HEADACHE / TMJ REVIEW

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Dear Colleagues,

Dr. Pamela Steed has been in practice since 1984. She received her Master of Science Degree in Oral Medicine/Oral Diagnosis/Oral Pathology (MSD) and Doctor of Dental Surgery (DDS) degree, from the Indiana University School of Dentistry.

Dr. Steed's practice employs only conservative procedures and care and is exclusively devoted to the diagnosis and non-surgical treatment of TMJ disorders – a variety of problems associated with the jaw, supporting musculature, head and neck.

Pamela Steed, DDS, MSD

She has treated, thousands of patients with TMJ symptoms and helped immeasurably with decreasing or eliminating their pain, thus drastically improving their quality of life. Because symptoms of TMJ and associated craniofacial pain syndrome can masquerade as so many different conditions, it is often difficult to diagnose, and thus requires the attention of an expert.

A patient's "incurable" headache, ear pain, neck pain and/or facial pain can conceivably be caused by the patient's jaw joints, their dental occlusion and the related muscle tension or spasm in the associated facial musculature. Dr. Steed is highly proficient in helping determine the source of the patient's pain, as well as unravel the many confusing signs and symptoms, to arrive at an accurate diagnosis and treatment plan.

With kind regards,

Dr. Steed and Staff

Coronavirus Disease 2019 (COVID-19): Emerging and Future Challenges for Dental and Oral Medicine

L Meng, et al.
J Dent Res 2020 Mar 12

The epidemic of coronavirus disease 2019 (COVID-19), originating in Wuhan, China, has become a major public health challenge for not only China but also countries around the world. The World Health Organization announced that the outbreaks of the novel coronavirus have constituted a public health emergency of international concern. As of February 26, 2020, COVID-19 has been recognized in 34 countries, with a total of 80,239 laboratory-confirmed cases and 2,700 deaths.

Infection control measures are necessary to prevent the virus from further spreading and to help control the epidemic situation. Due to the characteristics of dental settings, the risk of cross infection can be elevated between patients and dental practitioners. For dental practices and hospitals in areas that are (potentially) affected with COVID-19, strict and effective infection control protocols are urgently needed. *This article, based on the authors' experience and relevant guidelines and research, introduces essential knowledge about COVID-19 and nosocomial infection in dental settings and provides recommended management protocols for dental practitioners in affected areas.*

How Psychosocial and Economic Impacts of COVID-19 Pandemic can Interfere on Bruxism and Temporomandibular Disorders?

Camila Megal, et al.
J Appl Oral Sci. 2020; 28

The World Health Organization (WHO) announced COVID-19 outbreak a pandemic in March 2020 and it constitutes a public health emergency of international concern. As of April 20, 2020, there have been more than 2.3 million confirmed cases and 157.000 deaths globally. COVID-19 consequences on the global economy and financial crisis are already tangible. Quarantines, disruptions of daily life, travel, work, school education and social isolation that occurred worldwide may have impacting consequences on mental health.

It is well established the importance of psychosocial factors in development and maintenance of Temporomandibular Disorders (TMD) and the high prevalence of psychological disturbances in TMD patients, mainly in those who suffer from masticatory muscle disorders. Moreover, there is a significant relationship between painful TMD, depression, and anxiety. All psychological issues involved in emergency and threatening situations like the ones faced

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Impacts of COVID-19...*continued*

with COVID-19 pandemic are able to trigger a chain of events that culminate with higher levels of sympathetic activity and further release of adrenocortical steroids which lead to muscle vasoconstriction and increased peripheral vascular resistance. All these events are supposed to create/perpetuate a situation of system overloading, a common finding in TMD patients. The autonomic impairment may also lead to increased sympathetic drive and sensation of hyperarousal which create and perpetuate any sleep disturbance. If maintained, this cycle may play an important role in pain maintenance, especially in psychological vulnerable individuals. Hence, the occurrence of post-pandemic signs and symptoms of chronic orofacial pains, including TMJ, is expected in a very similar pattern to well described post-traumatic stress syndrome.

It has already been well documented the strong impact that COVID-19 is having on the psychological issues, where a significant portion of population has reported moderate-to-severe anxiety. Medical health-care workers, mainly females, are also facing increased levels of anxiety and stress. COVID-19 outbreak may lead to major impacts in applied oral sciences for the next years. *Remarkably, it could be expected that psychological factors associated to pandemic may lead to a greater risk of developing, worsening and perpetuating bruxism (mainly awake bruxism) and TMD. Orofacial pain specialists should be aware of this fact.*

Effectiveness of Mobilization of the Upper Cervical Region and Craniocervical Flexor Training on Orofacial Pain, Mandibular Function and Headache in Women With TMD

Letícia B Calixtre, Ana Beatriz Olivia, et al.
J Oral Rehabil 2019 Feb;46(2):109-119

Studies exploring interventions targeting the cervical spine to improve symptoms in patients with temporomandibular disorders (TMD) are limited. The purpose of this study was to determine whether mobilization of the upper cervical region and craniocervical flexor training decreased orofacial pain, increased mandibular function and pressure pain thresholds (PPTs) of the masticatory muscles and decreased headache impact in women with TMD when compared to no intervention.

In a single-blind randomized controlled trial, 61 women with TMD were randomized into an intervention group (IG) and a control group (CG). The IG received upper cervical mobilizations and neck motor control and stabilization exercises for 5 weeks. The CG received no treatment. Outcomes were collected by a blind rater at baseline and 5-week follow-up. Orofacial pain intensity was collected once a week. Appropriate statistical analysis was used to determine differences within/between groups and effect sizes. *The authors concluded from the results of their study that pain intensity showed significant time-by-group interaction, with significant between-group differences at four and five weeks, with large effect sizes. The decrease in orofacial pain over time was clinically relevant only in the IG. Change in headache impact was significantly different between groups, and the IG showed a clinically relevant decrease after the treatment. No effects were found for PPT or mandibular function.*

Autonomic and Psychologic Risk Factors for Development of Tinnitus in Patients With Chronic Temporomandibular Disorders

Jeong-Hyun Kang, et al.
J Oral Facial Pain Headache Fall 2019;33(4):362–370

The purpose of this study was to investigate the roles of autonomic regulation and psychologic condition in the development of tinnitus in patients with chronic temporomandibular disorders (TMD). In total, 55 participants (mean age 36.4 years; 7 men, 48 women) were involved: 13 with no signs of painful TMD or tinnitus (CON), 15 with painful TMD without tinnitus (pTMD), and 27 with both painful TMD and tinnitus (TMDTIN). The Research Diagnostic Criteria for TMD and the Tinnitus Handicap Inventory (THI) were used to classify painful TMD and self-reported tinnitus, respectively. Measures of arterial heart rate (HR) and blood pressure (BP) were assessed at rest and in response to orthostatic challenges, cold-stress vasoconstriction, Valsalva maneuver, and psychologic stress. The sympathetic variables (BP responses to standing, cold stress, and psychologic stress) and parasympathetic variables (HR response to Valsalva maneuver [Valsalva ratio] and active standing [30:15 ratio]) were estimated.

Parasympathetic measures demonstrated significant differences between pTMD and TMDTIN. The period of pain duration showed significant positive correlations with BP variables during orthostatic challenges and/or cold stress in both pTMD and TMDTIN. THI scores showed significant positive correlations with results from the psychologic analysis. *The range of motion of the mandible demonstrated a greater correlation with results from the psychologic analysis in TMDTIN compared to pTMD. The authors conclude that dysregulated psychophysiologic interactions may affect the development of tinnitus in patients with chronic TMD.*