



INTERNATIONAL JOURNAL OF ADVANCE RESEARCH, IDEAS AND INNOVATIONS IN TECHNOLOGY

ISSN: 2454-132X

Impact Factor: 6.078

(Volume 7, Issue 5 - V7I5-1293)

Available online at: <https://www.ijariit.com>

Enhancing aesthetics of the patient using internal characterization and detachable magnet retained cheek plumper: A case report

Dr. Kishor M. Mahale

dr.kishorm@rediffmail.com

Government Dental College and Hospital,
Aurangabad, Maharashtra

Dr. Shankar P. Dange

dr.dange4@gmail.com

Government Dental College and Hospital,
Aurangabad, Maharashtra

Dr. Aasmita K. Kabade

asmitakabade7@gmail.com

Government Dental College and Hospital,
Aurangabad, Maharashtra

Dr. Smita A. Khalikar

smitakhalikar@yahoo.com

Government Dental College and Hospital,
Aurangabad, Maharashtra

ABSTRACT

Aesthetics has become one of the increasing demands in dental patients so in complete denture wearers. Conventional complete denture can be modified according to patient's complexion like by denture characterization and in cases of sunken cheeks by incorporating cheek plumper.

Keywords— Aesthetics, Denture Characterization, Cheek Plumpers

1. INTRODUCTION

In today's 21st century world, aesthetics play a very important role in a person's professional and social life. Dentistry has been recognized because of its wonders in field of aesthetics. Teeth along with the supporting soft tissues greatly contribute to patients aesthetics. Cheeks due to their extreme visibility are an important factor in determining facial aesthetics. The form of cheeks is determined by the support provided by internal structures like teeth, ridges or dentures. Slumped or hollow cheeks can make a person look older, having a detrimental psychological effect on the patient. We prosthodontist's while replacing missing teeth, should always aim to fabricate prosthesis which not only replaces the missing teeth but also restores the facial contours. In some cases, like patients with hollow cheeks, extra support has to be provided which can be achieved using cheek plumper or cheek lifting appliances¹.

As well as denture characterization can be done to improve aesthetics of the patient in order to achieve lifelike appearance of the denture to match complexion or specific characteristics of the patient. According to the glossary of prosthodontics terms "Denture characterization is modification of the form and color of the denture base and teeth to produce a more lifelike appearance." Denture characterization can be done by two basic methods:

1. Characterization by selection, arrangement and modification of artificial teeth.
2. Characterization by tinting the denture base².

2. CASE REPORT

A 60-year-old male patient reported to department of prosthetics of Government Dental College and Hospital, Aurangabad with a chief complaint of replacement of missing teeth. On examination patient had completely edentulous upper arch. Upper ridge was good with pigmented mucosa. One of the major findings on extra oral examination was hollow and sunken cheeks of which patient was conscious and desired a prosthesis which would make his face look fuller healthier and younger. Also patient was unsatisfied with his previous denture because of artificial appearance of the denture. Thus patient wanted denture which will look like natural teeth and go with the complexion of his skin while speaking. Treatment plan was formulated, keeping patient's

demand in mind of aesthetics without compromising on its function. It was decided to give patient upper complete denture with internal characterization and with detachable cheek plumpers for the maxillary denture.



Fig.1 preoperative picture of patient with sunken ckeeks

The primary impression was made using medium fusing impression compound (Y Dents, MDM Corporation, Delhi). Custom trays were made using cold cure acrylic resin (DPI RR Cold Cure). Border molding was performed using low fusing type -1 impression compound (DPI, Mumbai) and wash impressions were made in light body condensation silicone impression material (Zetaplus, Zhermack). Jaw relations were recorded . For the try in appointment waxed denture were first tried for occlusion and esthetics. After that cheek plumper made in wax and were attached to the maxillary denture and were evaluated to give patient a more fuller appearance. The waxed plumper was separated from the waxed denture.



Fig. 2 and 3: Showing waxed up trial denture

Acrylization of separated cheek plumper's were done in conventional manner. For processing of maxillary denture flasking and dewaxing procedure was done in usual manner. At the time of packing, Heat cure denture acrylic resin (Meliodent Heat cure denture acrylic) was mixed with monomer and allowed to polymerize. Along with it heat cure pigments for characterization of denture (MP SAI Enterprise) matching with the patient's complexion were added with monomer and it was then mixed with the heat cure denture acrylic resin sufficient for labial and buccal cameo surface of denture. The acrylic mix containing pigments was placed along the labial and buccal gingival region in the mold space and the normal acrylic dough was then packed over it. Flasks were closed under clamp and the denture was cured (short curing cycle). Following polymerization, dentures were retrieved.



Fig.4,5,6,7: Showing processing for characterized denture.

Sufficient space was created in buccal flange of denture and in cheek plumpers for magnetic attachment. Diameter of the magnetic attachment should be smaller than to the width of plumper. Magnets should be attached to denture and cheek plumper by using clear acrylic. Utmost care and precision should be maintained to obtain close approximation of the plumper with the denture and also its removal from the denture since close approximation will not allow food to accumulate between denture and plumper thus improving denture hygiene.

Patient was instructed on the use of plumpers and dentures were delivered after evaluating them for fit and aesthetics. Recall appointment were scheduled after 1 day, 1 month and every 6 months.



Fig. 8: Showing final characterized denture with cheek plumper



Fig. 9: post-operative view of the patient

3. DISCUSSION

According to Frush and Fisher dentogenic concept includes effects of three main factors such as age, sex and personality in sequence of aesthetic planning. Frush and Fisher stated that “The environment of the teeth is as important as the tooth itself.” There are variety of methods used for characterization of denture like heat curing or auto- polymerizing resins are painted on the denture base. The technique described in this case report, includes the shade matching of gingival characterization directly in person but shade matching via photographs or soft tissue shade guide, light cure gum shading or photocured denture coating can also done. The technique described in this case report includes incorporation of pigments within the denture instead of externally painting, so here the thickness and outer layer of denture base does not affect the extent of tint and same degree of gingival characterization can be achieved as planned before processing. Another important advantage is that, because the pigments are incorporated within the denture material, it is not removed by the subsequent finishing polishing procedure. Also the surface porosities are minimized^{1,2}.

Along with denture characterization to improve esthetics of the patient cheek plumpers were used for sunken cheeks. In conventional technique non-detachable cheek plumpers were used which has some disadvantage like increased weight, increased width which causes difficulty while insertion of denture. Detachable attachments also allow ease in placement of the prosthesis. It enabled the patient to remove the plumpers and use the denture if required. Also detachable plumpers with magnets enabled proper cleansing of plumper- denture region reducing the food and plaque accumulation in that area. Since the detachable units (magnets) are available readily in the market, they are cost effective and they provide an easy and reliable means. They are also available in variety of sizes making its use and availability easier. Metal used is biocompatible, rarely causing allergies. Normal brushing technique is used to keep the attachment clean without causing its erosion or loosening of its fit. No special means are required to keep the attachments clean. As well the replacement of attachments is also very easy in case of any failure due to unknown reasons^{1,2}.

4. CONCLUSION

In this case report, we have taken effort to improve patient’s facial appearance by providing better support to his hollow cheeks by using detachable cheek plumpers incorporating magnets which is a simple, effective, easy to clean and non-invasive treatment alternative and by internal characterization of the denture to match patients complexion. Internal characterization of the denture and detachable attachments retained cheek plumper prosthesis successfully restored the contour of cheek thus improving aesthetics and psychological wellbeing of the patient in a very cost effective and simple way without further deteriorating available denture structures. A careful and skillful tinting procedure and appropriate positioning of cheek plumpers can give satisfactory results and also the patient was satisfied with the denture.

5. REFERENCES

- [1] Dr.Smita A. Khalikar, D.r Ashwini B Bhole, Dr. Shankar P Dange & Dr. Kishor M Mahale(2020) A Detachable Press Button Retained Cheek Plumper Prosthesis to Enhance Aesthetics in Geriatrics: Case Report, *J of Prosthet Dent*, 15(1);121-126.
- [2] Dr. Sumaiyya Shoukat Ali Sayed et al (2021) Internal Characterization of Complete Denture By Using Heat Cure Acrylic Pigments: A Case Report, *J Prosthet Dent* 16(1);1-6
- [3] Nandita N. Keni, Meena A. Aras, Vidya Chitre (2012) Customised Attachments Retained Cheek Plumper Prosthesis: A Case Report *J Indian Prosthodont Soc* 12(3):198–200
- [4] Hitoshi M, Chiaki K, Takashi O, Hisashi T (2004) Lip plumper prosthesis for a patient with a marginal mandibulectomy: a clinical report. *J Prosthet Dent* 92(1):23–26
- [5] Aggarwal P et al.(2016) Improving Complete Denture Aesthetics Using Cheek Plumper Appliance *International J of Oral Health and Medical Research*.3(2)

- [6] Punia V, Mishra R, Khandelwal M, Verma N, Handa M.(2013) Magnet retained detachable cheek plumper: innovation personified-a case report. *Int J Prosthet Dent*;4:16- 20.
- [7] Virdiya NM, Palaskar JN, Wankhede J, Joshi S. (2017) Detachable cheek plumpers with different attachments for improving esthetics in a conventional complete denture: A clinical report. *J Pros Dent* 117:592-6
- [8] Seema Pattanaik , Bikash Pattanaik (2011) Internal Characterization of Denture Base by Using Acrylic Stains and Tissue Paper *J Indian Prosthodont Soc* 11(3):202–204
- [9] Shetty B, Mody PV, Kumar M, Kumar G, Bhatt KK(2011) Personalized denture. Let's make a difference. A clinical case report on characterized denture. *J Orofacial Res*;1:41-4
- [10] Dr. Ambuj Chandna, Dr. Abu Nedal, Dr. Tanvi Kalra, Dr. Yashpal Rana, Dr. Ajay Yadav, Dr. Akash Jindal(2016) Characterization of Complete Denture: A Review *IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)* Volume 15, Issue 9 Ver. VIII.