

Temporomandibular Disease – Revisited (2001)

**Sheldon D. Gross, D.D.S.
Orofacial Pain Management
Bloomfield, Connecticut**

The term temporomandibular disorders (TMD) refers to an umbrella that embraces a number of clinical problems involving the masticatory musculature, temporomandibular joint, and associated structures. The symptoms are more prevalent in women, and usually include pain of the masticatory muscles, jaw dysfunction such as abnormal gait, and joint noise. Epidemiological studies have shown that 75% of these individuals complain of headache. Only 5% of TMD patients require treatment, but when given the fact that TMD exists in about 50-75% of the population, this group of disorders cannot be ignored in the differential diagnosis of headache.

The diagnosis and treatment of TMD varies among different disciplines as well as within each discipline. Complicating both diagnosis and treatment is that the clinical symptoms of TMD may not correlate with the severity of joint disease. Neurologists, dentists, chiropractors, physical therapists, physiatrists, and psychologists, are only a few of the practitioners claiming good success in treating TMD. Medications, trigger point injections, muscular therapy, dental appliances, coping skills and behavior modification are just a few of the modalities used. These claims are partially valid since TMD certainly has multiple etiologies and contributing factors. Treatment assessment is also made difficult by the fact that some TMD conditions are cyclical, with treatment success being assumed when symptoms resolve spontaneously.

TMD can produce headaches in several ways. When the source of the pain is an actual arthralgia, a headache can result from deep somatic referred pain, but may also be due to secondary muscle pain, or to stimulation of a trigeminal system generator by deep pain afferent input. Continuous temporomandibular joint pain has been shown to refer to the temporal region. This same pain often causes guarding, seen in the masseter and temporalis muscles, often perceived as frontal, temporal, and facial pain. Pre-existing headache tendencies can also be influenced by TMD, presumably on the basis of central sensitization brought about by continuous trigeminal stimulation. This clearly seems to happen with other strong head and facial pain input from such conditions as sinus infections, otalgia, and dental pain.

AAOP Proposed Classification of TMD Pain

- 1. Congenital or developmental disorders**
- 2. Disc derangement disorders**
 - a) Disc displacement with reduction**
 - b) Disc displacement without reduction**
- 3. Temporomandibular joint dislocation**
- 4. Inflammatory disorders**
 - a) Capsulitis / Synovitis**
 - b) Polyarthritides**
- 5. Osteoarthritis (noninflammatory disorders)**
 - a) Primary**
 - b) Secondary**
- 6. Ankylosis**
- 7. Fracture (condylar process)**
- 8. Masticatory muscle disorders**
 - a) Myofascial pain**
 - b) Myositis**

- c) Myospasm**
- d) Local myalgia - unclassified**
- e) Myofibrotic contracture**
- f) Neoplasia**

Myofascial pain is also a common finding in TMD patients. This regional muscle disorder is characterized by a dull aching pain with the presence of tender sites ("myofascial trigger points") capable of producing pain in local and non-dermatomal areas. As shown by Travell and Simons, masticatory myofascial pain is capable of producing reproducible referred pain to various regions of the head. For example, their studies have shown that masseter or temporalis muscle trigger points can refer pain to periorbital, supraorbital, and temporal areas. Therefore, masticatory muscle myofascial pain should be considered as a possible etiology in patients with chronic daily headache.

In the past, TMD was overdiagnosed as a cause of headache with many disciplines claiming particular success. As with other musculoskeletal conditions, several approaches may offer symptomatic relief while ignoring diagnosis or etiology. Some treatment successes may actually be related to unintended treatment of an undiagnosed condition or to spontaneous cyclical remission of symptoms. The confusing nature of TMD has led many to assume that TMD is not a valid condition. The correct conclusion, however, is that TMD is a collection of musculoskeletal symptoms, having multiple etiologies and treatments, that will continue to be misunderstood until diagnostic inclusion criteria are better appreciated and understood by everyone.