TMJ disorders complicate treatment planning

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Your first exam of the morning is a young woman, about 30 years old, with a chief complaint of acute temporomandibular joint pain and occasional locking. She has a Class I malocclusion with slightly excessive overjet and overbite secondary to a congenitally missing lower incisor. Will you consider treating this person, or do you prefer to refer her to a TMD specialist? If you decide to make a definitive diagnosis leading to a plan of treatment, will you include oriented tomograms in your records? And finally, if you do initiate active treatment for the purpose of repositioning the mandible anteriorly to relieve TMD symptoms, do you expect to maintain the new skeletal relationship indefinitely?

Orthodontists confront these and related questions weekly, and the answers are rarely easy. Most of us know some well-trained specialists in the area of temporomandibular joint disease, and involving them in the diagnosis and treatment planning process early on can be beneficial. When such consultative services are not available, studies show that taking time to educate the patient about the nature of his or her TMD symptoms is of value to the individual.

But what if you, as the experienced clinician, decide to initiate comprehensive orthodontic care by asking the patient to wear a simple *flatplane* splint full-time, or perhaps a splint designed to advance the mandible in an attempt to recapture the disk? What risks are inherent in this treatment approach, and how should the patient be involved in making this decision?

The first two articles in this issue of *The Angle Orthodontist* address many of these questions and are based on the long-term treatment responses of a number of patients with similar TMD symptoms. The first report, by Donald R. Joondeph (Long-term stability of mandibular orthopedic repositioning. Angle Orthod 1999;69:201-209), is based on his treatment of 12 patients using an anterior repositioning splint followed by orthodontic tooth movement to stabilize the occlusion in an anterior position. Although Joondeph presents only one patient, he states that all 12 treated in this manner responded similarly. You are encouraged to read this paper in its entirety; you might be surprised by his findings with regard to the final anteroposterior relationship of the mandible.

The second article related to this intriguing topic is authored by John Grubb and is titled, "Case Report: Treatment for a patient with a history of TMJ disorder." A thorough clinical evaluation of the patient revealed bilateral myofascial tenderness in the masseter and temporalis areas, a history of bruxism, and a mandibular functional relationship that was difficult to manipulate, leading to a suspicion that the patient might have a significant occlusal shift. Following the gathering of comprehensive records, the author stated that "Reasonable convention suggested the use of a *flatplane* deprogramming splint with periodic adjustments to maintain patient comfort."

One critical piece of information was disclosed to this patient prior to placing the flatplane splint. She was told, in a number of ways, that following splint therapy her occlusal relationship could be irreversibly altered to the extent that orthognathic surgery might be necessary to bring the teeth together again. In reviewing the lessons learned through the treatment of this patient, Grubb notes that establishing a stable occlusal reference point prior to initiating orthodontic therapy is the key to preventing the surprise of undiagnosed skeletal discrepancies.

Even with all of these precautions, the observed improvement in patient symptoms may not be related to the alteration of mandibular position. In the treatment of his TMD patients, Joondeph notes that the potential for relapse remains high. He cautions that, "if adaptation does not take place at the dental level through localized tooth relapse, adaptive changes may occur in the joints through remodeling or degenerative changes."

Take time to study these case reports as submitted by two excellent clinicians...then recommend *The Angle Orthodontist* to a friend or colleague looking for practical clinical solutions based on a background of peer-reviewed research.

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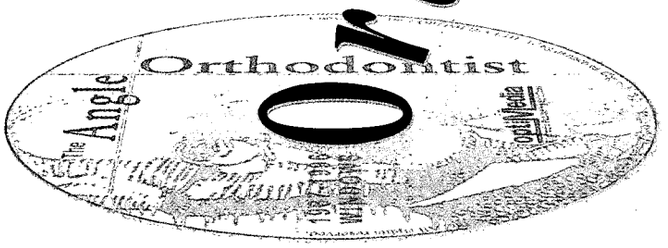

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