

Repair of large anterior palatal fistula using anteriorly based tongue flap: A case report

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ABSTRACT

Reconstruction of large palatal defects are challenging as the surgeon has to consider the function, esthetics, donor site morbidity and versatility of flap apart from closure of defect. Tongue is one such organ in the oral cavity, which has high vascularity and good donor for closure of defects inside the oral cavity. In this article we report a case of anterior palatal fistula closure with anteriorly based tongue flap.

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Introduction

The anteriorly based dorsal tongue flap was introduced by Guerrero-Santos and Altamirano in 1966 for the surgical closure of a large palatal fistula.[1] In 1972 Cadenat et al described the rich submucous vascular plexus in the tongue and demonstrated that tongue flaps could be raised safely in any direction, even when only 3 mm thick.[2]

Large fistulas of the hard palate are not uncommon. These defects are usually encountered after previous attempts at closure of palatal cleft or fistulas. Because of the shortage of tissue around large palatal fistulas, local mucoperiosteal flaps usually cannot be used to close these defects. In such cases, a tongue flap is commonly indicated.[3] In this article we report a case of anterior palatal fistula closure with anteriorly based tongue flap.

Case Report

An 8 year-old boy presented with a large anterior palatal fistula measuring 4 x2 cm after repair of unilateral cleft lip and palate (Figure 1). Because the local tissue was inadequate for fistula closure, a tongue flap was planned. The fistula was closed under general anesthesia with oral endotracheal intubation. An incision was made around the margins of the fistula. The mucosa of palatal margins and nasal surface was then mobilized, following which the nasal lining was reconstructed by approximating the marginal flaps using 4-0 chromic catgut. An anteriorly based flap was outlined in the tongue (Figure 2). In each case the tip of the flap was tailored to fit the recipient fistula. The thickness of the flap was 3 mm, except at its base, where the dissection was taken a little deeper to ensure a good blood supply (Figure 3). After checking the viability of flap, the donor site was then closed directly and the flap was inset using 4-0 vicryl in



Figure 1: Showing large anterior palatal defect



Figure 2: design of anteriorly based tongue flap

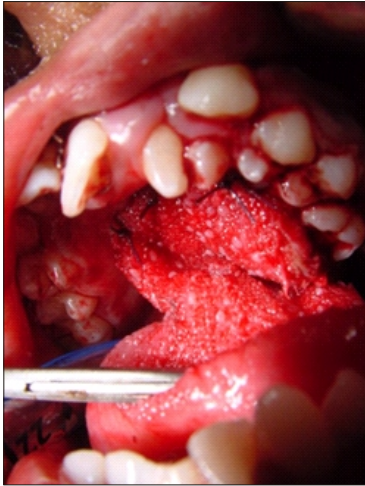


Figure 3: closure of defect by anteriorly based tongue flap

both the sites. On the sixteenth post operative day the pedicle was divided and the pedicle remnant was returned to the tongue. The healing was uneventful (Figure 4).

Discussion

The tongue is one of the most versatile organs for obtaining tissue for transfer within the oral cavity of pharynx. Its abundant blood supply permits the use of posteriorly based flaps, anteriorly based flaps, central island flaps, and dorsal flaps to transfer tissue. Tongue flaps are based on one or more branches of the ipsilateral lingual artery, sometimes including branches of the contralateral lingual vessel. This blood supply has recently been studied by Bracka. Its extensive anastomotic network with branches from the contralateral side permit ipsilateral lingual artery destruction without compromising viability.

The tongue flap is easy and reproducible. It can be recommended in mediopalatal defects after cancer palatal surgery. Its esthetical and functional results are excellent. It is an alternative to palatal obturator, which are not well tolerated in the long run. In study of Guerrero-Santos and Altamirano¹ show 70 percent and in study of Pigott et al.^[3] show 85 percent success rate. Guerrero-Santos and Altamirano suggested fixing the tip of the tongue to the upper lip to reduce the mobility of the tongue, thus reducing the traction on the attachment of the flap.^[4]



Figure 4: showing satisfactory healing postoperatively

The only factor that can be seen as a disadvantage with tongue flap is functional loss like inability in swallowing, speech due to immobile tongue till depedcling.

Conclusion

A tongue flap is an ideal flap to close a palatal defect as it has various advantages like rich vascular supply, easier technique, use of adjacent tissue, bulkiness of the subjascent muscle and less donor site morbidity.

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