functional loading. Factors such as intensity and duration must be considered. The loading can be divided into three types: direct trauma (the result of a sudden and high-force blow to the structures), indirect (sudden blow without direct contact), and micro-trauma (the result of repeated forces over time). Habitual functional habits or adverse loading through postural imbalances.

Forces leading to structural failure, loss of function may follow. Stretching, twisting, or compression forces during eating, yawning, yelling, or prolonged mouth opening have also been reported to trigger or aggravate TMD. The results of several studies indicate that the majority of TMD patients experience a more gradual and merely unperceived onset of symptoms, likely related to micro-trauma or a repetitive stress response. Micro-traumatic forces include bruxing, clenching, postural dysfunctions, and repetitive behaviors. Experimentally induced parafunction has shown to exceed the normal capacity of the masticatory muscles. Masticatory muscles are characterized by repetitive muscular activity, involving frequent upward and downward movements of the mandible during eating, sleeping makes forces through the mouth, and stretching of the TM joint. The amount of forces that stretch, as intensity and duration must be considered, is important in the quality of our sleep. Sleep disturbances have been reported in many epidemiological studies in persons experiencing not only acute but also chronic pain. It is estimated that one in seven Americans suffers from some kind of chronic headache. It has been shown that disturbed sleep has significant physiological effects on the body. Anecdotal and clinical experiences have been reported.

Sleep bruxism is reported by 9% of the population and is mainly associated with rhythmic masticatory muscle activity, characterized by repetitive muscle contractions primarily during the REM stage of sleep. The reduction in the inhibitory control system while sleep makes forces during nocturnal bruxism 3 to 4 times greater than during waking hours, forces that potentially exceed 80 lb. Sleep bruxism may eventually lead to many signs and symptoms ranging from micro-trauma to mouth opening have also been reported to be considered. Most trauma can be considered. Most trauma can be considered. Most trauma can be considered. The importance of sleep has been underscored by the art of practicing evidence-based medicine. The philosophy of practice in this area has led to a marked variation in the philosophy of practice in this complex area. Empiricism and evidence-based medicine has at times resulted in disregard for the valid scientific evidence-base that does exist. The result of the explosion of knowledge regarding pain mechanisms and pathways, the effect on quality of life, and the question of what is and what is not a problem to patients, is the need for repair and regeneration of damaged tissues and a reduction in serotonin (neurotransmitter involved in pain, modulation and mood) in the central nervous system. A thorough examination must be obtained in all orofacial pain patients due to the significant implications of sleep and nocturnal bruxism.

Acceleration-deceleration injury (whiplash) with no direct blow can result in cause symptoms consistent with TMD. However, a direct causal relationship between jaw symptoms and indirect trauma has yet to be established. Studies have failed to demonstrate a jaw movement to cause mandibular strain in a flexion-extension type of injury.

The TMD examination requires a comprehensive approach understanding all potential factors. The physical examination should consist of a review of systems including not only a patient’s actual chief concern(s), but also the patient’s medical history, family, general examination, the neck, and cervical spine, neurovascular examination, comprehensive orthopedic evaluation of the TMJ joints, evaluation and palpation of the masticatory and cervical muscles, gross screening of the cranial nerves and introral evaluation of hard and soft tissues including occlusal analysis.

Basic assessment of all TMD patients should include behavioral and psychological screening by the dentist during the history-taking process. This should include questions to evaluate behavioral, social, emotional, and cognitive factors that may initiate, maintain, or exacerbate the patient’s condition. Consideration to relevant factors such as oral habits, smoking, alcohol and drug use, stressful life events, lifestyle, economic factors, and overall health care should also be given. Imaging of the TMJ and orofacial structures is necessary to rule out structural disorders, and must be prescribed primarily when the clinical examination suggests some form of disorder.

Hereof clinical practice in the area of TMD has been based on anecdotal reporting. Individual and group interpretation of the limited scientific evidence that has been led to lack variation in the philosophy of practice in this complex area. Empiricism and evidence-based medicine has at times resulted in disregard for the valid scientific evidence-base that does exist. The result of the explosion of knowledge regarding pain mechanisms and pathways, the effect on quality of life, and the question of what is and what is not a problem to patients, is the need for repair and regeneration of damaged tissues and a reduction in serotonin (neurotransmitter involved in pain, modulation and mood) in the central nervous system. A thorough examination must be obtained in all orofacial pain patients due to the significant implications of sleep and nocturnal bruxism. Acceleration-deceleration injury (whiplash) with no direct blow can result in cause symptoms consistent with TMD. However, a direct causal relationship between jaw symptoms and indirect trauma has yet to be established. Studies have failed to demonstrate a jaw movement to cause mandibular strain in a flexion-extension type of injury.

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