



**Steven R. Olmos,
DDS**

Adjunct Professor,
University of Tennessee,
Memphis College
of Dentistry

We need to evaluate our system of treatment. A patient presents with worn dentition or complaints of muscle soreness. The dentist produces a nightguard without further investigation. The result is that the treatment helps the symptom of muscle soreness, makes it worse or has no effect. The dentist is unclear what to do.

Facial muscles are sore because of central nervous system stimulation. Jaw joints break down the result of continued nocturnal parafunctional activity. We bite harder at night due the result of proprioception ascending to the cerebellum and basal ganglia instead of the cortex where we recognize how hard we are biting. In the daytime proprioception ascends to the cortex where we are quite aware of how hard we are biting. Stress is often thought to be the most important factor in bruxism. The University of Pittsburgh School of Dental Medicine

Future of Dentistry (Part 3)

THE FUTURE IS NOW (IT'S TIME TO START DIAGNOSING)

conducted a study on one hundred adult bruxers and their relationship to stress and anticipatory stress measured by EMG. They found: "No overall relationship was established between electromyographic measures and the personality variables nor between electromyographic measures and self-reported stress."¹

Drs. Gilles Lavigne (Dean of the Dental School at the University of Montreal) and Barry Sessle (Professor and Canada Research Chair in the Faculties of Dentistry and Medicine, Editor of the *Journal of Orofacial Pain*) have collaborated in their book, *Sleep and Pain* to explain the relationship between chronic pain, sleep disorders and bruxism. They make this recommendation: "Evidence of bruxism should always prompt the clinician to test for abnormal breathing during sleep."

Is it hard for us to understand the relationship between Obstructive Sleep Apnea (OSA) and the anaerobic result of mouth breathing that results in periodontal disease. It was found that between 77-79% of patients with OSA have periodontal disease.² So if all non-caries pathology has a relationship to chronic pain and sleep disordered breathing then why aren't we evaluating it?

Which patients should we suspect have airway and chronic pain: Patients with mandibular opening less than 40mm and less than 5mm laterally, worn dentition, and scalloping of lateral sur-

face of tongue (70% predictive for OSA,³ and fractured teeth or restorations. Questions of sleep and pain should be asked. Questions of sleep would be: Can you get to sleep? Do you wake throughout the night? Do you wake rested?

The leading cause of insomnia is chronic pain.⁴ So questions of headaches and chronic pain should be asked.

We should see that the patients who seek dental care are the ones who suffer from chronic central nervous system stimulation. A recent study from two general dental practices demonstrated that 67% of the men and 28% of the women were identified as having a high risk for sleep apnea.⁵ We need to stop treating and start diagnosing. How many sleep studies have you prescribed? The future can be now.

Dentist's need to know whether they are treating primary idiopathic bruxism or iatrogenic secondary bruxism. A recently published article in the *Journal of Oral Health* from the Department of Clinical Neurophysiology and Center for Sleep-Wake Disorders, Slotervaart Medical Center, Amsterdam, The Netherlands, demonstrated an increase in apneic events in 50% of patients treated with nightguards who had OSA (Obstructive sleep apnea). **OH**

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