

CHEEK PLUMPER: A UNIQUE WAY TO ENHANCE FACIAL AESTHETICS

Abstract:-

Aesthetics plays an important role in complete denture treatment. Prosthetic rehabilitation of a completely edentulous patient no longer confines to only the replacement of missing teeth. Now day's patients are too demanding for improvement in aesthetics at the completion of treatment.

The loss of support of the facial musculature is of great concern in treating completely edentulous patients. Sunken cheeks are one of the major consequences of flaccid facial musculature. Natural teeth should be preserved but at the same time, clinician must be aware of the edentulous ridge that could be destroyed by forces exerted on the denture during function. Further, it has a greater impact on the aesthetics as well as the psychology of the patient.

Cheek plumper appliances can restore such facial delinquencies. The underlying principle for providing this appliance is that some patients have depressed cheeks and require extra support for improved facial aesthetics. Literature has well evidenced the extensive usage of magnets as attachments, but it has been shown that magnets lose their magnetic property over a period leading to failure of treatment. However, push buttons that were used in the cheek plumper[®] seems to increase the durability of the cheek plumper appliances.

This clinical report describes a simple technique to improve support for sunken cheeks using detachable acrylic cheek plumper.

Keywords:-Cheek Plumpers, Facial Esthetics, Sunken Cheeks, Flaccid Muscles, Press Buttons.

CASE HISTORY

38 year old female patient reported to department requesting replacement of missing teeth. On examination patient had completely edentulous upper and lower arches. Patient had

28 lost her teeth over a period of 5 years as they were mobile and was edentulous for past 3
29 years. Extra-oral examination revealed that patient had poor aesthetics, flaccid oral
30 musculature leading to sunken cheeks.

31

32

33

34

35



36

(Figure 1)

37 Patient was conscious and more concern about aesthetics. Treatment plan was
38 finalized keeping patients aesthetic demands in mind & it was decided to give patient
39 maxillary and mandibular complete dentures with detachable cheek Plumper's for the
40 maxillary denture. Maxillary and mandibular impressions were made using impression
41 compound in stock tray.

42 Custom trays were made using Autopolymerising acrylic resin. Border molding was
43 done using low fusing impression compound (Aslate,) and wash impressions were made with
44 Zinc oxide eugenol impression paste. Jaw relations were recorded. For the try in appointment
45 waxed denture were first tried for occlusion and esthetics.

46 At the try-in stage, the template for cheek plumper was fabricated with the help of
47 impression compound. Impression compound was molded and placed over the maxillary right
48 and left buccal flange of the denture Border movements were done so that the compound is
49 well adapted. Movements were repeated till the cheeks gained required fullness. Now, the
50 cheek plumper made of impression compound were separated from waxed up denture bases.

51

52

53

54

55

56

57

58

59

60

61

62



63

(Figure 2)

64

65

66

67

68

69

70

Denture Flasking and Dewaxing procedures were finished separately for the final denture and cheek Plumper's. The resultant mold space was then packed with heat-polymerizing acrylic material and curing procedures were completed. After curing, the cured final prosthesis and plumpers were retrieved. Trimming, finishing, and polishing procedures were performed. Clinical magnets were not affordable to patient, push button attachments were used to attach cheek plumper with denture base. Two 2mm deep and 5mm diameter push buttons were incorporated during flasking.

71

72

The female part of the push button was attached to the denture base, and male part of push button was attached to the cheek Plumper.

73

74

75

76

77

78



79

(Figure 3)

80

81

82

83

84

The patient was given common post-insertion instructions and was encouraged to make efforts to learn to adapt to the new dentures and the push button retained cheek Plumper. Within a week, the patient expressed satisfaction in mastication and phonetics and his esthetic dilemma was reduced with the use of detachable push button retained cheek plumper.

85

86

87



(Figure 4)

88

89

90

91

92

93

94 **DISCUSSION:**

95 In today's world denture esthetics is not confined only to selection of the teeth based
96 on factors like form, shape, color, arrangement and sex. Instead, it is more about
97 harmonization between the artificial and natural tissues [6-7].

98 Loss of teeth in posterior region results in loss of cheek support due to which cheek
99 tend to move medially to meet laterally expanding tongue. Also, loss of the teeth in anterior
100 region leads to changes in cheek contour as a result of loss of vertical dimension of occlusion.
101 The apparent loss of subcutaneous fat, Buccal pad of fat and elasticity of connective tissue
102 also produces the slumped cheeks, seen in aged [8].

103 Lazzari described the fabrication of a maxillary removable partial denture for a
104 patient with unilateral facial paralysis[2] Larsen et al. suggested construction of maxillary
105 removable partial denture framework with a retentive mesh in the premolar region which was
106 strengthen with modeling plastic to achieve desirable contours on estimation of speech and
107 esthetics[3].

108 A variety of materials has been documented in the literature that acts as a barrier to
109 corrosion. They can be encapsulate materials like stainless steel, titanium or palladium metal
110 or coating materials like a thin layer of parylene, polytetrafluoroethylene and polymeric
111 materials[2,3,8,9].

112 Ryf et al. conducted an in vitro study to assess the interference of neodymium
113 magnets with cardiac pacemakers and implantable cardioverter-defibrillators[10]. Their study
114 results showed that NdFeB magnets for home and office use might cause interference with
115 cardiac pacemakers and ICDs at distances up to 24 cm.[10].

116 Rectifications of drooping of cheeks can be done by different methods like
117 reconstructive plastic surgery, injecting the botulinum toxin (BOTOX) in the facial muscles
118 and different type of prosthesis[11].

119 Conventional cheek plumpers which are a single unit appliance with extensions on
120 either side of the posterior flange of denture base, leads to muscle fatigue and decreased
121 retention. Therefore, detachable cheek plumpers provide an advantage to detach the cheek

122 plumpers if they lead to muscle fatigue on long term use. Detachable cheek plumpers can be
123 easily inserted in patients with reduced mouth opening.

124 Various attachments like magnets, push buttons, etc. can be used to attach cheek
125 plumper with the denture. Clinical magnets being expensive, push button attachments are the
126 most affordable means to attach cheek plumper to the denture.

127 **CONCLUSION:**

128 This article has described a simple, effective and noninvasive treatment alternative to
129 improve facial appearance in a patient with hollow cheeks. An effort was made to improve
130 patient's appearance by providing better support to the cheek. Successfully restored the
131 contour of cheek improving esthetics and psychological wellbeing of the patient.

132

133 **REFERENCES:**

134

135 1. Bains JW, Elia JP. The role of facial skeletal augmentation and dental restoration in facial
136 rejuvenation. Aesthetic plastic surgery. 1994 Jun 1;18(3):243-6.

137

138 2. Lazzari JB. Intraoral splint for support of the lip in Bell's palsy. The Journal of Prosthetic
139 Dentistry. 1955 Jul 1;5(4):579-81.

140

141 3. Larsen SJ, Carter JF, Abrahamian HA. Prosthetic support for unilateral facial paralysis.
142 The Journal of Prosthetic Dentistry. 1976 Feb 1;35(2):192-201.

143

144 4. Mukohyama H, Kadota C, Ohyama T, Taniguchi H. Lip plumper prosthesis for a patient
145 with a marginal mandibulectomy: a clinical report. The Journal of prosthetic dentistry. 2004
146 Jul 31;92(1):23-6.

147

148 5. Verma N, Chitre V, Aras M. Enhancing appearance in complete dentures using magnet
149 retained cheek plumpers. J Indian Prostho Soc. 2004;4:35-8.

150

151 6. Picard CF. Complete denture esthetics. The Journal of Prosthetic Dentistry. 1958 Mar
152 1;8(2):252-9.

153 7. Wiltshire WA, Ferreira MR, Ligthelm AJ. Allergies to dental materials. Quintessence

154 International. 1996 Aug 1;27(8).

155 8. Martone AL. Effects of complete dentures on facial esthetics. The Journal of Prosthetic

156 Dentistry. 1964 Mar 1;14(2):231-55.

- 157 9.Riley MA, Walmsley AD, Harris IR. Magnets in prosthetic dentistry. The Journal of
158 Prosthetic Dentistry. 2001 Aug 31;86(2):137-42.
- 159 10.Ryf S, Wolber T, Duru F, Luechinger R. Interference of neodymium magnets with cardiac
160 pacemakers and implantable cardioverter-defibrillators: an in vitro study. Technology and
161 Health Care. 2008 Jan 1;16(1):13-8.
- 162 11.Ahmad KA, Drummond JL, Graber T, BeGole E. Magnetic strength and corrosion of rare
163 earth magnets. American Journal of Orthodontics and Dentofacial Orthopedics. 2006 Sep
164 30;130(3):275-e11.