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Case Report

Magnet Retained Cheek Plumper in Complete Denture: A Case Report

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ABSTRACT

Age and a protracted period of edentulousness allow the maxillary residual ridge to resorb, which narrows the arch and eliminates the support provided by the facial muscles, giving the cheeks a sunken aspect. This clinical report offers a method that uses magnet-retained removable acrylic cheek plumpers to increase support for depressed cheeks.

Keywords: Sunken cheeks, Esthetics, Magnets, cheek plumber

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INTRODUCTION

Cheeks are a crucial component of facial aesthetics. Denture aesthetics is one of the goals of establishing an impression from the very beginning. The maxillary residual ridge can resorb with age and prolonged edentulousness, which narrows the arch and removes the support offered by the facial muscles, giving the cheeks a sunken appearance. Various treatment options have been mentioned in the literature for the treatment of sunken cheeks. Completely edentulous patients are prone to a decrease in buccal fat volume and buccinator muscle wastage, primarily because of a decrease in the vertical facial height for a prolonged period due to a loss of teeth.

The goal of prosthodontic rehabilitation is to restore fac ial support in addition to replacing missing teeth. This clinical report illustrates the use of magnets to retain a detachable cheek plumper prosthesis in a completely edentulous patient.

CASE REPORT

A 65-year-old male patient reported to Department of prosthodontics wants to replacement of his missing teeth. On intraoral examination, the patient had completely edentulous maxillary and mandibular arches with sunken cheeks(Fig.1).

The patient wanted a prosthesis to fill up and rejuvenate his face. Various treatment options were explained to the patient. It was decided to give the patient maxillary and mandibular complete dentures with cheek plumber. Patient was insisted for removal type of cheek plumber. Primary impressions of maxillary and mandibular arches were made using impression compound impression material. Custom trays were made using autopolymerizing acrylic resin.

Fig.1

Border molding was done using low fusing impression compound (DPI Pinnacle). Secondary impression was made with light body addition silicone impression material. Tentative jaw relations were recorded. For the try-in appointment waxed denture was first tried for esthetics and occlusion. At the same appointment, cheek plumpers were made in alu wax and were attached to the upper waxed-up denture(Fig 2).

Fig 2

It was evaluated to give the patient a fuller appearance.
The patient was willing to accept the waxup cheek plumper because it was feasible to tell a difference between how the patient looked with and without it. It was possible to detach the waxed plumper from the waxed-up denture.
The final prosthesis and cheek plumper were then subjected to separate flaking and dewaxing procedures (fig 3, fig 4). The mould cavity was filled with heat polymerizing acrylic material, and curing procedures were carried out. The cured final prosthesis and plumpers were extracted after deflasking. Trimming, finishing, and polishing procedures were performed.(fig 5)

Fig 3

Fig 4.

Fig 5

A pair of commercially available magnets -cobalt-samarium (Mile stone health care), (fig 6) was employed to retain the cheek plumper with final prosthesis.

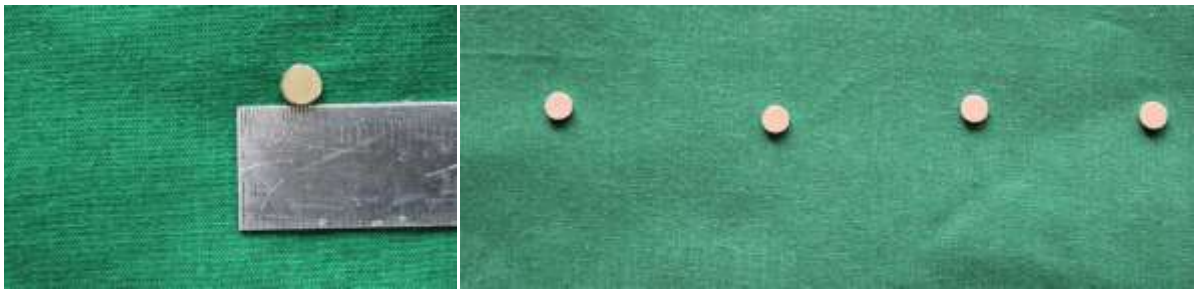

Fig 6

Provision for placement of magnets in the flange of the final prosthesis and in the cheek plumper was made and positioned with the help of autopolymerizing resin.(fig 7)

Fig 7

Finishing and polishing was then carried out(fig 8). The attachment of plumper to the prosthesis was first checked outside the patient's mouth.

Fig 8

The prosthesis and plumper were then evaluated for comfort, use, and aesthetics inside the patient's mouth. The patient was instructed on how to attach the plumper to the prosthesis.

Fig 9

DISCUSSION

Denture esthetics is defined as the effect produced by a dental prosthesis that affects the beauty and attractiveness of the person.

Tissue shrinkage, exaggerated wrinkles and folds of the face were significant change in facial aesthetics brought on by ageing. Both invasive and noninvasive methods can be used to alter the appearance of drooping cheeks. Cheek plumpers offer an non-invasive, efficient treatment option to counteract this unfavourable ageing impact. Magnets are used due to their small compact size and strong attractive forces. Easy placement and cleaning are a couple of the benefits for both the dentist and the patient. The cobalt samarium magnet utilised in this instance gave the patient an important retention while being reasonably priced. Corrosion is the primary issue with using magnets as retentive devices. Both Sm-Co and Nd-Fe-B magnets. They are extremely brittle and susceptible to corrosion, especially in chloride-containing environments such as saliva and the presence of bacteria increases the corrosion of Nd -Fe-B magnets. The patient also agreed that after the prosthesis were implanted, there would need to be periodic follow-up calls.

CONCLUSION

This article describes a straightforward, non-invasive therapy option for improving a patient with sunken cheeks' facial aesthetics. Due to its small, compact form and powerful attraction forces, magnetic retention for cheek patients is favourable.

REFERENCES

1. Deogade SC. Magnet retained cheek plumper in complete denture esthetics: a case report. J Dent (Tehran). 2014 Jan;11(1):100-5.
2. Mukohyama H, Kadota C, Ohyama T, Taniguchi H. Lip plumper prosthesis for a patient with a marginal mandibulectomy: a clinical report. *J Prosthet Dent.* 2004 Jul;92(1):23–6.
3. Waliszewski M. Restoring dentate appearance: a literature review for modern complete denture esthetics. *J Prosthet Dent.* 2005 Apr;93(4):386–94
4. Punia V, Mishra R, Khandelwal M, Verma N, Handa M. Magnet retained detachable cheek plumper: innovation personified – a case report. *Int J Prosthet Dent.* 2013;4(1):16–20.
5. Pudi S, Kota S, Karthik KV, Kaladi SR, Gade RR. An innovative technique using a stainless steel double die pin retained cheek plumper in complete denture esthetics: A case report. Cureus 2019;11:e6197
6. Chandrasekar V, Singaravel Chidembaranathan A, Muthukumar B. Cheek plumper: An instant, noninvasive face-lifting prosthesis—A case report. Sci Dent J 2022;6:152-5
7. Colvenkar S, Pathipaka S, Siva Santosh Babu D, et al. (July 31, 2022) Enhancing Facial Esthetics in a Complete Denture Patient Having Sunken Cheeks With a Hollow Fixed Cheek Plumper: A Case Report. Cureus 14(7): e27539.
8. Aggarwal P, Gupta MR, Pawah S, Singh A. An innovative technique to improve complete denture aesthetics using cheek plumper appliance: a case report. Int J Oral Health Med Res 2016;3:51-4.
9. Aaditee Vande, Abhijeet Kore, Pronob Sanyal, Kumar Nilesh. Customized attachment retained hollow cheek plumper to enhance esthetics in elderly: report of a novel technique. International Journal of Contemporary Medical Research 2019;6(6):F11-F13.
10. M. K. Marwah, K. Harshakumar, R. Ravichandran, and S. Lylajam, "Detachable magnet retained cheek plumpers to enhance complete denture esthetics - a case report," *International Journal of Health Sciences and Research*, vol. 6, no. 7, pp. 389–393, 2016
11. N. Javid, "The use of magnets in a maxillofacial prosthesis," *The Journal of Prosthetic Dentistry*, vol. 25, no. 3, pp. 334–341, 1971