Case Report

JRAD Journal of Research and Advancement in Dentistry

J Res Adv Dent 2017;6:2:66-70.

Button Retained Cheek Plumper's to Enhance Facial Esthetics

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ABSTRACT

Background: The success of prosthetic treatment not only is predicted by dentist ability but also on the ability to relate to patients and to understand their needs. There may esthetic consequences of edentulism, among which facial disfigurement due to sunken appearance of cheeks and lips has a great negative psychological impact on the individual. This clinical report highlights a technique for fabrication of intraoral detachable button retained cheek plumper's using stainless steel button. The use of these detachable button retained cheek plumper's is a modification from conventional technique of supporting the slumped tissue.

Keywords: sunken cheeks, complete denture, detachable button retained cheek plumper's.

INTRODUCTION

In current arena, esthetics play a very important role in person's professional and social life. Cheeks due to their extreme visibility are an important factor in determining facial esthetics. Extraction of molars, tissue thinning due to aging, or weight loss can cause concavities below the malar bone or hollow cheeks. Slumped cheeks can add years to a person's age and hence have a detrimental psychological effect on the patient[1].Cheek plumper, also known as the cheek lifting appliance is basically prosthesis for supporting and plumping the cheek to provide necessary support by reducing the sagging of cheeks and improve muscle tone in some cases.[2,3]

A conventional cheek plumper is 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. But they have few demerits like;

- Due to its excessive weight, could hamper retention of the maxillary complete denture.
- Can result in muscle fatigue.
- Can destabilize the maxillary denture
- Could interfere with masseter muscle and the coronoid process of the mandible.
- Difficult to insert the denture due to its excessive Medio lateral width.
- Can't be used in patients with limited mouth opening.[4,5]

This problem can be solved with the fabrication of denture with detachable cheek plumper creating dentures that are in harmony and dignity with the aging individual, which will not eradicate but compliment the stigma of aging in them.

Received: Jan. 17, 2017: **Accepted:** Mar. 10, 2017

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pISSN 2278-0076
eISSN 2321-9270

CASE REPORT

A seventy two year old male completely edentulous patient reported with chief complaint of replacement of existing ill-fitting dentures and very poor esthetics. History revealed that he was patient of edentulous for the past ten years and was wearing complete denture prosthesis since then.

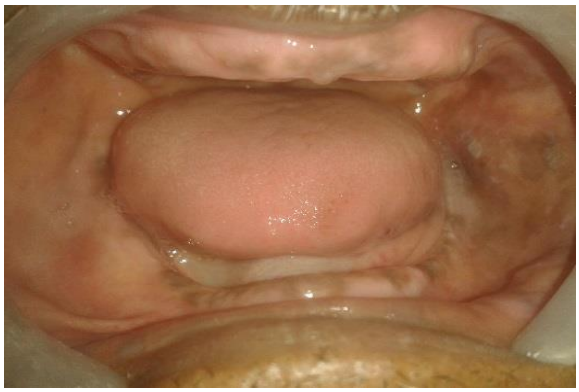

Fig 1: Edentulous maxillary and mandibular ridges.

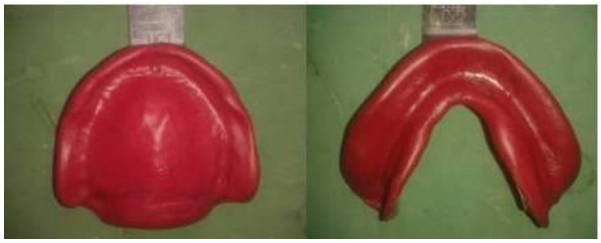

Fig 2: Primary Impression.

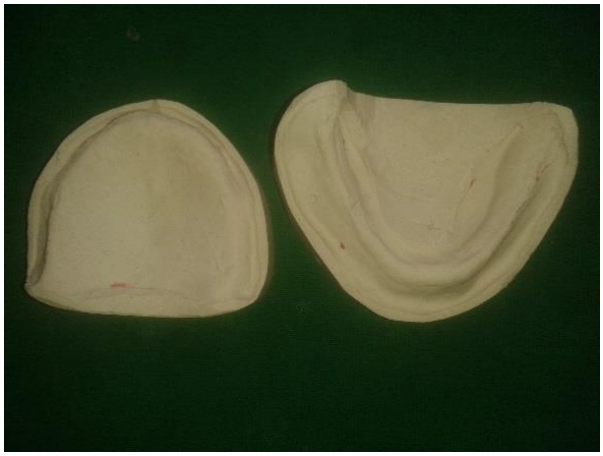

Fig 3: Primary cast.

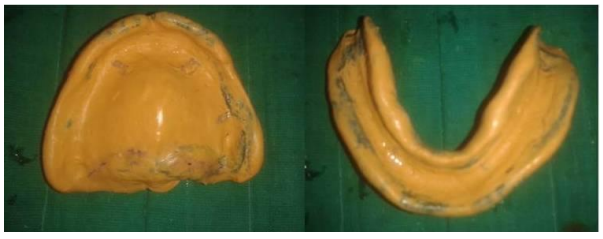

Fig 4: Secondary impression.

Fig 5: Secondary cast.

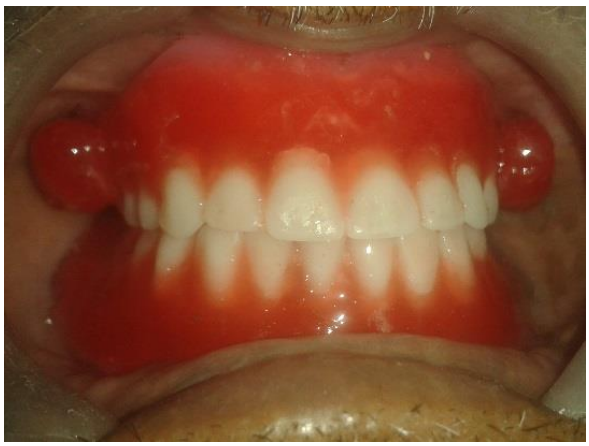

Fig 6: Wax try in.

Fig 7: Maxillary denture with button.

Fig 8: Plumpers with buttons.

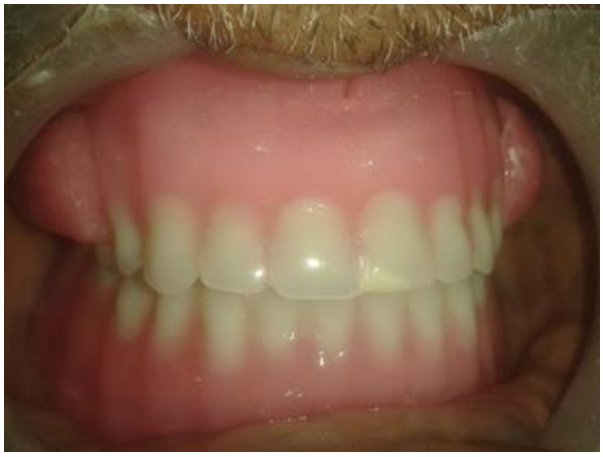

Fig 9: Final insertion of dentures.

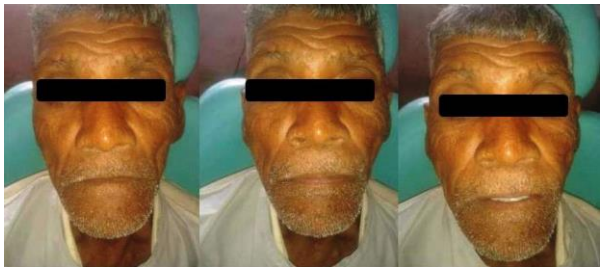

Fig 10: Post operative.

The general health status of the patient was quite satisfactory with no history of systemic disorders. On clinical examination one of the major finding was poor esthetics, unsupported oral musculature, sunken and slumped cheeks on intra oral examination, the ridge was low well rounded in maxillary arch and uneven mandibular ridge is seen with sufficient inter arch space with average mouth opening(Fig-1). The old existing dentures were compromised retention and stability due to under extended borders with severe occlusal wear. Therefore, new complete denture was planned with button retained cheek plumper's to provide the adequate support on both sides of cheeks to lift the sunken cheeks to enhance facial esthetics and appearance.

Clinical Procedure:

Preliminary impressions were made with impression compound using metal stock tray (Fig.2). Casts were prepared (Fig.3) and self-cure acrylic resin custom trays were constructed. The tray was border-moulded with modeling plastic (DPI Tracing stick, Dental products of India, Mumbai, India), taking care to avoid overextension. Final impressions were made with zinc oxide eugenol impression paste(Fig.4).Master casts were poured with Type III dental stone(Fig.5) (Kalabhai, Mumbai, India).Stabilized record bases were made with self-cure acrylic (DPI, Mumbai, India)using the sprinkle-on technique. Wax rims were adjusted until a tentative occlusal vertical dimensions were established and recorded. Teeth were arranged in the usual manner. A Wax set-up was tried in the mouth and was checked for esthetics, phonetics, occlusal vertical dimension, and occlusion.

At the try-in appointment treatment modality for the loss of buccal pad of fat in the cheek region was decided. Wax rolls were placed in the disto-superior aspect of the maxillary buccal flanges right and left side respectively(Fig.6). The modeling wax rolls acted as template for fabrication of heat cure cheek plumper's(Fig-8). Corresponding to this buccal extentension, hollowed cavities were made on the buccal surface of the denture on the right and left side approximately in the cervical region of molars and male part of button was attached(Fig-7). The maxillary and mandibular trial dentures were waxed up, flasked and dewaxed. Heat cure acrylic resin was packed by taking care not to dislodge the button. Final finishing polishing and laboratory remounting was done (Fig.9).

The patient was given routine post insertion instructions and was motivated to make effort to learn to adapt to the new dentures and the button retained cheek plumper's. Within a week, the patient expressed satisfaction in mastication and phonetics and his esthetic dilemma was reduced with use of detachable button retained cheek plumper's (Fig.10).

DISCUSSION

Denture esthetics have advanced ahead than mere selection of teeth on the factors of form, shape, color, arrangements and sex, it is more of harmonization of artificial with naturals.[6,7] Sequele of advanced aging is tissue atrophy, folds and creases of face become exaggerated which is due to loss of support by the alveolar bone and teeth in particular leading to collapse of lower third of face. There is deepening of nasio labial fold, drooping of corner of mouth, loss of vermillion border, depression of lips exaggerated wrinkling.[8] Teeth loss in posterior region results in loss of support to cheeks, which tend to move medially to meet laterally expanding tongue. Cheek contour changes as a result of loss of vertical dimension of occlusion due to anterior teeth loss. Loss of subcutaneous fat, buccal pad of fat and elasticity of connective tissue produce the slumped cheeks, seen in aged.[9]

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.[10,11] The plastic surgery is atraumatic procedure which leaves behind the post-surgical scar, sometimes contraindicated in old patients suffering from systemic diseases.[12] The conventional cheek plumper's has the major problem of retention and stability of maxillary denture due to increased size and weight of the denture. It can also lead to muscle fatigue due to continuous use.

To combat the major demerits of the conventional cheek plumper's this innovative intraoral detachable button retained cheek plumper's provide advantage of smaller size, easy to insert in two portions, easily detachable providing patient the allowance of its use which in turn reduces the chances of muscle fatigue and most importantly maintenance of the appliance becomes easier.

CONCLUSION

Loss of teeth, a part of normal aging can be restored along with few modifications to enhance the lifestyle and dental care of the elderly. With increasing age, treatment modalities become increasingly challenging. In addition to positioning of teeth for lip support, excellent denture esthetics can be achieved by providing additional support to the slumped tissues. The use of buttons in the present case report demonstrates a paradigm shift from the conventional methods. Button retained detachable cheek plumper simplifies the procedure and helps the elderly to preserve independence, self-esteem and to maintain dignity. This innovative aid in short helps in achieving overall well-being of the patient. A lost smile and enthusiasm for life was thus restored.

CONFLICT OF INTEREST

No potential conflict of interest relevant to this article was reported.

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