

# Maxilla to Mandible

Winter 2008

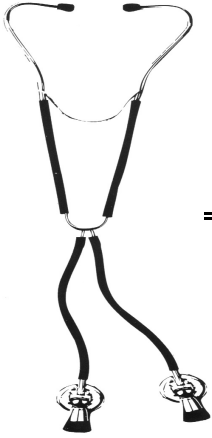
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## Editorial

The following is an edited press release from the Journal of the American Dental Association which I thought would be of interest to our readers.

*One in three people exposed to whiplash trauma is at risk of developing delayed TMJ symptoms that may require treatment.*

*Researchers studied short- and long-term temporomandibular joint (TMJ) pain and dysfunction in 60 patients in hospital emergency rooms directly after they were involved in a rear-end car collision and evaluated them again one year later. The incidence of new symptoms of TMJ pain, dysfunction or both between the initial examination and follow up was five times higher in subjects than in uninjured control subjects. In the year between the two examinations, 7 percent of control subjects developed symptoms in the TMJ versus 34 percent of study subjects.*

*When the patients reported having symptoms in the TMJ either before or after their accidents or both, the authors evaluated symptoms, including clicking, locking and TMJ pain. They also asked patients to rate their pain intensity and report the degree to which symptoms interfered with their daily lives, including sleep disturbances, use of pain relievers and the need to take sick leave.*

*The conclusion: One in three people who are exposed to whiplash trauma, which induces neck symptoms, is at risk of developing delayed TMJ pain and dysfunction during the year after the accident.*

Something to keep in mind!

## Headache Impact in Patients with Orofacial Pain

The most prevalent oral facial pain (OFF) condition is musculoskeletal in origin, i.e., temporomandibular disorder (TMD). One of the most common self-reported symptoms of TMD is headache. Treatment for TMD can greatly reduce headache, indicating a close relationship between the two disorders. The impact of headache on patients with TMD has not been widely studied, but it is thought to be a potential disability, as defined by the World Health Organization.

The purpose of this study was to assess headache disability in patients with orofacial pain. The Migraine Disability Assessment (MIDAS) questionnaire, a reliable and valid tool, was used to assess headache disability. MIDAS was administered to 337 patients with OFF and 367 general dental (GD) patients who served as controls for this cross-sectional study.

Upon examination, the patients with OFF were divided into three major categories: primary headache (PH), musculoskeletal disorders (MS) and neuropathic pain (NP). The MIDAS score was also categorized into four severity grades (I, the lowest, through IV, the highest). In general, patients with OCF had a greater prevalence of headache compared to patients in the GD group. They displayed a higher total MIDAS score, number of headache days in the past three months, and headache severity. Within the OFF group, the prevalence of PH, MS, and NP was 7.1%, 79.7%, and 13.1%, respectively. Fifty-six percent of the patients in the OFF group were categorized in the high impact headache group (MIDAS grades III and IV).



*Dr. Wexler has 30 years experience in the field of jaw treatment. He is a Diplomate, American Board of Orofacial Pain, member of the American Academy of Craniofacial Pain, American Academy of Orofacial Pain, American Headache Society, and the American Academy of Dental Sleep Medicine. He is a Fellow of Academy of General Dentistry, member of the Canadian and Ontario Dental Associations and the Ottawa Dental Society. His practice is limited to treatment of temporomandibular disorders and orofacial pain.*

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In conclusion, patients with OFP had a higher prevalence of headache with greater disability impact than the control patients. The degree of disability was highly correlated to the MS diagnosis. Because the coexistence of primary headache disorders and musculoskeletal disorders can lead to higher headache disability, clinicians need to treat both disorders concurrently, which will ultimately result in improved clinical outcome.

JADA 137: 1267-1274, 2006.

**Occlusal Characteristics in Subjects with Facial Pain Compared to a Pain-free Control Group**

A common symptom of temporomandibular disorder (TMD) is facial pain. The cause of facial pain is multifactorial, and a few studies suggest that discrepancies in occlusion may contribute to facial pain associated with TMD. Occlusal factors may cause morphological changes in TMJ internal structure in relation to configuration and function of the disk.

The purpose of this study was to compare the occlusal relationships with two definite measurements in subjects with and without facial pain in a population-based sample of young adults. The study consisted of 104 patients (52 with facial pain and 52 non-pain controls). Dental occlusion was analyzed on gypsum casts using the following two methods: (1) the Peer assessment rating (PAR) and (2) the bilateral canine relationship and the dental midline measurements. The PAR gives a score representing the overall severity of occlusal discrepancies. The second method consisted of measuring the distance of the distal contact point of the lower canine to that of the upper canine on the same side and also measuring the bilateral canine relationship.

A positive value indicates anterior location of the lower canine in relation to the upper canine, while a negative value indicates a posterior position of the lower canine. Dental midline asymmetry was determined as the distance from the lower incisal midline to the upper incisal midline parallel to the occlusal plane. A positive value indicated the lower incisal midline was to the right and a negative value to the left in relation to the upper incisal midline. The PAR method was less sensitive than the second method in detecting sagittal occlusal discrepancies. The second method showed the lower canine to be

more mesially located in the group with facial pain, compared to the control group.

The data from this study suggests that differences in occlusal sagittal relationships, especially mesial canine relation, correlate with facial pain symptoms associated with TMD.

J Craniomandib Prac 24: 245-251, 2006.

**Condylar Movements of Temporomandibular Disorder Patients with Intermittent Lock: A Pilot Study**

The present study was designed to clarify which direction of the condylar path is advantageous for releasing TMJ intermittent lock. Ten subjects, with TMD and intermittent lock caused by anterior displacement of disks without obvious medial or lateral displacement, were enrolled in the study. The patients could not open their mouths fully in habitual opening but could open fully in an intentional winding opening with reduction of the anteriorly displaced disks (winding opening).

Two kinds of movement at the kinematic condylar point were measured and compared in three dimensions in each subject using a jaw movement analyzer. The length of the condylar path in winding opening was significantly larger than that in habitual opening. The condyle on the affected side in winding opening traced medio-inferior paths in the early part of the condylar translation in comparison with habitual opening.

With respect to the condylar path, the medio-inferior direction of condylar translation is thought to be most advantageous for the release of intermittent lock. In future studies, it would be helpful to obtain more detailed points on the surface of the condyle using magnetic resonance imaging.

J Craniomandib Prac 25: 50-56, 2007

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