

## SUNKEN CHEEKS? - THE ONE STEP SOLUTION: A CLINICAL REPORT

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### ABSTRACT:

In this conquest for fabrication of functionally acceptable complete dentures, we tend to overlook the slumped, hollow cheeks of some of the patients who are just old by age but young at the heart. In this modern era where esthetics has become a priority, the conventional methods of only restoring the edentulous state are now been enhanced by improving the facial appearance of the individual as well. The unaesthetic sunken cheeks with compromised muscle tonus add to the patient's age and also create a negative psychological impact on their state of mind. This clinical case report describes an easy and innovative technique to lift up the hollow cheeks with a customized removable cheek plumper attached to the buccal surfaces of the conventional maxillary complete denture bilaterally.

**Key Words:** Cheek, Esthetic, Facial, Hollow, Slumped, Plumper



### INTRODUCTION:

As Defined by the glossary of prosthodontic terms , a complete denture is a removable dental prosthesis that replaces the entire dentition and associated structures of the maxillae or mandible; the natural dentition and the alveolar bone, tongue define the support system for the lips and cheeks. Aging leads to the decrease in the tonicity of the facial musculature , and thereby giving the lips and cheeks a sagged ,wrinkled appearance which not only create a negative psychological impact but also poses a social threat and is

accompanied by low self esteem and low confidence of the patient .

The primary role of the complete dentures is to restore the masticatory function followed by speech, deglutition and esthetics. However if along with denture esthetics the facial contour and form is also harmonized, it enhances the overall appearance for the patient. To meet the esthetic demands along with restoration of the lost natural dentition, the case report describes the use of the cheek plumper. This cheek lifting prosthesis is attached on the buccal surfaces of the conventional maxillary complete denture. The cheek plumper is

retained bilaterally by the use of a modified circumferential clasp.<sup>[1-8]</sup>

### CASE DETAIL:

A 50-year-old male patient reported to the Department of Prosthodontics and Crown & Bridge, CSMSS Dental College & Hospital, Aurangabad with the chief complaint of missing teeth in both upper and lower jaws. The mobility of teeth leads to the extraction over a period of one year. The patient had been completely edentulous since the last 6 months. The patient requested for restoration of function and esthetics. On extra oral examination patient was found to be with poor esthetics, unsupported oral musculature and slumped cheeks. Intra oral findings revealed moderately resorbed maxillary and mandibular ridges. Based on patient's needs, a treatment plan was formulated. Taking the resorption of the ridges into consideration instead of the use of conventional cheek plumper, a modified design to plump the cheeks, was proposed. It was decided to give the patient complete dentures with detachable cheek plumper (with buccal extensions on both the sides). The new design was to support the cheeks as well as to not add to the weight of the prosthesis and not hinder the retention, stability and support as well as the insertion and removal of the prosthesis. Maxillary and mandibular impressions were made using impression compound. Custom trays were made using autopolymerising acrylic resin. Border molding was done using low fusing impression compound and wash

impressions were made with zinc oxide eugenic paste. Jaw relations were recorded. For the try in appointment waxed denture was first tried for occlusion and esthetics. Wax template for cheek plumper was attached to the maxillary denture in the region buccal to maxillary 1<sup>st</sup> and 2<sup>nd</sup> molar. (Fig 1)

At the try-in stage, cheek plumper was made in wax as separate portions on the maxillary buccal surface of the complete trial denture. They were superficially attached to the maxillary 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 esthetics. Once this was determined, the wax up of cheek plumper was separated from the complete denture. For retention of the cheek plumper, a clasp was made in such a way that its active arm engaged the palatal embrasures of maxillary second molars on each side. The retentive arm of the clasp ran interdentally from the occlusal embrasure between maxillary 1<sup>st</sup> and 2<sup>nd</sup> molar and got embedded in the cheek plumper (fig 2). The ends of the retentive arm were extended in long U shape for the better grip of the plumper. Thin indentations/ grooves were made on the trial denture, to allow the seating of the plumper on the denture which were also replicated in the final denture base (fig 3). Post completion of the standard laboratory fabrication procedures, the complete dentures along with cheek plumper, was delivered to patient with all the necessary instructions.

**DISCUSSION:**

In the realm of denture esthetics, it would seem that only one aim would be necessary, and that would be to reproduce the anatomic characteristics present, before the patient's become completely edentulous.<sup>[1]</sup>

The oral cavity should not be considered solely from the stand point of optimum biochemical function <sup>[1]</sup>. All phases in the construction of complete dentures in prosthodontics should be questioned and weighed in order to afford the best possible long-term denture service to the patient <sup>[2]</sup>.

Treatment challenges for the patient have been traditionally described as a combination of function, comfort and esthetics<sup>[3]</sup>. I Kenneth proposed a technique for the fabrication of removable prosthesis restores the proper cheek contour. The prosthesis described by him was a modified

removable partial denture with a retentive surface to hold an acrylic resin bolus to re-contour the cheek from within <sup>[4]</sup>. The sagged wrinkled and “ hollow “appearance of the cheeks , compromises on the beauty with which conventional maxillary denture was made , hence the cheek lifting prosthesis added to improving the entire facial form and contour as described above in the case report.

Lazar described a case report for the construction of an internal oral splint which was used to support the right corner of the mouth of a patient with Bell's palsy (which affected the right side of the face). In this case the support was fabricated in the form of a partial denture.<sup>[5]</sup>

The advantages and disadvantages of the customized cheek plumper described in the case report have been listed in the table below:

Table 1: Advantages and Disadvantages of the Plumper

| Advantages  | Disadvantages   |
|---|---|
| No additional bulk and weight to the complete denture prosthesis.       | Distortion of the wire framework may hamper the retention of the cheek plumper  |
| Easy of fabrication due to the minimally technique sensitive procedure. | The retention is less when compared to the cheek plumper retained using magnets or customized buttons.                                    |
| Economical  | Clogging of the grooves made for the retention of the clasp on the denture over a period of time  |
| Detachable cheek plumper's for patient's convenience.                   | Plumper's to attached prior to the insertion of the maxillary complete denture , leading to overstretching of the cheeks during insertion |

## CONCLUSION:

The key to success in a complete denture fabrication is through meeting the basic requirements of the patient, which when the edentulous can take back home his lost smile. The complete dentures are a reflection of age defying restorations which let the individual walk into the society with high self-esteem and increased confidence.

The use of customized, detachable, light weighted cheek plumper enhances the esthetics without any hindrance to the function of the conventional complete denture. Hence through the case report, the author has presented an easy way of retention for the plumper, to increase the fullness for the slumped, depressed cheeks on both the sides.

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