

Diagnosis and Beyond

The founder of *TMJ & Sleep Therapy Centre International LLC* believes that combining knowledge with a crucial bit of software can get dentists off to the right start when tackling sleep disordered breathing.

Steven R. Olmos, DDS, travels far and wide to educate dentists on the relationship between orofacial pain and sleep disordered breathing. He finds that many clinicians harbor only vague notions about how to actually diagnose and treat sleep disorders.

BRIDGING THE KNOWLEDGE GAP WITH TMNDX

For those who have made the effort to bridge the knowledge gaps that routinely exist within sleep medicine, Olmos created a software intake system called TMNDX (www.tmndx.com), an intake solution for temporomandibular disorders (TMD), orofacial pain, and obstructive sleep apnea. Features include: data collection; report generation; insurance claims and history; appointment scheduling; collection tracking; and chart notes.

After all, literature shows that almost 90% of those who suffer from craniofacial pain, jaw joint problems, and TMD, also have sleep disorders. “People used to treat them as separate entities,” says Olmos, a 2008 recipient of the American Academy of Craniofacial Pain’s Haden-Stack Award for contributions to education in the field of TMD and craniofacial pain. “Intake forms usually concentrate only on one thing at a time such as facial pain or breathing problems. Our software includes intake for both. It is a basic screening form for any kind of craniofacial pain or chronic pain in the whole body, as well as airway problems.”

A NEED TO EDUCATE

It comes down to education, and this type of sleep-related information gathering is rarely taught in dental schools—a situation that still exists at most institutions. Where can dentists go to get this knowledge? Olmos sought to answer this question by starting the *TMJ & Sleep Therapy Centre International LLC*, with licensed centers in the United States, Canada, and New Zealand. In conjunction with his La Mesa, Calif.-based *TMJ & Sleep Therapy Research Group*, Olmos offers courses and the TMNDX software that fosters a systematic data intake for all new patients.

Developed from a need to educate, the software and courses are based on the premise that the role of sleep in above-the-shoulder pain must always be thoughtfully considered. A complete understanding of jaw joint problems must ultimately view the jaw joint as more than a mechanical problem of displacement. “At first, we said the jaw just needed to be relocated and maintained, but the driving mechanism is what happens when you are asleep,” says Olmos. “It is not getting hit in the face with a baseball bat—which is macro trauma. That is easily explained, and can be

treated surgically. It is all the other cases of jaw joint pain, which are the majority of cases. Most times it is because of micro trauma caused by the repetitiveness of low threshold energy to the system.”

DEVELOPING A DIAGNOSIS

The intake information looks at different physiological structures and walks the dentist through the formulations and thought processes of how to identify, and then make, a diagnosis. “The problem in dentistry is that we are so quick to do a treatment, we never make a diagnosis,” explains Olmos. “We try an appliance or treatment, but we don’t know what we are treating, and that is the problem. The software helps develop a diagnosis, and then it asks you after you have a diagnosis, ‘What kind of a plan do you have? What are your goals?’ You have to have goals before you have a plan.”

Different plans for different problems guide the thinking behind the software, which is also useful for orthodontics. “This is truly an interdisciplinary approach,” adds Olmos. “As part of the software, we make it clear that other health care professionals will need to be brought into the system to make a person better. No dentist, or any one person in any type of profession, can help people in chronic pain—because if you have had chronic pain in one area then you’re going to have pains in other areas. These other areas may be out of the specialty of whatever provider is taking care of you.”

Olmos’ comprehensive system of triage could someday be the standard of care that all dentists use. “It is certainly what I am teaching at the University of Tennessee where I am an adjunct professor,” says Olmos. “I am working with the American Academy of Craniofacial Pain and the University of Tennessee to produce a craniofacial pain and sleep clinic at the University, and it would be using these techniques from the software, and make that the standard of care for all the patients that are going through that program.”

Clinicians interested in the software can download it off of the Internet. In the works for the last 6 years and introduced 3 years ago, the system bills medical insurance, gathers input into a letter writing program, and generates communication letters to other practitioners and insurance companies. “We use it at our centers and have about a hundred who are using it now,” says Olmos. “We want to get it out to the masses. It’s a great tool, but right now only specialists know about it. I’d like to see more dentists doing this kind of basic triage.”

SPEEDING UP EVOLUTION

As the recipient of a traditional dental school education from the University of Southern California, Olmos practiced for almost a decade before addressing his own knowledge gaps in the realm of sleep disordered breathing. For the next 18 years, he bridged that gap in a big way, devoting his time

exclusively to the treatment of TMD, orofacial pain, and obstructive sleep apnea.

Lay people believe that dentists are trained to identify, examine, and treat people with TMD, facial pain, or craniomandibular problems—and Olmos says dentists are typically in no hurry to dispel that misconception. Even physicians believe the myth. “Only dentists know that they were trained in none of these things,” says Olmos. “We have a big lie here. We dentists know that we were only trained on how to treat acute situations of the jaw joint, such as when someone gets hit in the face. If the problem does not resolve after that, we really do not know what to do.”

Increasingly, the medical literature is backing up Olmos with clarity on the relationships between airway problems and headaches. Twenty years ago, that was not the case, and invasive techniques (whole jaw joint replacements) for popping and clicking were in vogue. When patients underwent such surgeries, literature showed they were likely to have five more revision surgeries in their lifetime.

After seeing the evolution of dental sleep medicine for the past 20 years, Olmos says it is impossible to adequately treat orofacial and craniomandibular pain without fully exploring sleep disorders. But what should dentists check for? What should they rule out?

It all starts with the education process, and Olmos’ organization offers a number of courses, including an entry-level seminar called the “mini residency.” The mini residency reveals the basics of how to diagnose and treat jaw joint, TMJ, orofacial pain, craniomandibular pain, and all pain of the head and neck. “It is a combined course, because you can’t separate these things,” says Olmos. “We explain how to diagnose and how to intake data. We talk about neurology and functional anatomy. We talk about how to go about collecting data and how to formulate a diagnosis and treatment plan, and then we show them the different appliances. Phase one is to treat the jaw joint problems and maintain an airway, and of course we show them how to produce appliances for the specific treatment of apnea. We also explain how to view orthodontics and other phase 2 procedures.”

The mini residency is essentially didactic, so from there a student may choose to move on to the “advanced residency” where he or she will actually work with patients. The first course takes 3 weekends of 2 days, for 6 days total. The advanced residency is 2 days in succession, done once a month for 6 months.

Doctors involved will see the applications and how to diagnose, treat, and read various imaging (MRI and CT) and intake data. “We show how to treat pain with trigger point injections, and all the other physical medicine techniques,” adds Olmos. “In addition to that, we have courses that just explore how to treat sleep medicine and how to deal with apnea, the medical billing, how to read ambulatory studies, and that is a 2-day course.”

In addition to dentists, courses are attended by chiropractors, neurologists, and all other health care providers. All therapies demonstrated in the courses incorporate techniques that are provided in Olmos’ eight TMJ sleep therapy centers around the world.

APPLICATIONS FOR ALL

No matter what dental appliance or technique is used by the dentist for treating sleep apnea, Olmos laments the lack of systemized methods to take in data. Tired of repeatedly seeing this problem, Olmos’ organization created the intake software system designed to give dentists complete information about jaw joint, headache, and facial pain. The software is intended to deal with all the reasons that dentists may get a call, such as a sleep evaluation, headaches, and facial pain—or even crooked teeth.

“And when they come in, you find that the person who was going to come in to get his airway treated with an oral appliance—you find out after you put in the appliance that they are dislocated because you never checked to see if they had an osteoarthritic situation or displaced disc, because that was not part of your examination process,” says Olmos. “Or there may be someone who comes in complaining of terrible headaches and you later find he is a severe apneic, and you made appliances and he never got better. In fact he may have even gotten worse, and you could not figure out why. That is because you never check them for airway.”

In some cases, using other products in conjunction with the software can enhance overall results. Olmos also uses a system called MediByte™ (invented and sold by Braebon Medical Corp, Ontario, Canada) to monitor the efficacy of oral appliance therapy.

Using the MediByte allows Olmos to objectively measure if the oral appliance is helping before he sends patients back to the physician for a possible follow-up polysomnography (PSG). “All ambulatory devices have limitations, and some of them measure things indirectly using peripheral arterial tone, which is a step away from what you are really measuring,” says Olmos. “MediByte is more in line with what you would see when evaluating using a PSG. Data is like apples and apples. Another advantage is decent delivery to the patient. You can also use among children, and it costs just a fraction of what some of the other disposables cost.”

With data collection so important for proper identification of disorders, Olmos’ goal is for the intake software, patient questionnaire, and data collection format to be the standard of care that dentists use worldwide. Currently, the American Dental Association mandates that all dentists complete a TMJ exam on every patient, but they are notoriously sketchy about what that examination should include. “In the future, the American Dental Association will be telling us that we should do an evaluation for airway as well, and that will be mandated,” says Olmos. “Of course, I think it will be the same thing as the TMJ mandate. That is, details and guidance will be hard to come by.”

For now, Olmos is content to continue his private dental practice (and 8 international centers), while also teaching and spreading his message one course at a time. Recognizing his passion and knowledge in this arena, the University of Tennessee asked Olmos to put together a program for orofacial pain and sleep disorders.

Olmos has met with the dean and relishes the chance to influence young minds at the university level, where he can stress the importance of data intake. “I want this program and

this intake data to be taught at this master's program," says Olmos, with his characteristic enthusiasm. "In that way, we will get center stage to demonstrate that this is the standard of care, and everyone should be doing it. From that, someday I hope that all health care providers would look at this and say that we should all be doing this, because right now what is the standard documentation intake for the diagnosis of sleep disordered breathing? I don't think there is one... Every dentist should be trained in this, and it is a huge market."

UPCOMING COURSES

Two-day courses for understanding how to identify, diagnose, and profitably treat sleep-disordered breathing and apnea in your practice are planned throughout 2010.

Topics covered include:

- defining obstructive sleep apnea and sleep disorders;
- preventing potential problems;
- PSG and ambulatory evaluations;
- treatment options for sleep disordered breathing;
- oral appliance determination;
- case presentations start to finish;
- treatment alternatives;
- practice management and steps to implementing sleep; and
- marketing.

Check www.tmjtherapycentre.com for details.