GUEST COMMENTARY

McKenzie Physical Therapists and the American Dental Association: What We Learned from San Francisco Screenings

David J Pleva, PT, MA, Dip. MDT and Timothy J Caruso, PT, MBA, Cert. MDT

Over the past 15 years, Tim Caruso has been speaking to dental professionals at national and state meetings about the effects of poor posture, improper techniques or equipment, and pain in the profession. During his travels, he has noticed an increasing number of dental professionals seeking out suggestions for how to relieve their pain and discomfort, how to choose the proper equipment and how to begin an exercise routine to meet their specific needs. Additionally, he has sat on the Dental Wellness Advisory Committee (DWAC) of the American Dental Association (ADA) and has been working with them to keep dental professionals healthy. He has also helped create ergonomic tip sheets for ADA members to avoid some of the ongoing maladies that they encounter in their day to day practice. But still the question remains on how to establish a cost effective way to address the practitioner's pain while at work or to help prolong their careers pain free.

To answer some of these questions, in 2011, the American Dental Association invited Tim and I to their annual conference in Las Vegas. We participated in the health screenings portion (HSP) of the national meeting performing musculoskeletal and postural assessments on dental professionals in attendance. The musculoskeletal screenings were done using the Mechanical Diagnosis and Therapy (MDT) system guidelines for evaluating musculoskeletal spinal and extremity conditions.

We screened 62 participants in two days. We had originally allowed for 20 minute "appointments", but due to several computer glitches, we were quickly overrun with dental professionals that wanted to be screened. The process included having the participants postures photographed in a seated and standing position before and after his/her screening. Next, a musculoskeletal pain survey was filled out and an abbreviated MDT assessment was performed. The recorded complaints ranged from spinal pain to extremity pain and even a few non-mechanical presentations requiring further investigation were discovered. The participating dental professionals were very appreciative of the time we had with them, the tips we provided and the recommendation for follow-up with a McKenzie certified therapist closer to home. We asked ourselves "perhaps there is a real need out there?!"

The screenings were so well received that we were invited back to their annual conference in 2012 in San Francisco. In addition to our revisions to the questionnaires and scheduling, we enlisted the help of three California licensed, McKenzie certified therapists (Todd Soares, PT, Cert. MDT, Karl von Tiesenhausen, PT, Cert. MDT, and Marianne Potts, PT, Cert. MDT) to perform the screenings due to California's practice act. Over 100 dental professionals (dentists, hygienists and assistants) were screened for various spinal and extremity complaints. Once again, we obtained seated and standing postural photos prior to the musculoskeletal pain survey and performing the MDT assessment.

On the HSP questionnaire, 61% of current practicing dental professionals reported regularly experiencing pain, tingling or numbness with 42.6% stating their symptoms began as a result of their work. In reviewing the data from San Francisco, we had 61 males (51.3%) and 58 females (48.7%). The years in practice ranged from 0 to 55 with most in the 31 – 35 year range. Age ranged from 25 to more than 75 years old. The average visual annual score (VAS) was 4.03 out of 10. Their regions of pain complaints included: headache, neck, shoulder, elbow, wrist/hand, back, thigh, leg and foot. Some participants had upper or lower extremity symptoms consistent with cervical or lumbar derangements. The most common regions of pain complaints for both the hygienists and dentists were back, neck and shoulder pain. The hygienists had more complaints of wrist, forearm, hand/finger symptoms than the dentists. The dentists had more complaints of back and neck pain. Seventy percent of the dental professionals screened had experienced pain in the last 12 months.

Symptoms were categorized as follows: present zero to two years in 41 subjects (37%), two to five years in 22 (20%), five to 10 years in 17 (15.5%) and more than 10 years in 30 subjects (27%). Of these, 22 (19%) felt they were getting better; 67 (59%) were unchanging and 23 (20.5%) felt that they were getting worse. Almost 43% have had pain for greater than five years and the majority had symptoms that were either staying the same or worsening. Seventy-six percent had previous episodes with 36% having more than 11 episodes. Thirty seven percent believed their symptoms began as a result of repetitive motions

at work with 34% not being able to find a direct cause. Eight percent were not able to practice because of their symptoms.

Overall, 78.4% responded positively to mechanical therapy after this brief screening. Fifty-two percent had an extension directional preference, 27% lateral, 3% flexion and 19% did not exhibit a directional preference. With classification of these participants, fifty-five percent were derangements, 17% were dysfunctions, 2% posture and 15% fell into the OTHER category. Of those who were derangements, 73% responded to extension, 14% to lateral principles and 13% responded to flexion. Just by correcting the sitting posture, 31.8% reported improvement in their symptoms. These findings demonstrate that the majority of dental professionals that participated in the screenings can respond quickly to an appropriate conservative treatment plan.

We also found some interesting findings that we need to further investigate. Hand dominance did not have a significant role in symptoms and neither did the number of hours worked per year or hours spent sitting or standing have any significant correlation with back pain. Significant risk factors were height, age, years in practice and posture.

The next two years, we were involved in the ADA meeting performing postural screenings and ergonomic assessments with participants at the meeting in an informal setting. We discovered similar findings and a general lack of knowledge on where to seek out a competent caregiver.

When looking at these numbers, we ask ourselves, why should one suffer so long with symptoms that are not getting better when there is help out there? Our experience and the feedback that we have received has been invaluable and speaks to the need to share the importance of seeking out and exhausting conservative spinal care before having expensive imaging, undergoing unnecessary procedures or signing up for surgical intervention. There are a significant number of individuals in any number of professional organizations that do not have any idea where to start to seek out competent initial care and treatment for ongoing back, neck or extremity pain. We can see that partnering with the American Dental Association will have a positive impact on the dental professionals by sharing this information about MDT as a service to its members.

We were invited back to the 2014 ADA conference in San Antonio and in addition to screening more dental professionals, we presented our initial findings from San Francisco to over 150 dental professionals. We are in the process of streamlining our musculoskeletal questionnaire in order to make meaningful recommendations to the ADA. We will be presenting more detailed findings from San Francisco with the assistance of the American Dental Association's epidemiologist at the 2015 American Dental Association conference this November.