USE OF A MODIFIED OCCLUSAL BITE GUARD TO TREAT SELF-INDUCED TRAUMATIC MACROGLOSSIA (TWO CASE REPORTS)

HASTANIN KENDİSİNİN OLUSTURDUĞU TRAVMATİK MAKROGLOSSİYİ ÖNEMEK İÇİN AĞIZ AŞİSİ APEREYİN KULLANIMI

Serhat YALÇIN¹, Buket AYBAR², Cemalettin ERTEKİN³, Recep GÜLOĞLU⁴

ÖZET: Amac: Dilde devamlı olarak meydana gelen travmayı önlemek üzere ağız açıcı aparyeyi kullanımı
Dizayn: İki vaka raporu
Araçlar: ağız açıcı aparyey
Sonuç: Ağız açıcı aparyeyi erken kullanarak, travmatik makroglossi 16 yaşında erkek ve 22 yaşında bayan hastanın, diline gelen travmanın önlenmesi ve diddeli ödemin hızla giderilmesi
Anahtar kelimeler: Komaya giren hastalar, travmatik makroglossi, oral cerrahiv kullanımaya başlanmıştır (4).

SUMMARY/Objective: To describe the use of a bite guard to avoid continued tongue trauma and edema
Design: Two case reports
Interventions: bite raiser
Conclusion: Muscle relaxation and a bite guard were used in a 16 years old male and 22 years old female with traumatic macro glossia, which allowed for rapid resolution of edema and prevented additional trauma to the tongue.
Key words: Comatose patients, traumatic macro glossia, oral surgery

INTRODUCTION
As a consequence of head trauma and some other neuralgic diseases a clinical case called "coma" might occur (1). A multidisciplinary approach must be applied in intensive care units on patients having the case mentioned above. Comatose patient exhibit powerful ruminatory reflex chewing and bruxism that may result in soft tissue trauma, most commonly to the tongue (2,3). This condition called as a "Traumatic Macroglossia". Traumatic Macroglossia is defined as a resting tongue that protrudes beyond the teeth or alveolar ridge (4). This is a rare condition and only a few cases have been reported(1,2,4,5,6,7).

The purpose of this report is to describe two cases of traumatic macro glossia and their clinical progresses in the intensive care units in terms of head trauma.

CASE
A male patient at the age of sixteen had been hospitalised in Istanbul University, Faculty of Medicine, Department of Emergency Service and Intensive Care Unit after having been fallen from an electric post. The patient with unconscious, has been found to have a Glasgow coma scale of E1, M1, V5. During this period, intensive care unit clinician realised that the patient's tongue had become gradually protrusive and macro glossic. After consulting with ENT surgeons, treatment of high doses steroid was applied on the patient. However, no recovery was recorded at the end of this treatment which lasted for a week. Approximately forty five days after the injury, Istanbul University, Faculty of Dentistry, Department of Oral and Maxillofacial Surgery Clinic was referred for consultation by the intensive care unit. After clinical examinations, it was observed that the patient's tongue approximately one and a half as big as its normal dimensions, had grown so big that it no longer fit his mouth (Fig. 1). Although the patient...
was cooperative, he was neither able to talk nor move his tongue which was dry and covered with crust. The tissue continuity of the tongue was lost by the penetration of the lower incisal teeth to the ventral side of the tongue carving a wound 3 mm depth and 4 cm long. This obstruction of the lymphatic and venous drainage caused congestion in the tongue. Upon these changes, oedema and inflammatory change occurred with the corpus of the tongue. Diagnosis was made as a "Traumatic Macroglossia".

Surgical intervention was planned and under the general anaesthesia, the patient's mouth was opened an the crust on his tongue was cleaned. Prosthesis could not be prepared because an impression from the patient could not be taken due to macroglossia. For this reason, two mouth prop were placed on the patient's both molar teeth, thus creating an open bite at the anterior area and relieving the tongue from the trauma of the incisive teeth. The mouth prop were secured with a ligature wire of 0.4 mm and the open end of the wire was clasped by a haemostatic pen (Fig. 2).

The patient was given sedative and it was observed that the oedema was dissolved within 24 to 48 hours following the treatment. On the 5th day, the mouth prop was taken off and it was observed that the tongue had become to it original dimensions. The patient was able to move his tongue and the tracheostomy wound was also recovered and finally the patient was discharged from the hospital (Fig. 3, 4).

CASE II

A female patient at the age of twenty-two was hospitalised in Istanbul University, Faculty of Medicine, Department of Emergency Service and Intensive Care Unit as a result of a suicide attempt with a gun. The Glasgow Coma scale was found to be E, M, V;5. The clinical examination showed the pupils minimally isochoric while the light reflex was found / +. Approximately two months after the injury, Istanbul University, Faculty of Dentistry, Department of Oral and Maxillofacial Surgery Clinic was referred for consultation by the intensive care unit secondary to patient's tongue that had become gradually protrusive and macroglossic. The clinical examination of this case presented similar appearance and data as of the case discussed above (Fig. 5).

The following procedure were done without any anaesthetic application to the patient because the state of her being unconscious. Maxillary and mandibular impressions were taken in order to prepare a night guard of 2 mm thickness made of soft material by Biostar for the lower jaw and an acrylic Hawley Plaque for the upper jaw serving as an occlusion elevator at the posterior area (Fig. 6). Thus, an early contact at the posterior and an open bite in the anterior were obtained therefore the tongue was set free to function. Following the cleaning of the tongue and mouth, the prosthesis was placed and the tongue was replaced back into the oral cavity (Fig. 7). Unfortunately, after three days oedema in the tongue had begun to diminish, the patient died without final data obtaining regarding her last condition.
Figure 5. The patient's appearance before the treatment.

Figure 6. Plaster stone models and lower soft night guard and upper Hawley appliance. Thus creating an anterior open bite.

Figure 7. Intrarot view of appliances in place showing position of tongue.

tongue swelling(9).

Saah et al (9) has used a bite guard apparatus for the treatment of a case and has observed that the oedema of the tongue was resolved within 48 hours the tongue to take its normal posture.

Roberts (8) had presented a treatment of a twelve year old patient with a mobile apparatus consisting Adams Cribs and Hawley Rusk retainer.

Fenton (12) described the function and fabrication of a removable acrylic resin dental appliance useful in the hospital management patients with uncontrolled seizure disorders or other neurologic impairment.

Piercett et al (2) and Hanson et al (13) were suggested that to use acrylic tongue stent for the traumatic macroglossia patient's treatment. But acrylic tongue stent type apparatus are more difficult to wired in place and cannot be removed for cleaning and performing oral hygiene. In such cases, using mobile prosthesis would be more appropriate to protect the tongue in terms of the hygienic point of view (8,10,12).

In our first case mentioned above, a prosthesis was not made to prevent trauma because an impression from the patient couldn't be taken due to macroglossia. In both of our cases, it was observed that the reason causing the trauma was the lower incisive tooth. Thus, in the second case, to protect the tongue from the sharp edges of the lower front teeth, a nightguard made of a soft material was made for the anterior teeth.

As a conclusion, it should always be taken into consideration that early use of a bite guard allows for more rapid solution of edema and prevention of additional trauma to the tongue in patients with traumatic macroglossia.

REFERENCES


