

Rehabilitation of sunken cheeks – A magnetic way.

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ABSTRACT

Introduction- The face of an individual is his representation to the world. Any disfigurement of the facial structures directly affects the mental well-being of the concerned person which in turn affects the psychological wellbeing too. Facial disfigurement is the least desired physical limitation. The gradual loss of alveolar bone and lack of tonicity of the muscle leads to the cheeks being pulled inside which gives a hollow appearance to the patient's face.

Case study- As the word suggests, plumpers help in plumping the cheeks as a result enhancing the youthful appearance of the patient. In this case report we have discussed about a magnet retained cheek plumpers in upper complete denture, in a completely edentulous male patient.

Conclusion- To restore the facial esthetics, cheek plumpers can be planned in completely edentulous patients, who cannot otherwise spend for costly surgical and cosmetic procedures.

Keywords: Cheek plumpers, facial esthetics, magnet retained cheek plumpers, non-surgical cheek plumpers.

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Introduction

Facial esthetics has been a topic of discussion from the Egyptian era where the kings and the queens have been portrayed with idealistic facial features and the subordinates with comparatively less sharp features and people have been continually stigmatized according to their appearance.^[1] In the recent years the acceptance gradient, depending on facial esthetics kept on changing, still people put extreme significance to one's own face. The cheek has a profound social significance as it is supported by the teeth, alveolar bone and the muscles. With aging there is loss of teeth and alveolar bone and loss of muscle tonicity that leads to hollowing out of cheeks. Hollow cheeks affect patients in general, irrespective of their age.^[2]

The role of a Prosthodontist is not only to restore the oral function but also to rehabilitate

the facial esthetics of the patient.^[3] To overcome the cheek hollowness, there are many options like surgical upliftment, nonsurgical botox fillers, conventional complete dentures, complete dentures with cheek plumpers. The first two options are costly and the conventional complete dentures might fail to provide proper support to the cheeks in many cases. Hence the most feasible option is the incorporation of cheek plumpers within the conventional complete dentures. A conventional cheek plumper is a lifting device that has its extension in the molar premolar region and helps in supporting the cheek.

Cheek plumpers are of two types:

1. Undetachable cheek plumper
2. Detachable cheek plumper^[2]

The undetachable cheek plumper comes with added disadvantages of increased weight and

muscle fatigue, thus affecting the retention of the denture and its limited application in patients with microstomia.^[4] Hence, the most accepted option is the detachable cheek plumper. In the detachable cheek plumper design, the plumpers can be removed and attached easily, thus helping in efficient cleaning and effective reduction of discomfort.^[5] In this case report we have discussed a case of magnet retained cheek plumper attached to conventional complete denture

Case report

A 54-year-old, completely edentulous male patient reported to the Department of Prosthodontics and Crown and Bridge, GNIDSR, Kolkata with a chief complain of difficulty in chewing food and lack of cheek fullness. On the day of examination, the patient appeared to be apprehensive about his appearance and presented with a lack of confidence. On intra oral examination, it was evident that the patient had lack of support to his buccal mucosa because of prolonged edentulism of more than 5 years (Fig. 1).

The residual alveolar ridge was class 3 in maxilla and class 6 in mandible (according to Atwood's classification of residual alveolar ridge) (Fig. 2 and 3).^[6] Two treatment plan was devised for the patient – conventional complete denture with detachable or undetachable cheek plumpers, according to the patient's best need after thorough evaluation of the patient's history, medical records, radiographs and overall medical conditions. The patient consented to a conventional complete denture for both the arches along with a magnet retained cheek plumper in the canine premolar region of the upper denture. The primary impressions were made using high fusing impression compound (Y-Dent, India) and final impressions with zinc-oxide impression paste (Impression paste, DPI, India) after border moulding with

low fusing compound material (Pinnacle tracing sticks, DPI). Following the preliminary jaw relation, teeth setting and try-in was performed. It was observed that the trial dentures couldn't provide adequate support to the sunken cheeks. Hence on the same day another pair of impressions were made using low fusing compound material (Pinnacle tracing sticks, DPI) in the area of canine and premolar of upper denture base.

The trial dentures were then flaked in the conventional manner, with the green stick cheek plumpers separately. After dewaxing, both the dentures and the plumpers were packed using heat cure acrylic resin (DPI Rr heat cure, DPI) and were processed in the conventional manner. After deflasking, the acrylic plumpers were hollowed out from inside using a acrylic trimming bur, windows of 10 mm by 5 mm diameter were scooped out of them. Two intraoral neodymium-iron-boron magnets (Nd-Fe-B) of diameter 8mm by 3mm were then incorporated within the space created and fixed using autopolymerising acrylic resin (DPI) (Fig. 4). Patient was instructed on removal and attachment of cheek plumpers. Care was taken to ensure the cheek plumpers don't hinder the normal mandibular movement and opening and closing of the jaws (Fig. 5, 6 and 7). The patient was reviewed after 24 hours, 7 days and 1 month post-operatively.

Discussion

The rehabilitation of slumped cheeks is a challenge to a Prosthodontist particularly when the patient doesn't consent to surgery and use of cosmetic fillers. Incorporation of both detachable and undetachable cheek plumpers have been widely used in clinical practice, but the undetachable cheek plumpers come with their own disadvantages of being heavy thus affecting the denture retention and

stability along with muscle fatigue due to constant usage.^[7]

In many cases, detachable cheek plumpers attached using soft liners are also used. However, the soft liners lose their resiliency over a period of time and also gets discoloured with use.^[8]

In the present case cheek plumpers used were detachable using magnets, that provided the patient with a leeway of removal whenever not in need. Also, the snug fit of the magnets prevented any discomfort due to sudden dislodgement during functional movements. However, the magnets also have a tendency to corrode over time and has to be replaced after every 4-6 months.

Conclusion

Important aspect of a prosthodontic rehabilitation, in catering to the patient's treatment needs are proper diagnosis and treatment plan.^[9] Loss of support to the cheeks in elderly patients with prolonged edentulism is a major concern. It affects the esthetics which indirectly impacts the psychological health of the patient. Rehabilitating these patients with magnet retained cheek plumpers, incorporated within the conventional complete dentures can be a cost-effective solution in place of surgical and cosmetic treatments.

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FIGURES



Figure 1

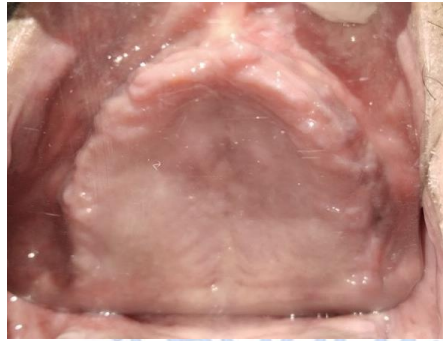


Figure 2



Figure 3



Figure 4



Figure 5



Figure 6



Figure 7