Journal of Advanced Medical and Dental Sciences Research

@Society of Scientific Research and Studies

Journal home page: www.jamdsr.com doi: 10.21276/jamdsr UGC approved journal no. 63854

(e) ISSN Online: 2321-9599; (p) ISSN Print: 2348-6805 SJIF (Impact factor) 2017= 6.261; Index Copernicus value 2016 = 76.77

Case Report

Cheek Plumper: Magnet Retained Approach to Enhance Esthetics for Sunken Cheeks

Vidya Hittalamani[1], Premaraj Jadhav[2], Milind Limaye[3], Pradeep Taide[4]

[1]Post graduate student, [2]Head Of the Department, [3]Professor, [4]Senior Lecturer
Department of Prosthodontics and Crown & Bridge, Yogita Dental College Hospital, Khed, Maharashtra, India

ABSTRACT
Changes in the skin are an inevitable part of aging. It's quite common for the cheeks to deflate as the cheek pads lose fat retention and the skin loses elasticity. As the skin begins to sag, the area around the mouth can appear worn and aged. These negative side effects of age are only exacerbated by poor diet and a lack of exercise. Certain health conditions can also make the cheeks appear hollow. As esthetics is one of the objectives in complete denture prosthesis. This clinical report describes technique to improve support for sunken cheeks using magnet retained detachable acrylic cheek plumpers. The new generation of magnets with improved technology provides sufficient denture retention for clinical application. 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, magnet-retained prosthesis, sunken cheeks.

Received: 12 May 2018 Revised: 26 May 2018 Accepted: 27 May 2018

Corresponding Author: Dr. Vidya Hittalamani, Post graduate student, Department of Prosthodontics and Crown & Bridge, Yogita Dental College Hospital, Khed, Maharashtra, India

This article may be cited as: Hittalamani V, Jadhav P, Limaye L, Taide P. Cheek Plumper: Magnet Retained Approach to Enhance Esthetics for Sunken Cheeks. J Adv Med Dent Scie Res 2018;6(7):46-50.

CASE REPORT

A 65 years old male completely edentulous patient reported to the Department of Prosthodontics , Yogita Dental College and Hospital, Khed, Maharashtra, India, with the chief complaint of replacement of existing ill fitting dentures. History revealed that he was edentulous for four and half years and was wearing complete denture prosthesis since then. Patient had lost his posterior teeth over a period of seven years as they were mobile and had got anterior teeth extraction after two years. His prior concern for the denture was functional purpose but in addition he also insisted on improving his facial appearance. Treatment plan was formulated, keeping patients desire in mind that prosthesis which would make his face look fuller and healthier.

On extra oral examination, one of the major finding was poor esthetics, unsupported oral musculature, wrinkles on skin and flaccidity of facial muscles, resulting in sunken cheeks and slumped cheeks. On intra oral examination, the ridge was high well rounded, mandibular ridge is seen with sufficient inter arch space with average mouth opening.

The old existing dentures were compromised in retention and stability due to improper extensions of borders. The use of conventional cheek plumper as the weight of the prosthesis would result in loss of retention and stability of the maxillary denture with buccal extension to support the cheeks. The new complete denture prosthesis was planned with Magnet Retained Cheek Plumpers to provide adequate support on both sides of the cheeks to lift the sunken cheeks as well as not add to the weight of the prosthesis and not hinder the insertion and removal of the prosthesis which also enhances facial esthetics and appearance.

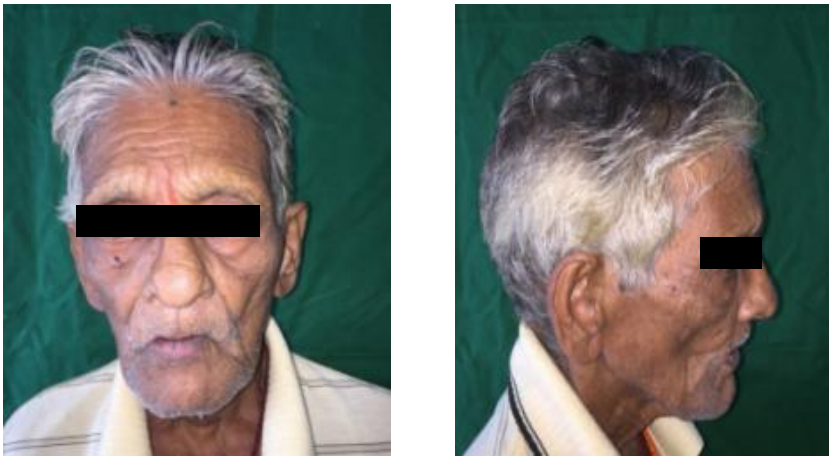
CLINICAL PROCEDURE:

The primary impression of maxillary and mandibular arch was made with impression compound (DPI PINNACLE, The Bombay Burmah Trading Corporation, Mumbai).

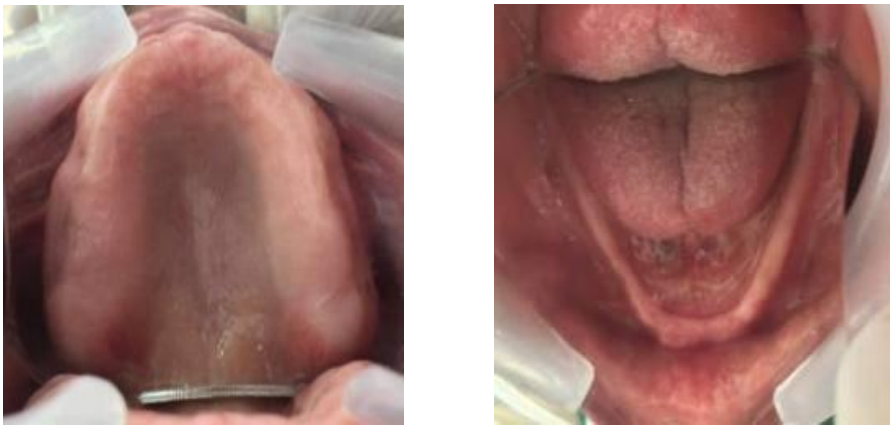
Custom trays were made using autopolymerising acrylic resin (DPI-RR Cold Cure, DPI, Mumbai, India). Border molding was done using low fusing impression compound (Pinnacle Tracing sticks, DPI, Mumbai, India) and wash impression was made with zinc oxide eugenol impression material (Impression Paste, DPI, Mumbai, India). Tentative jaw relation was recorded. Face bow transfer and Centric relation record done and mounted on semi adjustable articulator. Teeth were arranged in the usual manner to optimize occlusion. A wax set up was tried in the patients mouth and was checked for esthetics, phonetics, occlusal vertical dimension, and occlusion.

After that cheek plumper made in wax and were attached to the maxillary denture and evaluated to give patient a more fuller appearance. The waxed plumper was separated from the waxed denture. A layer of petroleum jelly coated on maxillary trial denture and Impression of intaglio surface of the wax cheek plumper was made with zinc oxide eugenol impression material to make proper adaptation of cheek plumpers to maxillary denture. The Cheek plumpers and trial denture were flasked and dewaxed and were processed with high strength heat cure resin (DPI, Mumbai, India). Trimming, finishing and polishing procedures were performed.

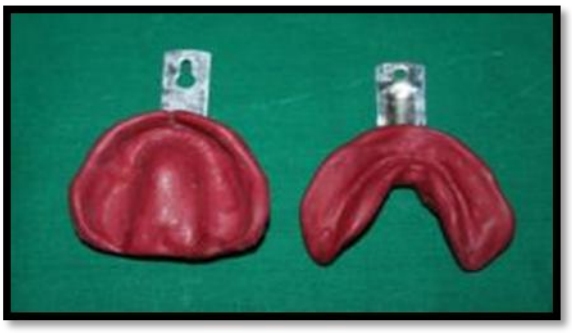
Magnets with 5mm and 7mm diameter, 1.5mm thick were placed by creating concavities on buccal surface of denture on right and left side approximately in the cervical region of 2nd premolar and molars and on the denture surface of plumpers using autopolymerising acrylic resin. Finishing and polishing procedure was carried out again. And denture was delivered after evaluating the fit and esthetics. Patient was given routine post-insertion instructions and was motivated to make efforts to learn to adapt to the new dentures with magnet retained cheek plumpers. Recall appointments were scheduled after 1 day, 1 month, and every 6 month. Within three weeks, the patient expressed satisfaction in mastication and phonetics and his esthetic dilemma was reduced with use of detachable magnet retained cheek plumper.



EXTRAORAL

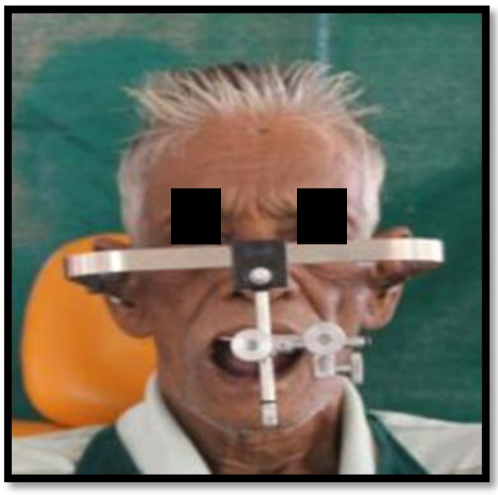


INTRA-ORAL

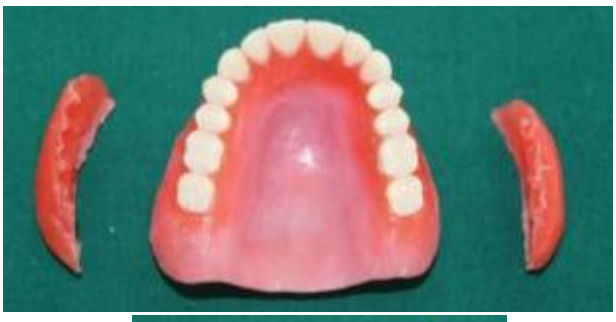


PRIMARY IMPRESSION

SECONDARY IMPRESSION

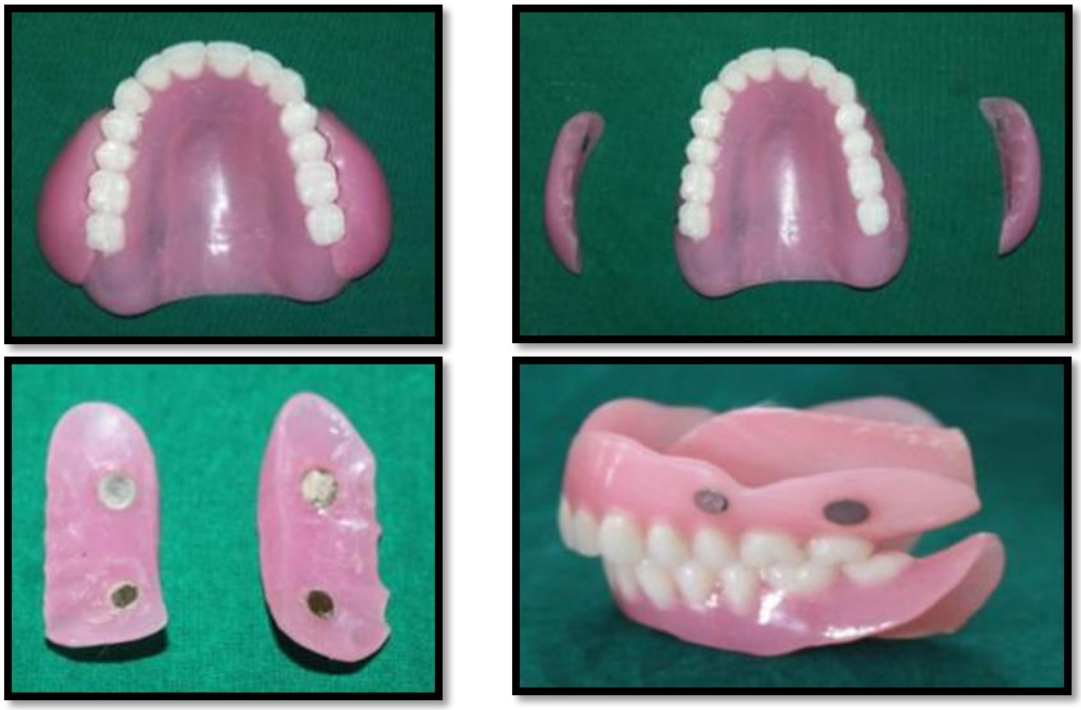


FACEBOW TRANSFER



CHEEK PUMPER EXTRAORAL

Try in



Acrylisation

Post operative

DISCUSSION

Prosthodontic rehabilitation does not mean to simply replace the missing teeth, but also restore the facial support. Conventional procedures can fulfill these requirements. But in some cases, where the patient has sunken cheeks an extra support to the dentures must be provided. This can be achieved by using cheek plumper or cheek lifting appliances. Cheek plumper is basically a prosthesis to enhance the support of sunken cheeks providing better esthetics. Use of plumper prosthesis in maxillofacial prosthodontics is also well documented.[1-3]

Denture esthetics have advanced ahead than mere selection of teeth on the factors of form, shape, color, arrangement and sex, it is more of harmonization of artificial with natural.[4-6] Corrections of slumping of cheeks can be accomplished by various methods like reconstructive plastic surgery, injecting the botulinum toxin (BOTOX) in the facial muscles and different types of prosthesis. The plastic surgery is a traumatic procedure which leaves behind the post-surgical scar, sometimes contra-indicated in old patients suffering from systemic diseases.[7] Although these modalities may be effective, they have a variety of disadvantages among them, including cost, time to onset, skin irritation and allergic skin reactions.[8]

The conventional cheek plumper has the major problem of retention and stability of maxillary denture due increased size and weight of the denture. It can also lead to muscle fatigue due to continuous use. To overcome the demerits of conventional undetachable cheek plumper, detachable cheek plumper has been tried that has proven more beneficial. In a detachable plumper prosthesis, plumper part can be detached from the complete denture. In the present case plumping the cheeks using detachable cheek-plumpers which are attached to the conventional complete denture, using magnets.

Advantages of magnet retained cheek plumpers that they are small size and hence can be placed within the denture and the cheek plumper without being obtrusive to either 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 experiencing excessive muscle fatigue. It allows for ease of placement and cleaning. Automatic reseating.[9]

CONCLUSION

Detachable cheek plumpers enabled the patient to remove the plumpers and use the denture if required. An alternative option such as magnet retained detachable cheek plumper simplify the procedure as well as improved esthetics, psychological well being of the patient. As we have used such intraoral magnets, the patient was informed about the limitations, and he was instructed to report to the clinic once every 6 months to replace the magnets if required.[10]

REFERENCES

1. Lazzari JB. Intraoral splints for support of lips in Bells palsy. J Prosthet Dent. 1995;5(4):579-81.
2. Larzen SJ, Carten JF, Abrahamian HA. Prosthetic support for unilateral facial paraly-sis. J Prosthet Dent. 1976 Feb;35(2):192-201.
3. Mukohyama H, Kadota C, Ohyama T, Taniguchi H. Lip plumper prosthesis for a pa-tient with a marginal mandibulectomy: a clini-cal report. J Prosthet Dent. 2004 Jul;92(1):23-6.
4. Clairf, Picard Jr. Complete denture esthetics. J Prosthet Dent 2005; 93:386-94.
5. Waliszewski M. Restoring dentate appearance: A literature review for modern complete denture esthetics. J Prosthet Dent 2005; 93:386-94.
6. Tautin F. S. Denture esthetics is more than teeth selection. J Prosthet Dent 1978; 40:127-30.
7. Kamakshi V., AnehosurGV.,Nadiger R K. Magnet Retained Cheek Plumper to Enhance Denture Esthetics: Case Reports. J Indian Prosthodont Soc. 2013 Sep; 13(3): 378–381
8. Chandra S , Devi M P, Ravindra S V, Singh D, Kumar S. Botoxonomics: A Palliative Prick.International Journal of Scientific Study.2014 ;2 (6):108-11
9. Riley MA, Walmsley AD, Harris IR. Magnets in prosthetic dentistry. The Journal of Prosthetic Dentistry. 2001;86(2):137-42.
10. Lingegowda A.B., K. R., Shankaraih M., Bhallaiah P. Magnet retained cheek plumpers in complete denture patient. Int. J. Dent.Clinics. 2012;4(2): 65-66.

Source of support: Nil **Conflict of interest:** None declared