

## Arthrographically Assisted Splint Therapy for the Treatment of Temporomandibular Joint Disk Displacement

When arthrography is used for the diagnosis of temporomandibular joint disorders, the severity of intracapsular disease can be determined and specific treatment regimens initiated. The purpose of this study was to evaluate the use of temporomandibular arthrography in aiding the fabrication of occlusal splints for patients with painful clicking of the temporomandibular joint.

Eighty-two patients with painful temporomandibular joints and audible joint noise, diagnosed by the dentist as disk displacement with reduction (reciprocal clicking), were selected for this study. Arthrographic examination was used for making the diagnosis, for confirming the anterior repositioning of the mandible to a normal disk-condyle relationship, and for fabricating an anterior repositioning splint to the arthrographically acceptable anatomy.

The average amount of protrusion necessary to establish optimal disk-condyle relationships was 3.2 mm on the affected side and 1.3 mm on the non-affected side. A satisfactory disk-condyle relationship was established in 52 of the 82 patients (63.4 percent), but not in the remaining patients. In the course of the study, it became apparent that the later the opening click, the earlier the closing click. It was not always possible to auscultate or palpate either an opening or closing click in many patients with arthrographic findings of disk displacement with reduction. Since the opening click was the only audible sound in some patients, clinical judgment alone cannot be used to replace the displaced disk at an optimal mandibular position. The elimination of the opening click does not always signify recapture of the disk. Maxillomandibular and incisal relationships limit the amount of protrusion possible to recapture the displaced disk.

R. H. Tallents, R. W. Katzberg, T. L. Miller, J. V. Manzione, and C. Oster. Evaluation of arthrographically assisted splint therapy in treatment of TMJ disk displacement. *J. Prosthet. Dent.* 53:836, 1985.

*Comment: In successfully treating many anteriorly displaced disks (90 percent success rate), it never has been necessary to resort to arthroscopy for splint construction. This technique seems to be too invasive for the potential advantage it might provide.*

N = 82

Condyle advancement

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3.2 mm