The role of dental practitioners in treating PTSD patients

Except for the ravages of excessive forces of mastication associated with bruxism, dental practitioners in general have had little experience with post-traumatic stress disorder (PTSD), a neuropsychiatric disorder that may occur in people who have experienced or witnessed a traumatic event such as a natural disaster, serious accident, terrorist act, war/combat, rape, or who have been threatened with death, sexual violence, or serious injury (DSM-5).[1] Moreover, the co-existence of medication-related xerostomia[2] and stress-related pernicious oral health behaviors (smoking, alcoholism, and drugs) readily account for PTSD patients' poor oral hygiene and consequent oral disease.[3] In general, however, the dental treatment of PTSD patients has been limited to routine care of teeth and supporting tissues, mostly provided in military or equivalent hospitals

Dental splints have long been the treatment of choice for prevention and treatment of orofacial dysfunction, dysmorphism, and other health-related disorders,[4] including temporomandibular joint-related myofascial pain and sleep apnea,[5] as other examples of the increasing involvement of dental practitioners in the physical and mental health of their patients.

Reduction in noxious nocturnal symptomatology of patients with PTSD was first reported by the oral surgeon (the third author, Donald Moeller) who observed that the insertion of a larger splint than ordinarily used to treat bruxism surprisingly reduced the self-reported sleep disruptions, headaches, and nightmares in several hundred of his PTSD patients. A formal controlled study[6] was then undertaken to quantitate the therapeutic effectiveness of a calibrated-by-patient-size increase in thickness of a mandibular splint in reducing the sleep disruptions, headaches, and nightmares of PTSD patients. Following the statistically significant demonstrated effectiveness of the splint in reducing noxious nocturnal symptomatology of 100 new patients described in a previous study,[6] the objective of the report in this editorial was to verify a suggested order effect in the relative magnitude of effectiveness in reducing the three noxious nocturnal symptoms of PTSD, with occasionally a short period of sleep when the final splint was inserted.

The results of the follow-up analysis in this editorial revealed that there was in fact a difference in the order of magnitude of effectiveness of the splint in reducing symptoms, with sleep disruption being significantly more reduced than for the equally effective headaches and nightmares. Moreover, the reliability of this method in reducing self-reported symptomatology of PTSD was based on finding no significant difference between the two identical trials of the effectiveness with and without the splint.

In conclusion, the statistically significant reaffirmation of the validity and reliability of the order of effectiveness of a thicker than usual splint provides an important therapeutic adjunct for the treatment of PTSD by dental practitioners. This follow-up statistical analysis also increases the opportunities for clinicians to utilize their knowledge and skills in treating a broader range of dental patients with comorbid physical and mental disorders involving the cranial nerves and the neuromuscular system. Given that sleep disorders are among the most frequently reported PTSD symptoms and possibly other genetically based neuropsychiatric diseases and other diseases identified in a recent special issue of Science,[7] all of which add up to considering sleep disruption the "hallmark of PTSD."[8] The use of dental splinting should therefore receive even more attention as an adjunct or alternative to pharmacologic and/or psychotherapeutic intervention.

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Donald B. Giddon, DMD, PhD
Professor Emeritus of Developmental Biology, Harvard School of Dental Medicine, Harvard University, Boston, MA, USA.
Email: donald_giddon@hms.harvard.edu

Curtis K. Deutsch, PhD
Director, Psychobiology Program, Eunice Kennedy Shriver Center, Department of Psychiatry, University of Massachusetts Chan Medical School, University of Massachusetts, Worcester, MA, USA

Donald R. Moeller, DDS, MD, MA
Moeller Oral Surgery, Columbus, GA, USA

Fahad Hegazi, BDS
Department of Preventive Dental Science, College of Dentistry, Imam Abdulrahman Bin Faisal University, Dammam, Saudi Arabia

Donald B. Giddon