Conference of U. P. Chapter of A.O.I. will be held on 1st March, 1998 (Sunday), at Banaras Hindu University.

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