

## DETACHABLE CHEEK PLUMPER FOR UPLIFTMENT OF DENTURE ESTHETICS: A CASE REPORT

### Prosthodontics

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### ABSTRACT

In rehabilitating complete denture patients, aesthetics have an exemplified part in natural smile. The physical environment of edentulous mouth is in constant and permanent change. Emphasis on facial aesthetics has become an integral part of dental treatment. Prosthetic rehabilitation of a completely edentulous patient no longer confines to only replacement of missing teeth. Patients are increasingly demanding improvement in aesthetics at the end of treatment. This article reports an innovative, simple, effective and non-invasive treatment alternative to improve facial appearance using detachable cheek-plumper which are attached to the conventional complete denture using magnets.

### KEYWORDS

Hollow cheeks, cheek plumper, esthetics, magnets

#### 1. Introduction

Esthetics has become a major factor of concern in today's social world. Hollow cheeks is a common finding in many edentulous patients due to resorption of alveolar ridge, loss of fat and muscle tone.<sup>1</sup>

A prosthodontist's responsibility is not only to replace missing teeth, but also restore the facial appearance. Patients having hollow or sunken cheeks require additional addition of cheek plumper or cheek lifting appliance to the denture.

A conventional cheek plumper is a single unit prosthesis with extensions on both side and are continuous with the rest of the denture.<sup>2,3</sup>

A cheek plumper can be of two types: detachable and undetachable. It has been seen that undetachable cheek plumper have some limitations like:

- Retention is hampered due to excessive weight.
- Stability can be affected.
- Insertion becomes difficult due to its bulkiness.
- Cannot be used in patients with limited mouth opening.<sup>4,5</sup>

To overcome the aforementioned flaws, a detachable cheek plumper is used which can be easily and conveniently removed by the patient. This clinical report illustrates a technique of plumping the cheeks using detachable cheek-plumper which are attached to the conventional complete denture, using magnets.

#### 2. Case Report

A 65 years old male patient reported to MIDSR Dental College and Hospital, Latur with chief complain of difficulty in chewing due to missing teeth and wanted replacement of them. Though his main concern was of replacement of teeth, but the patient also pointed out to his sunken cheeks (Fig. 1) and desired to enhance his facial esthetics. History revealed that the patient was edentulous since 3-6 months. The general health status of the patient was good with a history of hypertension.

On clinical examination, one of the major finding was poor facial appearance due to sunken cheeks. On intraoral examination, the ridge was high well rounded in maxillary arch and mandibular arch with sufficient inter arch space.

Maxillary and mandibular impressions were made using impression compound (Y Dents, MDM Corporation, Delhi). Custom trays were

made using autopolymerizing acrylic resin. Border molding was done using low fusing impression compound (DPI Pinnacle, The Bombay Burmah Trading Corporation Limited, Mumbai, India) and wash impressions were made with light body condensation silicone impression material. Facebow transfer was done and Jaw relations were recorded.

For the try in appointment waxed denture were first tried for occlusion and aesthetics. After that cheek plumper were made in wax (Fig. 2) and were attached to the maxillary denture (Fig. 3) and were evaluated to give patient a fuller appearance. They were superficially attached to the buccal surfaces on the right and left side and tried in the mouth to determine the amount of desired cheek support appropriate for comfort, function and esthetic. A dramatic change in the appearance with and without wax-up cheek plumper (Fig. 4) was observed and it was immediately accepted by the patient. The waxed plumper was separated from the waxed denture.

After that the processing of final prosthesis and cheek plumper were completed separately. Then a pair of commercially available magnets 5 mm in diameter and 2 mm in thickness (Fig. 5) were employed to retain the cheek plumper with final prosthesis. Provision for placement of magnets in the flange of the final prosthesis (Fig. 6) and in the cheek plumper (Fig. 7) was made and positioned with the help of autopolymerizing resin. The attachment of plumper to the prosthesis was first checked outside the patient's mouth. The prosthesis along with the plumper was then checked in the patient's mouth for comfort, function and aesthetics (Fig. 8).

The patient was given routine post-insertion instructions and was educated about the positioning of the plumper to the prosthesis and was motivated to make efforts to learn to adapt to the new dentures and the magnet retained cheek plumper. The patient was satisfied with aesthetics of the denture. At the recall appointment, the denture was evaluated for any soreness.

#### 3. Discussion

In today's world, complete denture is given not merely for replacement of teeth, but also to enhance the overall facial appearance. Loss of teeth and alveolar bone leads to various sequelae, like deepening of nasolabial fold, drooping of corner of mouth, loss of vermilion border and exaggerated wrinkling, which gives a poor facial appearance.<sup>6,7</sup>

Hollow cheeks basically result when after loss of teeth and alveolar support, the cheek move medially to meet laterally expanding tongue, which result in change in the cheek contour. Loss of subcutaneous fat,

buccal pad of fat and elasticity of connective tissue add on to the already decreased support to the cheeks.<sup>8</sup>

Magnets find numerous application in dentistry due to their small size and strong attractive forces.<sup>9</sup>

In this case, stainless steel was used instead of clinical magnets due to affordability of the patient. The major flaws of undetachable cheek plumper is overcome by use of detachable cheek plumper, providing not only patient comfort but also improved esthetics and also reduced muscle fatigue.<sup>10</sup>

**4. Figure legends**



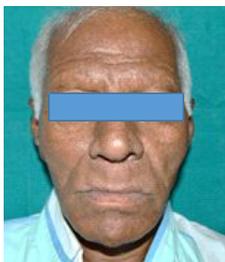
**Fig. 1: Pretreatment extraoral view**



**Fig. 2: Wax cheek plumper**



**Fig. 3: Trial denture along with wax cheek plumper**



**Fig. 4: Posttreatment extraoral view**



**Fig. 5: Magnets**



**Fig. 6: Magnets attached to denture**



**Fig. 7: Magnets attached to cheek plumper**



**Fig. 8: Denture insertion**

**5. References**

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