

Restoring Not Just Teeth but Facial Esthetics: Cheek Plumper: A Case Report

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ABSTRACT

Complete Denture is an artificial appliance which restores natural functions and esthetics caused by loss of natural teeth. This clinical report describes a technique to improve support for sunken cheeks using magnet retained detachable acrylic cheek plumpers. Magnet retained cheek plumper help to enhance facial appearance by supporting the slumped cheeks. However, further follow-up may be necessary to ascertain the long-term usefulness of the magnet-retained prosthesis, because of corrosion and further loss of magnetism.

Key Words: Cheek Plumper; Esthetics; Magnets

INTRODUCTION

Complete Denture is an artificial appliance which restores all the lost natural teeth in an edentulous mouth and restores the mastication, phonetics and esthetics. The first objective of complete denture prosthesis is mastication. Second objective is restoration of the esthetics, concerned with the artistic phase of the prosthesis. It relates to the ability of the prosthesis to construct or create the natural looking substitutes for the lost natural alveolar processes and teeth and to reproduce by artistic sense and skillful technique to restore the lost facial contour as well[1].

Denture flanges if properly extended and contoured can help to achieve facial esthetics by supporting lips and cheeks. However, in cases of patients with hollow cheeks, extra support has to be provided. Cheeks due their extreme visibility are an important factor in determining facial esthetics. Slumped or hollow cheeks can add years to a person's age and can have a detrimental psychological effect on the patient. In such cases, cheek plumper can be given. Cheek plumper, also known as cheek lifting appliance, is a prosthesis for supporting and lifting the cheek to provide required support and esthetic that will increase the self esteem of the patient by providing a youthful appearance. It can be used in patients who have excessive slumping of cheeks due to tooth loss. It is especially useful in young patients who have lost all their teeth and part of the maxillary bone as a result of traumatic injury[2,3,4].

A cheek plumper can be of two types: detachable or undetachable. The undetachable or conventional cheek plumper is a single unit prosthesis with extensions on either side in the region of the polished buccal surfaces of the denture and are continuous with the rest of the denture. Detachable cheek plumper on the other hand is the prosthesis in which plumper part can be detached from the complete denture. This can be achieved by magnets or customized attachments[11]. This paper reports an innovative technique of plumping the cheeks using cheek-plumper which are attached to the conventional complete denture, using magnets.

CASE REPORT

A 65 year old male patient(fig 1) reported to the department of prosthodontics, PGIDS , Rohtak with the chief complaint of missing teeth . On examination, patient had completely edentulous upper and lower arches. He was edentulous for past 4 years. Extraoral examination showed slumped cheeks. The patient was conscious about the slumped cheeks and desired a prosthesis which will make his face look fuller. Keeping patient's demand in mind, the treatment plan was formulated. It

was decided to give the patient maxillary and mandibular complete dentures with magnet retained detachable cheek plumper for the maxillary denture.



Fig. 1 (extraoral photograph of the patient , hollowing of cheeks is quite evident)

Fabrication Technique:

1) Preliminary Impressions: The preliminary impression of the maxillary and mandibular arch was made in the conventional manner using impression compound (fig 2)



Fig. 2 (primary impression)

2) Secondary Impressions: The preliminary casts were obtained, over which special trays were fabricated using auto polymerizing resin, keeping them 2mm short of the sulcus. The border moulding was carried out conventionally using low fusing impression compound and the final impression was recorded with zinc-oxide eugenol impression paste for mandibular arch and using light body elastomeric material for maxillary arch (fig 3).



Fig. 3(Secondary Impression)

3) Jaw Relations and teeth arrangement: Master cast was obtained on which denture bases were made. Occlusal rims were fabricated on the denture bases and maxillomandibular relations were recorded . Articulation was done(fig 4) followed by teeth arrangement(fig 5).

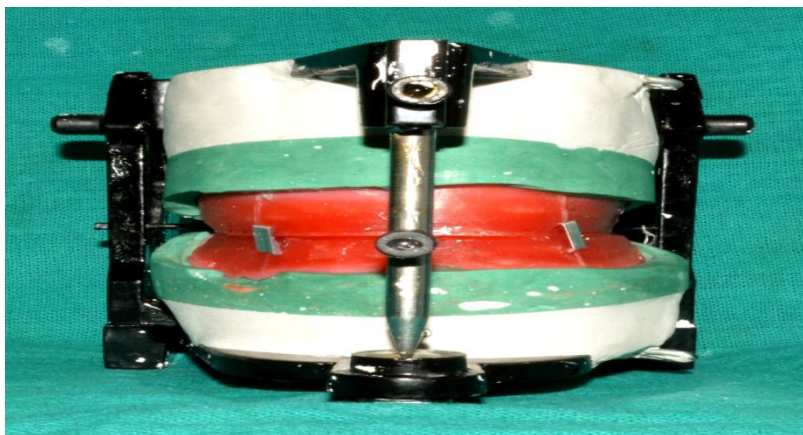


Fig. 4 (Recorded jaw relation)



Fig. 5 (Teeth Arrangement)

4) Try In: For the try in appointment, waxed denture were first tried for occlusion and esthetics. Wax templates for cheek plumper were attached to the maxillary denture in the distobuccal region and were adjusted accordingly to give patient a fuller appearance(fig 6) . A wash impression with light body impression material was also taken by placing the wax templates against the distobuccal region for better adaptability(fig 7).



Fig. 6(wax try-in, along with trial for cheek plumpers)



Fig. 7 (Impression with light body was taken for better adaptability)

5) Acrylization: After taking the patient's consent, the waxed plumper was separated from trial denture and acrylization of dentures(fig 9, 10) and cheek plumper(fig 8) were done in the conventional way. Dentures were finished and polished (fig 11a,b) and were tried in the patient 's mouth(fig 12). After inserting the dentures along with cheek plumper the patient's esthetics was improved remarkably and he was quite satisfied with his new appearance (fig 13).



Fig. 8 (Investment of the cheek plumpers done seperately)



Fig. 9 (investment f or the denture done seperately)



Fig. 10 (De-waxing was done)



Fig. 11 (Magnet retained cheek plumpers)



Fig. 11b (Finished and polished denture along with cheek plumpers attached)



Fig. 12 (Denture insertion along with cheek plumpers)

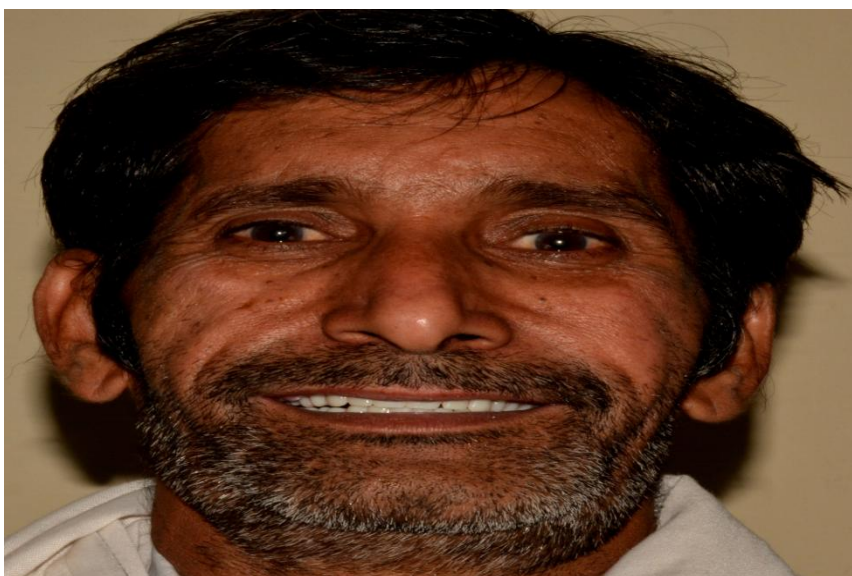


Fig. 13 (Extraoral photograph of the patient after insertion, cheeks are well supported and patient is quite happy)

DISCUSSION

In order to mimic the fullness of the cheeks, a cheek plumper is often used and known as the cheek lifting appliance. It is variously cited in literature for providing support to the cheek wherever and whenever deficient. This prosthesis is basically for supporting and plumping the cheek to provide a youthful appearance. Its use in Maxillofacial Prosthodontics is well documented. However it can also be used in patients who have an unusually excessive slumping of the cheeks as a result of teeth loss.

A Conventional Cheek Plumper would be a part of the complete maxillary denture prosthesis forming single unit prosthesis with extensions on either side in the region of the polished buccal surfaces of the denture and are continuous with the rest of the denture[8,10].

Disadvantages of conventional cheek plumper: The conventional cheek plumper if not made hollow could add excessive weight to the upper denture thus bringing it down by force of gravity. The buccal extension could interfere with masseter muscle and the coronoid process of the mandible and hence destabilize the upper denture especially during eating. The extensions could result in muscle fatigue and the only way to relieve it would be for the patient to remove the upper denture which might not always be desirable. The excessive medio-lateral width of the denture in the region of the cheek plumper could result in difficulty in inserting the denture and this would be more of a problem for patients with smaller mouth opening[5-8].

Advantages of magnet retained cheek plumper:

The magnets have a small size and hence can be placed within the denture and the cheek plumper without being obtrusive and produce strong attractive forces between the hollow plumper portion and the steel encased magnet within the buccal tissue surface of the denture. It can be introduced in the mouth after the insertion of the denture as two separate portions each of which are marked for convenience. It can be removed from the mouth during eating and when excessive muscle fatigue is there. It also allows for ease of placement and cleaning and automatic reseating.

Disadvantages of magnet retained cheek plumper are:

Poor corrosion resistance, alleged harmful effects of magnetic field on the health of the oral tissues and loss of magnetic property over a period of time and hence requiring frequent replacement [8,9].

CONCLUSION

Giving the patient magnet retained cheek plumper the authors made an attempt to restore cheek fullness within that comfort and function would permit and boost the self-esteem of the patient by improving his appearance.

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