



OMS

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“Electromyography in diagnosing temporomandibular disorders”

According to Bell and the American Association of Orthodontists, “temporomandibular disorders” (TMDs) is the term used to describe all functional disturbances of the masticatory system. TMDs are characterized by symptoms in the preauricular area, the temporomandibular joint (TMJ) and related structures. Kohler and colleagues reported that up to 50 percent of people in a normal population may have at least one sign of TMD, and approximately 5 to 9 percent have significant TMD symptoms. TMD constitutes a major source of chronic orofacial pain that interferes with daily activities, and it may be associated with other symptoms affecting the head and neck region. TMD pain is typically aggravated by jaw function and may be accompanied by a limitation in jaw movement, as well as by joint tenderness, joint noises and masticatory muscle soreness. Diagnosing TMD has been difficult because of the symptoms that

overlap those of other orofacial pain conditions such as otitis, tooth pain and headaches.

Electromyography (EMG) is the study of muscle function through the analysis of the electrical signals produced during muscular contractions. EMG is a noninvasive tool used to measure muscular activity by placing surface electrodes on the skin overlying the muscle. Operators use EMG commonly to determine the timing of muscle contractions, analyze the pattern of muscle contraction in the function of body movement and investigate the process of muscular fatigue. The theoretical basis behind EMG in the diagnosis of TMD is the belief that a painful muscle with spasm has high electrical potential detected by means of EMG. However, because most pain symptoms such as myofacial pain and centrally mediate myalgia, are not the result of myospasm, the absolute association between muscular pain and high EMG mus-

cle activity is questionable. A small amount of experimental evidence suggests a long lasting increase in EMG activity in human participants during ongoing experimental muscle pain.

Although clinicians and researchers have used EMG extensively in dentistry, its usefulness as a clinical tool to diagnose TMD has been controversial. Several authors

continued on reverse

NEWS YOU CAN USE

For mandibular overdentures, marginal bone loss may not be affected by implant design or attachment type

Clinical Question. What is the effect of implant design and attachment type on marginal bone loss around implants supporting dentures?

Systemic Review Conclusion. Marginal bone loss around implants supporting or retaining mandibular overdentures is not significantly affected by the implant system or attachment design.

Critical summary assessment. Results of a systematic review show no significant difference between implant systems or attachment designs with regard to marginal bone loss around mandibular overdentures. This

allows practitioners to focus on other variables when planning treatment.

Implications for dental practice. The available evidence suggests that no difference exists with regard to marginal bone loss around implants supporting mandibular overdentures with ball or bar attachments. Therefore, clinicians may want to consider the clinical context, patients' values and the cost:benefit ratio when recommending one implant or attachment design over another.

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DENTAL FUN FACT

DID YOU KNOW...

The ancient Chinese wrapped tiny pieces of parchment around painful teeth, all of which contained written prayers and incantations.

<http://dentistry.about.com/funfacts>

have conducted studies and reviews of EMG and TMD; however to date there is no agreement with regard to its diagnostic utility.

CONCLUSIONS:

The scientific literature available to date does not provide evidence to support the use of EMG for TMD screening or diagnosis. There is no substitute for a comprehensive medical history and physical examination, which

are low in cost and available to the general population. In addition, the use of various imaging modalities (cone-beam computed tomography, magnetic resonance imaging or both) is appropriate in se-

lected patients for diagnostic and treatment purposes.

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Dr. Brian Simpson
announces the thirteenth meeting of the
NANUET IMPLANT STUDY GROUP

speaker: Frank Deschino, NREMT-P, CIC
Deputy EMS Coordinator, Rockland County

**“Emergencies in the
Dental Office”**

Thursday, November 8, 2012

Dinner: 6:30 Presentation: 7:00 — 9:00 pm

Restaurant X 117 North Rte. 303 Congers, NY

2 CE credits awarded by the Ninth District Dental Association

Cost: \$45.00

**To register, contact Theresa: 845-623-3497
or email her at theresag@drbriansimpson.com**

*“I’ve failed over and over and over again in my life
and that is why I succeed.” - Michael Jordan*