Sleeping partners:The role of the dentist in multi-disciplinary care of patients with obstructive sleep apnoea.

Obstructive sleep apnoea/hypopnoea syndrome (OSAHS) is characterised by repeated, intermittent complete or partial obstruction of the upper airway during sleep. The word apnoea is derived from the Greek meaning “without breath”. Obesity is the main predisposing risk factor for OSAHS and as early as 1837, the astute observer of the human condition Charles Dickens described in the *Pickwick Papers:*

*“Joe was obese, excessively sleepy, snored loudly and suffered from heart failure”* (Dickens, 1837)

Dickens had described OSAHS and a consequence of the condition. OSAHS is a common condition and can present with or without symptoms. The main presenting signs and symptoms of OSAHS are loud snoring, though not all snorers may have OSAHS, excessive diurnal sleepiness, feelings of choking when asleep, restless and unsatisfying sleep, mood changes and nocturia.

The consequences of untreated OSAHS can include hypertension, stroke, arrhythmias, cardiomyopathy, heart failure, unstable diabetes and cardiac arrest. The social consequences are many and include lack of concentration impacting work, road accidents, depression and marital difficulties.

The financial impact for diagnosing and treating OSAHS in the USA in 2015 was estimated to be $12.4 billion (Watson, 2016) and the global burden of adults affected has been estimated to be nearly 1 billion (Benjafield, et al., 2019). The increasing incidence of obesity worldwide will undoubtedly increase the future incidence of OSAHS.

In the UK, diagnosis is performed by respiratory physicians which will involve the history of signs and symptoms as well as polysomnographic (PSG) assessment which has traditionally involved an overnight stay in a hospital. The Covid-19 pandemic has increased the use of home assessment kits and in some countries, dentists are getting involved in the diagnosis of mild to moderate cases with such home kits. This, in the UK would be considered beyond the dentists’ scope of practice.

The standard treatment for OSAHS is continuous positive airway pressure (CPAP) which has been in reduced supply due to the increased demand brought on by the number of covid patients requiring this form of ventilation.

In August 2021 the national Institute for Health and Care Excellence published their guidelines for OSAHS (NICE, 2021). These guidelines recommended for mild to moderate OSAHS for patients who have refused or cannot tolerate CPAP that customisable or semi-customisable mandibular advancement splints should be considered for patient treatment.

This report has brought dentists into the possibility of joining multi-disciplinary teams to treat OSAHS patients by collaboratively sharing care with our respiratory physician colleagues.

So, what is the role of the dentist for OSAHS in the UK?

Dentists can refer patients who have reported issues with snoring or sleepiness for a sleep assessment at their local hospital respiratory department, possibility via the general practitioner or directly. Dentists are also ideally positioned to start health advice about weight loss and healthy life styles. Once diagnosed the dentist, after suitable training can provide mandibular advancement splints which work by opening the airway and reducing the number of apnoea episodes when the patient sleeps. These devices work best when there are some teeth left in both jaws and it is important that the dental team emphasise the importance of preventive care. Dentists need also to be aware of some of the dental consequences of OSAHS. These patients are at increased risk of respiratory complications after receiving sedation/general anaesthesia and need extended monitoring. The OSAHS patients frequently have evidence of bruxism. Possibly caused by trying to open the airway, as well as acid erosion of the teeth caused by gastro-oesophageal reflux occurring when the patients gasp air in loudly. The low oxygen levels in OSAHS patients have been associated with morning headaches and tempero-mandibular dysfunction disorders (TMJD). Indeed, there is some evidence that single arch splints may aggravate sleep apnoea and that correct diagnosis of bruxism, acid erosion and TMJD is essential for safe patient care (Nikolopoulou, et al., 2011).

With the recent NICE guidance the role of the dentist has become more central and important in the care of patients with OSAHS.

# References

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