



RESEARCH ARTICLE

A CONSERVATIVE APPROACH OF TREATING MORSICATO MUCOSAE ORIS
THROUGH MODIFIED ORAL SCREEN

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ABSTRACT

One of the most challenging tasks for a pediatric dentist is the management of deleterious oral habits which severely affect the dento facial complex. However, if these habits can be intercepted and diagnosed early, they can save the patient from the psychological impact of undergoing long treatment therapies. One such deleterious oral habit is Morsicato mucosae oris ie Chronic Cheek biting that affects the buccal mucosa. Presented here is a case report that describes the interception of this deleterious habit in a 6 year old girl child who was a bilateral cheek biter with the help of an unique design, modifying oral screen.

INTRODUCTION

Development of dentition is influenced by balance of orofacial musculature and its function. Equilibrium of opposing forces from buccal soft tissues and tongue maintain the dentition in pleasing form and function. Disruption of this balance affects developing dentition and sets in malocclusion of varying degrees. Morsicato mucosae oris is a form of chronic cheek biting that is seen commonly on the buccal and labial mucosa and lateral surface of tongue due to untoward deforming forces. In cases of chronic cheek biting cases, trauma often leads to inflammation and inflammatory lesion may lead to more injury due to persistent, unconscious, psychogenic habit. So screening or barrier must be created between cheek and buccal mucosa as screening therapy which works on the principle of eliminating abnormal muscle forces, prevents development of abnormal biting forces.

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Barrier or screening effect can be achieved by Oral screen which is a simple and versatile myofunctional appliance used in early interceptive treatment in dental arch deformities. It was first introduced by Newell in 1912. Oral screen was routinely used in England before Second World War (Schwarz, 1966). Kraus (Kraus, 1956) first differentiated the difference between oral screen and vestibular screen. The main objective of oral screen has been to eliminate oral dysfunction and establish muscular balance, correct or diminish maxillary incisor protrusion particularly in connection with thumb or lip sucking and tongue thrust and also in relieving chronic cheek bite. Later oral screen has been modified by Hotz (Hotz, 1980), Nord (Nord, 1959) and Fingeroth (Fingeroth, 1958). Different modifications of oral screen had been designed by different researchers to fulfil different treatment needs. More recently Goyal.S has introduced different variations. Here an effort has been made through a modification to relieve patient from ulceration in the buccal mucosa from chronic cheek bite through the use of oral screen. The purpose of following article is to present efficacy of oral screens in relieving the deleterious effects of chronic cheek bite.



Figure 1A. Pre operative photograph



Figure 1B



Figure 13

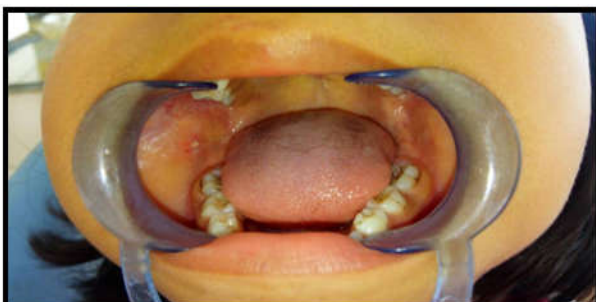


Figure 2. Bilateral cheek bite intra orally

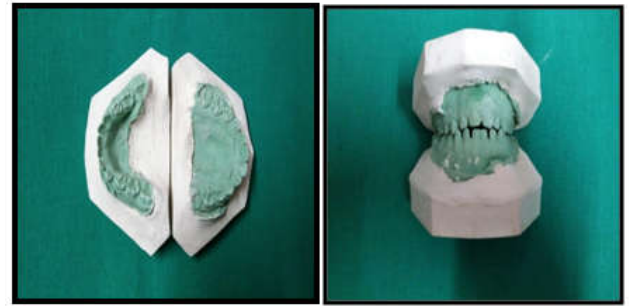


Figure 3. Upper and lower model cast



Figure 4. Design of the fabricated appliance



Figure 5. Appliance in patients mouth.



Fig 6A, 6B, 6C. Post insertion healing of the mucosa after 2 months

Case history: A 6year 2 months old girl reported to the department of Pedodontics and Preventive dentistry, Guru Nanak Institute of Dental Science & Research with the chief complaint of irritation, occasional bleeding and ulceration in the cheek intra orally in approximation with posterior teeth bilaterally (Figure- 1A). The symptoms were relieved after 1 or 2 days with local application of ointment but recurred again. An intra oral examination of the patient revealed soft, bilateral ulceration of 2mm x 2mm, involving buccal cheek mucosa near retro molar region. The lesion was slightly tender on palpation and a partially sessile growth was at the level of occlusion near permanent Ist molar teeth (Figure-2). Upon eliciting, parents revealed a history of pacifier sucking habit of the patient and also informed that the patient unconsciously had cheek biting which occurred not only in daytime but also during sleep. Intraoral examination revealed mixed dentition stage. Assessment of occlusion revealed class I molar relation bilaterally. On extraoral clinical examination, the patient revealed mesoprosopic facial form, convex facial profile with

competent lips and tendency of formation of open bite was presented (although minimum) at the time of first visit(Figure-1B,1C).The medical history revealed that patient had no systemic illness . Parents also informed that patient had minimum breast feeding and had intense pacifier sucking habit mainly during sleep time in night. Therefore, after counseling the parent, an immediate interception was planned with relief from chronic cheek bite.

Fabrication of the appliance: Upper and lower alginate impressions were recorded giving special emphasis on accurate reproduction of the depths of vestibular sulcus and labial fold and was poured with dental stone and working cast was fabricated (Figure- 3). Wire bending was done by using 20 gauge wire and wire framework was constructed giving proper curvature keeping in mind the vestibular level of the patient. Proper relief was given in the frenum area of the maxillary arch by making a notch in the wire framework. After completion of wire bending, acrylization was done. Two buccal shields extending from canine to permanent Ist molar region on both sides were made adding clear, heat cure acrylic resin which rested on bent wire. Buccal extensions on both sides were made in such a manner that they shielded the buccal cheek mucosa and ensured no contact between teeth and the soft tissues. After acrylization, the appliance was trimmed, polished and checked for sharp extensions. and was given a wing shaped design which ensured no trauma due to biting of cheek. . Borders of the acrylic extensions were properly trimmed, polished to smoothen the edges so that appliance itself does not cause any injury as well as promote healing due to barrier effect of that particular retromolar region of the concerned patient (Figure- 4). After appliance delivery, post insertion instructions were given to the patient and was recalled at 1, 3 and 6 months follow up (Figure 5). After 2 months, it was observed that buccal mucosa of both sides was healed with no recurrence of traumatic cheek bite and also at the same time pacifier sucking habit of the patient reduced drastically preventing further malocclusions to develop(Figure-6)

DISCUSSION

Deleterious oral habit in the form of biting of oral mucosa is prevalent in 750 out of every one million individuals (Saemundsson, 1997). Females are affected more compared to males (Flaitz, 2000). In one of the largest studies conducted in a Mexican dental school clinic comprising 23,875 students, found out that cheek biting is the fifth most common oral mucosal finding with a prevalence of 21.7 cases per 1,000 patients (Castellanos, 2008). Repeated and recurrent biting leads to a chronically traumatized area which is sometimes thickened, scarred and paler than the surrounding mucosa, may or may not be present with sloughing, may or may not be tender and sometimes present as edema, purpura and erosions. When formulating a differential diagnosis, it is important to keep in mind that mucosal areas that approximate the plane of occlusion with clinical features such as irregular surfaces, erythematous zone, white tags of desquamated epithelium and many more could be due to traumatic injury. A wide variety of habitual biting behaviour exists and many treatment methods have been described and the most important consideration in managing self injurious behaviour if any is to plan the treatment to the severity of the condition. Individualized approach is needed for each child in the management of these type of deleterious oral habit. A variety of dental appliances

have been reported in literature for controlling of Morsicato mucosae oris, ie chronic biting of oral mucosa⁹ Although, a dental appliance does not resolve the etiology of oral mucosa biting, it is an effective means of controlling the trauma through remainder therapy¹⁰. Appliances like normal vestibular screen, mouth guard and even a crib has been thought of, however none of these was the choice of appliance as the child was a young adolescent and the habit was deep rooted and bilateral in nature. So keeping in mind considerations, such as patients age, general health, cooperation level, and severity and recurrence of cheek biting, a bilateral cheek biting interception design was planned through this appliance. This design seemed non -interfering with the esthetics of the patient, an unique design effectively deflected the buccal mucosa bilaterally from the occlusal table, thereby preventing trauma, obstructing cheek bite and thumb sucking and at the same time being malleable in design. More over this design does not hamper the transverse growth of the maxilla, does not hamper speech and it is a single unit design that can be easily fabricated and installed without any discomfort or risk to the patient.

Conclusion

Main role of a pediatric dentist lies in the interception of habit. The removable prosthesis described in this case presents a conservative treatment approach in managing chronic cheek biting or Morsicato mucosae oris. It fulfills criterias from being esthetic, functional, non -interfering etc .This modification of oral screen may prove useful in timely intervention and management of chronic, recurrent cheek biting habit and its harmful effects.

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