American Academy of Dental Sleep Medicine

FACT SHEET

Definition of Dental Sleep Medicine
&
Dental Scope of Practice Protocol

Abbreviated Definition

Dental Sleep Medicine focuses on the management of sleep-related breathing disorders (SBD), which includes snoring and obstructive sleep apnea (OSA), with oral appliance therapy (OAT) and upper airway surgery. OAT involves the customized selection, fabrication, fitting, adjustments, and long-term follow-up care of specially designed oral devices, worn during sleep, which reposition the lower jaw and tongue base forward to maintain a more open upper airway. Surgery may be an effective treatment for SBD if performed competently and on correctly identified specific anatomic sites that contribute to upper airway obstruction. The diagnosis of SBD, particularly the potentially life-threatening medical disorder OSA, must be determined by sleep physicians. The treatment of selected SBD cases with OAT should be performed by qualified dentists, and upper airway surgery by qualified surgeons.

Expanded Definition

Dental Sleep Medicine focuses on the management of sleep-related breathing disorders (SBD), which includes the continuum of snoring to obstructive sleep apnea (OSA), with oral appliance therapy (OAT) and upper airway surgery. OSA is a potentially life-threatening medical disorder that is more prevalent in males, and progressively worsens with advancing age and weight gain. It is caused by repetitive collapse and blockage of the upper airway while asleep that results in reduced oxygen delivery to body organs, most critically the heart and brain. Snoring and excessive daytime sleepiness (EDS) are the two most common symptoms of OSA. It may also cause memory loss, morning headaches, irritability, depression, decreased sex drive, and impaired concentration. Left untreated, OSA can result in hypertension, strokes, heart attacks, and sudden death while asleep, as well as motor vehicle accidents due to drowsiness while driving.

According to the Institute of Medicine's 461 page report released in April 2006 entitled "Sleep Disorders and sleep Deprivation: An Unmet Public Health Problem" (http://nap.edu), an estimated 50-70 million Americans suffer from chronic sleep disorders, including OSA. EDS alone costs $150 billion annually in lost productivity and mishaps, and another $48 billion in medical costs related to motor vehicle accidents that involve drowsy drivers. Almost 20% of all serious car crash injuries are associated with driver EDS, independent of alcohol effects.

Unfortunately the vast majority of these SBD go undiagnosed and untreated. Dentists, together with sleep physicians, are challenged to share responsibility in responding to this alarming data on the healthcare risks and economic impact of the largely undiagnosed and untreated SBD in the general population.

Dentists have pioneered the scientific research and clinical development of OAT for SBD. OAT involves the selection, fabrication, fitting, adjustments, and long term follow-up care (and management of potential complications such as malocclusion and temporomandibular joint dysfunction) of custom-designed oral devices, worn only during sleep, to reposition the mandible and tongue base anteriorly to enlarge and stabilize the oropharyngeal airway. Based in large part on these numerous studies and successful outcomes, the American Academy of Sleep Medicine (AASM) in February 2006 published updated "Practice Parameters" for the treatment of OSA with OAT, followed by a comprehensive review article, which further validates the important role of OAT in the treatment of SBD, particularly mild to moderate OSA (*Sleep* 2006:29;240-262).

Upper airway surgery is indicated when other therapies (eg., positional therapy, weight loss, and continuous positive airway pressure – by sleep physicians) are non-applicable, unsuccessful, or intolerable. Surgery may be an effective treatment for SBD, but only if performed competently and on correctly identified specific anatomic sites that contribute to upper airway obstruction, which varies between different patients.

The dental specialty of oral & maxillofacial surgery has pioneered the development of jaw, ie., maxillomandibular advancement (MMA), which is the most therapeutic surgery (excluding tracheostomy) for selected cases of moderate to severe OSA. MMA permanently advances the soft palate and tongue base (suspended from the maxilla and mandible, respectively) to enlarge and stabilize the entire velo-oro-hypopharyngeal airway and can be combined safely with adjunctive extrapharyngeal procedures in a single-staged operation. There are minimal risks of airway embarrassment due to edema in the immediate post-operative period or recurrent OSA due to cicatricial scarring and contracture, because the tissue dissection and bony osteotomies are performed outside the pharyngeal airway lumen (*Chest* 1999:116;1519-1529).

The American Academy of Dental Sleep Medicine and the AASM advocate the following medical-dental scope of practice protocol. The diagnosis of SBD, particularly the potentially life-threatening medical disorder OSA, as well as the differential diagnosis of narcolepsy, periodic limb movements of sleep, insufficient sleep syndrome, and other medical conditions that also exhibit EDS, must be determined by sleep physicians. Although research is needed to determine the efficacy and validity of evolving technology regarding portable monitoring, polysomnography, performed and interpreted by a sleep physician in an accredited sleep center or laboratory, is currently the best method to diagnose SBD. The treatment of selected SBD cases with OAT should be performed by qualified dentists, and upper airway surgery by qualified surgeons. This medical-dental practice protocol must continue to be promoted and implemented for the health and safety of our patients (and to comply with our state licensure boards). Simply put, this scope of practice is just good (sleep and dental sleep) medicine.

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