



CASE REPORT

PROSTHETIC REHABILITATION OF HEMI FACIAL PARALYSIS PATIENT: A CASE REPORT

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ABSTRACT

The success of prosthetic rehabilitation has always been holistic rather than mere manual dexterity of the prosthodontist. The emphasis on restoration of facial esthetics is an integral part of any prosthetic rehabilitation. The unsupported and paralyzed facial musculatures of especially the cheeks and lips have a detrimental psychological effect on the patient's professional and social life. Prosthetic rehabilitation of such patient not only confines to replacement of missing teeth but also restoring the lost cheek support. Cheek plumpers or cheek lifting appliances have been effectively used for the purpose of improving aesthetics and psychological profile in such patients. This article focuses on simple, effective and a noninvasive technique of restoring the slumped facial musculature by incorporating cheek plumper in the dentures.

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INTRODUCTION

The success of prosthetic rehabilitation of a partially or a completely edentulous patient no longer confines to only replacement of missing teeth. The emphasis on restoration of facial esthetics is an integral part of any prosthetic rehabilitation. The unsupported and paralyzed facial musculatures of especially the cheeks and lips have a detrimental psychological effect on the patient's professional and social life.<sup>1-3</sup> Prosthetic rehabilitation of such patient not only confines to replacement of missing teeth but also restoring the lost cheek support. Cheek plumpers or cheek lifting appliances have been effectively used for the purpose of improving aesthetics and psychological profile in such patients.<sup>4-6</sup> This article focuses on simple, effective and a noninvasive technique of restoring the slumped facial musculature by incorporating cheek plumper in the dentures.

Case Report

A 58 year old male patient accompanied by his son reported to Department of Prosthodontics with chief complaint of missing teeth in the upper left back region and lower front and right back region from past 3 years due which he was not able to chew his food properly and he was referred by his physician for the replacement of the same. The extra oral findings included gross facial asymmetry with sunken cheek, drooping

upper and lower lips on the left side face. (Fig.1) Medical history of the patient revealed that he was diagnosed with Jugular glomus tumour of the left ear and had complaints of hemi facial spasms and which was converted into hemi facial paralysis post surgery 9 years ago. Due to which the patient was indifferent type with low self esteem and most of the communication was done by his son. Patient was not subjected to any adjuvant chemotherapy or radiotherapy as it was a benign tumour. Patient is also known type II diabetic, hypertensive and under medication for the same. Patient and his son were educated about the cheek plumper and patient was taken into confidence, treatment plan involved rehabilitation of the patient with acrylic cheek plumper attached to removable partial dentures.

Primary upper and lower impressions (Fig2,3) were made using irreversible hydrocolloid (DPI Algitec, Dental Products of India, Mumbai) were fabricated by obtaining the primary cast. Using autopolymerising resin (DPI Cold Cure Resin, Dental Products of India, Mumbai) custom trays were made for fabrication of cheek plumpers. Functional impressions were made using condensation silicone (Fig.4,5) (Speedex putty, Coltène/Whaledent Inc. USA). After an acceptable symmetrical and esthetical facial contouring was achieved, it was relined with light body (Fig 6,7) (Speedex putty, Light body Coltène/Whaledent Inc. USA). On the approval of esthetics and denture trial, heat cure acrylic cheek plumper attached to

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removable partial dentures (DPI Heat Cure resin, Dental Products of India, Mumbai) were fabricated by using conventional compression moulding technique.(Fig8,9) Final necessary adjustments, were made and the dentures were relined with chair side denture relining material.( Soft liner, GC Dental Product Corp, Japan) the check plumper (Fig 10,11) was delivered to patient along with post insertion and maintenance instructions.

### DISCUSSION

The rehabilitation of hemi facial paralytic patient associated with long term psychosocial effects is always a challenge.<sup>7</sup> A holistic approach and proper patient education are the key ingredients of success along with prosthodontic dexterity. Denture flanges if extended and contoured properly, it can help to achieve facial acceptable esthetics by supporting lips and cheeks.<sup>8</sup> The use of condensation putty for obtaining functionally moulded impression saves chair side time and enhances patient comfort during the procedure unlike the convention technique of using modelling wax.



Fig. 1 Pre operative Profile view



Fig. 2 Irreversible hydrocolloid impression - Upper



Fig. 3 Irreversible hydrocolloid impression - Lower



Fig. 4 Functional impression for Cheek plumper - Upper



Fig. 5 Functional impression for Cheek plumper - Lower



Fig. 6 Relined Functional impression - Upper



Fig. 7 Relined Functional impression - Lower



Fig. 8 Conventional flasking Relined Functional mpression - Upper



Fig. 9 Conventional flasking Relined Functional impression - Lower



Fig. 10: Relined Cheek plumper - Upper



Fig. 11: Relined Cheek plumper - Lower



Fig. 12: Post operative Profile view

## CONCLUSION

The changes in appearance, function and psychological wellbeing have an enormous impact on the patient's personal and social lives. This was very evident with present patient has his phonetics and facial aesthetics had improved and he regained his self esteem and confidence during the recall visits. Prosthetic rehabilitation is not only confined to replacement of missing teeth but also restoration and rehabilitation of the patient, holistically has a whole. Cheek plumpers or cheek lifting appliances can be effectively used for the purpose of improving aesthetics and psychological profile of patients with hemi facial paralysis. (Fig.12)

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