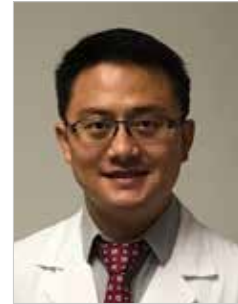


The Role of Dentists in the Treatment of Obstructive Sleep Apnea

Dennis Chun-Yu HO
Taipei Municipal Wan Fang Hospital



Sleep is a brain physiology, which could be divided into Non-REM and REM sleep. Sleep is controlled by genes and sleep structures are changed by age. Sleep is related to the growth, learning, and memory. Obstructive sleep apnea (OSA) was initially reported by Dr. Guilleminault et al in 1976. OSA is characterized by repetitive episodes of complete or partial collapse of the upper airway during sleep, resulting in periodic cessation of breathing, and intermittent hypoxia. The alteration of craniofacial structures has been associated with OSA. Therefore, dentists have an important role in diagnosis and treatment of OSA.

The diagnosis of OSA includes history taking, physical examination, medical images, sleep study and so on. Among them, the standard examination is sleep study. The sleep study is also called polysomnography, which is a painless test that measure how well you sleep and how your body responds to sleep problems. The treatment of OSA includes reduction of body

weight, nasal dilator or nasal allergy treatment, positional therapy, hypoglossal nerve stimulation, oral appliance, continuous positive airway pressure (CPAP) machine, and surgeries. Among them, the CPAP machine has been considered the 1st-line treatment of OSA because of its potential high efficacy. However, patient compliance represents a problem. Oral appliance treated by dentists could be effective in mild to moderate OSA and could be helpful in moderate to severe OSA. The surgery of maxillomandibular advancement (MMA) is one of the effective treatment option for OSA. Among Caucasian patients, an advancement of 10 to 12 mm or more has been recommended. However, a maxillomandibular protrusion can pose a cosmetic issue in Far East Asians. Some modifications should be considered during surgical planning to achieve the balance between airway changes and esthetic outcomes.