The complex concepts and procedures of magnetic resonance imaging (MRI) are unfamiliar to many dentists. Similarly, many radiologists lack understanding of the clinical requirements of the dentist for accurate assessment of TMJ abnormalities. Thus, TMJ imaging procedures may be inadequate or incomplete, may vary from facility to facility, and sometimes from patient to patient in a given facility. A protocol for TMJ imaging is presented which meets dental requirements and is rapidly performed in the MRI facility. The protocol may be copied and attached to the prescription to the imaging center. It may be modified or expanded to accommodate specific patient requirements or equipment performance.

Forty-eight (48) consecutive patients seeking treatment in a referral based practice for complex chronic painful temporomandibular joint (TMJ) disease were enrolled in a prospective study to assess specific symptom relief from anterior repositioning appliance (ARA) therapy and the relationship between specific symptom relief and the status of the TMJ disk. Each patient was assessed on 86 symptoms based upon whether each symptom was present before treatment and absent, better, unchanged or worse after Maximum Medical Improvement (MMI). The most common symptom was occipital cephalalgia (94%). The least common symptom was pain and burning of tongue (8%). A profile of a temporomandibular disorder (TMD) patient was developed. The typical TMD patient has cephalalgia, mainly in the occipital, temporal and frontal region, pain upon chewing food, pain upon opening and closing the mouth, TMJ pain, pain in the back of the neck and difficulty chewing food. Before treatment, patients with bilateral displaced disks had more symptoms than those with unilateral displaced disks and the opposite side normal. After MMI, the maximum benefit (percent of pretreatment symptoms relieved) was found in patients with normal or recaptured disks. The minimum occurred in patients whose disks did not recapture with therapy. ARA therapy improved or eliminated symptoms in all patients in the study.
Guidelines for Anterior Repositioning Appliance Therapy for the Management of Craniofacial Pain and TMD

The Journal of Craniomandibular Practice, October 2005, Vol. 23, Nº4, Pag. 300 - 306

The following is a position paper on the guidelines for Anterior Repositioning Appliance (ARA) therapy that are approved by the Board of Directors of the American Academy of Craniofacial Pain (AACP). These guidelines should be used as an aid in the reader's education. ARA therapy is complex care and the reader should seek education and clinical skills before attempting to provide ARA therapy services to patients. Successful ARA therapy depends on the skills of the clinician and has limitations. No treatment modality works every time on every patient. The following is an organized literature review with opinions of the author. The AACP does not accept any responsibility for adverse treatment outcomes from following these guides.

Initial TMJ Disk Recapture with Anterior Repositioning Appliances and Relation to Dental History

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Fifty-eight consecutive patients in a referral based practice seeking treatment for complex chronic painful temporomandibular joint (TMJ) disease were enrolled in a prospective study to assess the recapture of displaced disks by anterior repositioning appliances (ARA) and the improvement in disk position in those disks that did not fully recapture. After standard clinical workup, including assessment of pain, maxillary and mandibular ARAs were constructed which repositioned condyles to the Gelb 4/7 position as determined by cephalometrically-corrected linear tomograms. Multi-planar magnetic resonance imaging (MRI) was performed immediately before and after insertion of the mandibular ARA, showing three-dimensional recapture of disks in 85% and improved disk position in 6% of reducing displacements. Disk position was improved in 28% of nonreducing joints, but none were totally recaptured. Recapture or improvement was achieved in 91% of reducing, 28% of nonreducing, and 63% of all joints with internal derangements. Initial disk position, reduction on opening and recapture by ARA were statistically independent of patient age, number of teeth missing, number of third molars missing, malocclusion (Angle's class), overjet, overbite, prosthetic appliances, and previous orthodontic treatment. It was concluded that ARA therapy provided effective recapture of displaced TMJ disks that reduce upon mouth opening. In this population of patients with chronic TMJ pain, previous dental treatment had no statistically significant effect on the incidence of internal derangement or on disk recapture by ARA therapy. There was no evidence of adverse effect from orthodontics, prosthetics, or any other dental care.