NEWS AND UPDATES

http://dx.doi.org/10.15331/jdsm.4874

AADSM News and Updates

Reported by Ghizlane Aarab, DDS, PhD; Leila Chahine, DDS, Diplomate, ABDSM; Matthew Danchuk, DMD; Leslie C. Dort, DDS, Diplomate, ABDSM; David Schwartz, DDS, Diplomate, ABDSM

AADSM 24TH ANNUAL MEETING

Dr. Kathleen Bennett, President of the AADSM, welcomed members and attendees to the 24th Annual Meeting of the AADSM. The meeting began with the presentation of the AADSM awards. Frédéric Gagnadoux, MD, PhD received the Pierre Robin Academic Award; Dr. Sheri Katz, DDS received the Distinguished Service Award; and Dr. Gilles Lavigne, DMD, PhD was given the Honorary Membership Award for 2015.

Dr. Greg Essick, Chair of the AADSM Research Committee, presented the following abstract awards:

- Clinical Excellence Award – Shouresh Charkhandeh
- Clinical Research Award – Lilian Giannasi
- Clinical Research Award – Marijke Dieltjens
- Student Excellence Award – Elizabeth Kornegay
- Student Research Award – Fabiane Azeredo
- Student Research Award – Rita Brugarolas

Selected Meeting Highlights

Keynote Speaker: Impact of Opiates on Sleep and Addiction Risk: What Dentists Should Know
Gilles Lavigne, DMD, PhD

Dr. Lavigne discussed the chronic pain and opioid crisis. He reminded the audience that dentists are among the top prescribers of opioids. Acute pain needs to be managed but with caution. Dental providers may be the first to expose teenagers to opioids for pain after accidental injury, third molar surgery or orthognathic surgery. Dr. Lavigne cautioned against sending post-surgery patients home with large quantities of opioids.

At least 20% of the North American population experiences chronic pain and therefore those practicing dental sleep medicine will have a significant portion of their patients using opioids for pain. This situation is particularly relevant in North America where 80% of the world's opioid consumption occurs. Dental sleep medicine practitioners need to be aware of opioid use in their patients because opioids increase upper airway resistance and blunt other chemo-reflexes related to breathing. Good use of opioids is critical. There is a need to balance the right to pain relief and the possibility of misuse.

Nasal and Pharyngeal Surgery for OSA
Edward Weaver, MD

Dr. Weaver reviewed the literature on the use of surgery as an adjunct to CPAP therapy. There are to date no studies on the role of surgery as an adjunct to oral appliance therapy. He also addressed the role of surgery as salvage therapy. Although surgery may not be curative in terms of AHI reduction., AHI reduction has a poor correlation with quality of life and health effects. OSA is a progressive disease and surgical treatment may slow the progression. He emphasized that approaches to surgery should be minimally invasive, that functional obstructions should be addressed and approaches tailored to the individual's anatomy. Although useful as second line therapy surgery rarely cures OSA, poses risks and may introduce difficult recovery.

Challenging Case Reports

Dr. Michelle Cantwell presented a 56-year-old male with a history of hyperlipidemia, hypertension and gastroesophageal reflux disease. The patient reported having undergone orthognathic surgery to correct Class III malocclusion in 1998. There were no reported sleep problems or excessive daytime sleepiness prior to 1998. Following surgery the patient noted increasing fatigue, snoring and he underwent a diagnostic sleep study that indicated an AHI of 90 events/hour of sleep. In 2001, he underwent UPPP surgery with a residual AHI of 45 events/hour of sleep. In 2006, the patient initiated treatment with a mandibular advancement appliance. A repeat polysomnogram with device in place yielded an AHI of 6.2 events/hour of sleep. The patient was followed closely, had excellent homecare and his symptoms were managed well for five years. In 2012, the patient returned to his pulmonologist concerned that symptoms had returned. He was retested with his oral appliance in situ and his AHI had increased from 6.2 to 28.3 events/hour of sleep. His pulmonologist recommended CPAP but the patient refused. In 2013, a new appliance was made and calibrated. The patient changed pulmonary providers in early 2014, who suggested another sleep study to access the effectiveness. In February 2014, his PSG with oral appliance in situ yielded an AHI of 41.8 events/hour of sleep. Therefore, in April 2014, the patient was fitted with a Bi-level PAP therapy, with 16/12 cm H_2O with a residual AHI of 17 events/hour of sleep. The patient tried Bi-level PAP at home for one month, however, he could not tolerate it and came back to their prosthodontic office for re-evaluation. In May 2014, his oral appliance was calibrated further in office and a calibration home sleep study was completed during which the patient slept only on his side yielding an AHI of 6 events/hour of sleep. The patient's results were shared with his pulmonology team. However, in September 2014, the patient reported being unable to maintain positional change and was referred for surgical consultation. The patient has been assessed and is currently awaiting insurance preauthorization for hypoglossal nerve stimulation surgery. He is being monitored by his pulmonology team and is attempting to use positional therapy and an oral appliance until surgery is approved.

Dr. Ghizlane Aarab presented a 41-year-old male Treacher Collins syndrome patient with severe obstructive sleep apnea (OSA). Treacher Collins syndrome is an autosomal dominant congenital disorder characterized by craniofacial deformities. This patient complained about unrefreshing sleep, snoring, and daytime fatigue. Information about the general health status (BMI of 23.5 kg/m^2, hypertension, smoking, and alcohol intake), photographs of his face, intra-oral photos, a panthomogram, and the outcome of the baseline polysomnographic (PSG) recording (AHI = 63 events/hour of sleep) were shown during this presentation. The patient presented the following problems: 1. CPAP failure because of adherence problems 2. daytime and nighttime problems with breathing; 3. depressed mood with suicidal thoughts. The audience was challenged to answer the following questions: 1. What is the suspected etiology of OSA?; 2. Which additional diagnostic tests are needed?; 3. Which treatment options are available for this patient? After this challenge, the outcomes of the cone beam CT (CBCT) and of the drug induced sleep endoscopy (DISE) were shown. The CBCT showed the following risk factors of OSA: deviation of the nasal septum, retrognathic mandible, and a hypoplasia of the zygomatic complex. The DISE showed a complete collapse of the upper airway at the velo-pharynx and at the tongue base. The chin lift showed good clinical effect, therefore oral appliance therapy was suggested by the ENT physician. A mandibular advancement appliance (MAA) was placed and titrated in four visits based on subjective reports of the patient. The patient had an evaluation PSG with the MAA set at the 75% of the maximal protrusion in situ. The PSG showed that the MAA was not effective in lowering the AHI (62 events/hour of sleep), although the patient reported improvement in OSA symptoms. An maxilla- mandibular advancement with a double zygoma osteotomy was suggested to the patient. The patient refused this treatment, and he decided to have another try with CPAP.

Gizmos and Gadgets: Using Technology to Enhance the Care of Patients with Sleep Disorders
Dr. Neil Freedman, MD

Dr. Freeman reviewed some of the newest technologies that may be used in the field of sleep both by clinicians: now or in the future. He reviewed some of the features of ambulatory sleep testing devices commenting that some devices can allow the differentiation of central and obstructive events and others cannot. He commented that improvements in technology will expand the options for diagnosis and treatment but cautioned understanding of the limitations of devices to ensure they are used in appropriate populations. There is a lack of consistent training opportunities with the majority of ambulatory devices so scoring and interpretation beyond that given automatically can be challenging. The results and scoring from some devices will be compromised if patients on certain medications such as alpha blockers or have peripheral neuropathies. There are promising devices that may be useful for population based screening in the future. Most of the devices used today are most appropriate for those with a high pre-test probability of OSA.

Sleep Apnea's Contribution to the Stress Load and Mindfulness Based Stress Reduction
Mark Abramson, DDS

Dr. Abramson addressed the fact that humans have a multitude of stressors during the day that cause sympathetic activation leading to increase in BP, tearing of cellular walls and platelet thickening. As a reaction, Cortisol levels increase. This whole process is compounded by the fact that if you have OSA, this same sympathetic activation is occurring and of course is piggy backing onto the day time stressors. He is initiating programs at Stanford, whereby the physicians and students of the medical program are undergoing Mindfullness and Meditation training as a way to improve their behavior, their focus and performance. He had the audience perform a breathing exercise to show how breathing mindfully can improve our stress level immediately. It is these stresses that break down cells and cause cell death prematurely. Meditation can slow this rate down.

Dentofacial Consequences of CPAP
Hiroko Tsuda, DDS, PhD

Dr. Tsuda did a review of some research in both from Japan and at UBC in Vancouver. Normal Growth in children can be altered if SDB conditions become prevalent—such as adenotonsillary hypertrophy—and if left untreated can create midface deficiency and other orthodontic/orthopedic changes. First line treatment is considered Adenotonsillar removal. Unfortunately unresolved SDB in such patients can lead to long term chronic pediatric use of CPAP may also cause dental and orthopedic alterations including maxillary dental and skeletal retroclination and class III growth tendencies and maxillary midface hypoplasia and deficiency. In Adults edentulism is found to have a high correlation with increased AHI, and wearing of dentures does appear to help decrease AHI in most cases, but 44.6% of patients complained of dry mouth since beginning CPAP therapy in a 744 patient questionnaire of patients on CPAP more than 4 years. Many of these patients were aware of OAT but had a high incidence of dental neglect and may not be good candidates for OAT without proper dental treatment and intervention.

Trends in Sleep Medicine
Nathaniel Watson, MD, MS

Dr. Watson discussed some of the up and coming technologies for assessing sleep. He cautioned that many of the devices aimed at consumers are marketed as entertainment devices and therefore usually do not have validation studies. Some of the smartphone apps are promising but there are legal and social issues related to storage, access to and use of the data collected. Giving patients and their health care providers more information will allow for customized advice and treatment.

Dr. Watson reviewed the findings of the recent consensus conference on sleep duration for adults. Adults should sleep 7 or more hours to promote optimal health. There is good evidence that 6 hours or less is not healthy. There is uncertainty whether 9 hours or more is unhealthy. In certain situation, such as recovery from a period of restricted sleep or recovery from illness, that more than 9 hours may be beneficial but uncertainty over whether more that 9 hours on a regular basis is health.

AADSM 2015 EDUCATIONAL CALENDAR OF EVENTS

Upcoming 2015 Education

August 11–October 20
Fall Study Club Program
live, web-based seminars

September 19
Practical Demonstration Course
Darien, IL – AADSM National Office

November 7–8
Advanced Dental Sleep Medicine Course
Orlando, FL

Essentials of Dental Sleep Medicine Course
Orlando, FL

December 5
Practical Demonstration Course
Darien, IL – AADSM National Office