Editorial

Trismus and Mouth Exercise

Trismus or Lockjaw refers to reduced opening of the jaws caused by spasm of the muscles of mastication, or may generally refer to all causes of limited mouth opening.¹ It is a common problem with a variety of causes and may interfere with eating, speech, oral hygiene, and could alter facial appearance. The severity ranges from the simple and nonprogressive to those that are potentially life-threatening.¹ There is an increased risk of aspiration. Temporary trismus is much more common than permanent trismus and may be distressing and painful, and limit or prevent medical examination or treatments requiring access to the oral cavity.

Mouth exercising is the well-established method to improve mouth opening and also to prevent postsurgical relapse.^{2,3} A majority of the appliances are tooth-borne, where



opening force can be applied with the help of the devices or stents placed between the maxillary and mandibular arches or teeth. Previous literature described many mouth-opening devices.⁴⁻⁸ All these mouth-opening devices for this purpose are fixed to the teeth to keep the dental arches apart.^{5,6} Partially or totally edentulous arches, decayed teeth, or periodontitis do not allow the use of such devices and often patients suffering from severe trismus present with these conditions. In such situations, a nontooth-borne mouth-opening devices are helpful. One such device (nontooth-borne) was described with which the force for mouth opening was applied to two intraoral screws placed in the vestibules of the maxillary and mandibular bones.⁷ Patient noncompliance prevents surgical intervention for placement of the screws and limits the use of such devices. Cox and Zoellner⁵ used sequential addition of the tongue depressors between upper and lower arches as oral physiotherapy and tested the hypothesis that physiotherapy alone can modify tissue remodeling in oral submucous fibrosis (OSMF) to increase oral opening. A new mouth exercising device (MED) has been designed which is nontooth-borne, handy, and easy to use by the patients by Patil and Patil.⁸ The MED causes local squeezing and stretching of the mucosa. This leads to increase the blood circulation in the area and thus decreasing the fibrosis and increasing the elasticity of mucosa and ultimately resulting into increase in mouth opening. The MED can also be used in patients with poor dental conditions and can allow rehabilitation to start immediately after trismus release. Patil et al⁹ studied clinical efficacy of the MED for 6 months for oral submucous and concluded that use of the MED appears to be effective for increasing oral opening in OSMF patients in conjunction with local, injection, and/or surgical treatment.

However, the clinical efficacy of such devices in postradiation trismus and the trismus occurring due to other reasons is still unclear. There is a vast scope of research in this area where many of such devices are still not being evaluated for their long-term efficacy in different clinical situations of trismus.

References:

- 1. Marien M. Trismus: causes, differential diagnosis and treatment. Gen Dent 1997;45(4):350-355.
- 2. Angadi PV, Rao S. Management of oral submucous fibrosis: an overview. Oral Maxillofac Surg 2010;14:133-142.
- Lai DR, Chen HR, Lin LM, et al. Clinical evaluation of different treatment methods for oral submucous fibrosis. A 10-year experience with 150 cases. J Oral Pathol Med 1995; 24:402-406.
- 4. Farrand P, Rowe RM, Johnston A, Murdoch H. Prevalence, age of onset and demographic relationships of different areca nut habits amongst children in Tower Hamlets, London. Br Dent J 2001;190:150-154.
- 5. Cox S, Zoellner H. Physiotherapeutic treatment improves oral opening in oral submucous fibrosis. J Oral Pathol Med 2009;38:220-226.
- Le PV, Gornitsky M, Domanowski G. Oral stent as treatment adjunct for oral submucous fibrosis. Oral Surg Oral Med Oral Pathol Oral Radiol Endod 1996;81:148-150.
- 7. Heller F1, Wei FC, Chang YM, Tsai CY, Liao HT, Lin CL, Kuo YC. A nontooth-borne mouth-opening device for postoperative rehabilitation after surgical release of trismus. Plast Reconstr Surg 2005;116:1856-1859.
- 8. Patil PG, Patil SP. Novel mouth-exercising device for oral submucous fibrosis. J Prosthodont 2012;21:556–560.
- Patil PG, Hazarey VK, Chaudhari R, Nimbalkar-Patil S. Clinical efficacy of mouth-exercising device adjunct to local ointment, intra-lesional injections and surgical treatment for oral submucous. Asian Pacific Journal of Cancer Prevention 20016;17:1255-1259.

Pravinkumar G Patil Managing Editor International Journal of Prosthodontics and Restorative Dentistry School of Dentistry, International Medical University Kuala Lumpur, Malaysia

