Temporomandibular disorder is a collective term embracing a number of clinical problems that involve the masticatory musculature, the temporomandibular joint (TMJ), asso- ciated structures, or both that have many common symp- toms. The term is synonymous with others frequently utilized such as non-organic pain and dysfunction syndrome, temporo- mandibular joint syndrome and other general disorders. Temporomandibular disorders are currently recognized as a major cause of non-dental pain in the orofa-acial region and are considered a sub-categorization of muscu-loskeletal disorders.

Classic signs and symptoms associated with TMD are pain in the auriculo-mandibular region and con- tiguous areas to include, TM joint and masticatory and cervical musculature; muscle action in mandibular movements; and TM joint sounds (clicking, pop- ping, crepitus). The pain is usu- ally aggravated by chewing or other jaw function.

Commonly associated co-ex- isting co-morbidity factors with TMD are headache, ocular pain, facial pain, ear and jaw ache. Non-painful masticatory muscle hypeoesthesia is also an oc- casional feature resulting from oral sa- nitation activities such as bruxism may be related prob- lems.

A functional homeostatic bal- ance between the various com- ponents of the masticatory sys- tem must be maintained for long- term stability. In addition, there are other contributing factors which can disrupt this dynamic bal- ance. Anatomical, neurologic, physiologic and psychologic fac- tors can, alone or in combination, be sufficient to disrupt this bal- ance; thus reducing the adaptive capacity of the masticatory sys- tem by accelerating the progression of symptoms of TMD.

Epidemiology, the study of the distribution and determi- nants of health-related states and events in populations,1 should have a definitive application to the problem in question. Epi- demiology studies related to TMD have been primarily focused on prevalence and the associated signs and symptoms. Most of the studies are cross-sectional sam- ples, meaning they are not neces- sarily representative of the gen- eral population. Therefore, their presence and specific signs must be questioned.

8 Trends & Applications

Temporomandibular Disorders: Epidemiologic and Etiologic Considerations, Part 1

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Signs and symptoms of TMD are very common in the general population. They suggest that 40 to 75% of the general popula- tion have at least one sign of TMD (joint noise, tenderness, etc.), 33% of the general popul- ation have at least one symptom (face pain, joint pain, etc.).** The prevalence of signs and symp- toms of TMD in childhood has been assessed but tends to be significantly lower in adults.*** Signs and symptoms years suggesting that either bio- logic, neurological or psycholog- ical factors unique to women in this period of life could increase the risk of developing or main- taining this condition. It has been long recognized that females demonstrate a greater pain sensi- tivity during the menstrual cy- cle, at ovulation, and following menses. Functional estrogen re- ceptors have been identified in most synovial joints of males and females in equal concentrations.

A relationship between a his- torical and the natural history of the course of TMD. Probably the dif- ficulty in establishing clinically, a significant direct cause effect relationship because of the many variables involved that probably are too difficult, if not impossible, to exclude.

Many early theories empha- sized dental morphologic fac- tors of malocclusion, occlusal disharmony, and temporomandibular alignment as being primarily responsible for the development of TMD symptoms. However, the definition, evaluation and analysis of occlusion are impor- tant aspects in the treatment TMD. The question is, is occlusion the most im- portant factor? Little evidence is available to strongly implicate occlusion in the etiology of TMD.

Several studies have demon- strated that the presence of predisposing factors such as structural, metabolic, and/or psychological conditions could be sufficient to increase the risk of developing TMD related prob- lems if these affecting the mas- ticatory system in a negative way. It is estimated that 10–25% of the general popula- tion have a history of physical and/or sexual abuse. Researchers have found that an abuse history is likely to increase an individual’s tendency to dwell on, amplify, and over in- terpret somatic symptoms.** The role of various types of trauma in the etiology of TMD has been debased for many years.

“Historically, TM disorders have been on stage for confusion and disagreement about what constitutes proper diagnosis, treatment, and management.

The value of proper nutrition in the treatment of TMD has been debated. The controversy may have been based on belief systems and testimonials. Why so much contro- versy? The controversy may have been on stage for confusion and disagreement about what constitutes proper diagnosis, treatment, and management.

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