



Surgical and Restorative Considerations of Cleft Palate Patients



Hyongsup Kimm, Manju Natarajan, Angela Kalaw, Zahra Bagheri, Zev Kaufman, Sang-Choon Cho
Ashman Department of Periodontology and Implant Dentistry, New York University, College of Dentistry

ABSTRACT

Cleft lip and palate (CLP) are one of the most common orofacial anomalies. The overall incidence of CLP is 1 in 1000 live births which is the third most common congenital disability in the United States. Anterior teeth replacement with implant treatment in the cleft lip and palate (CLP) patient is challenging due to the hard and soft tissue defects in the areas next to the cleft. The defects come from multiple surgical procedures for CLP in the early tooth development stage and orthodontic treatment affecting the tooth and bone morphology in the area. Also meeting both functional and esthetic success

for anterior teeth poses additional difficulties. Placement of implant in grafted cleft area utilizing allograft or xenograft bone graft was previously reported. Yet, there is limited literature utilizing soft tissue graft to preserve soft-tissue volume for better functional and esthetic outcome in CLP patients. In this case report, anterior teeth replacement after internal resorption was treated with free gingival graft at the time of extraction and implant placement. The implants were followed for a duration of six months after loading and showed favorable functional and esthetic result.

CASE 1: 29 YO Hispanic Male



CASE 2: 20 YO Asian Male



DISCUSSION

Type	Author	Year	Method and Discussion
Survival Rate	Wang F	2014	<ul style="list-style-type: none"> CLP implant survival rate 91.5% ±4.77% was comparable to the survival rate in non-cleft patients. CLP implant survival rate 95% Marginal bone loss -0.4±0.4 mm PES lower in CLP (12.9) than non-cleft (14.1)
	Alberga JM	2020	
Keratinized tissue	Monje A	2019	<ul style="list-style-type: none"> Presence of <2mm of keratinized mucosa (KM) around implants to be associated with better clinical parameters such as probing depth (PD), marginal bone loss (MBL), modified sulcular bleeding index (mBI), plaque index (PI) and brushing comfort (VAS). Lack of adequate KM around implants was associated with more plaque accumulation, tissue inflammation, mucosal recession (MR), and attachment loss (AL).
	Lin GH	2013	
Socket Seal	Landsberg CJ	1994	<ul style="list-style-type: none"> Debride and decorticate the extraction socket, filled with particle bone and soft tissue graft that matched the socket orifice, harvested from the palatal mucosa sutured to close the socket.

CONCLUSION

Anterior teeth replacement with implant treatment in the cleft lip and palate (CLP) patient is challenging due to the hard and soft tissue defects during CLP treatments. Anterior teeth replacement after internal resorption was treated with free gingival graft at the time of extraction

and implant placement. The outcome showed favorable functional and esthetic results. However, more research and cases are required to evaluate the predictability of the approach used in this case series.

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