

Efficacy of arthrocentesis, splint therapy and MRI assessment in management of patients with temporomandibular joint disorders

This study was done on twenty patients who complaining of TMD which included pain, limited mouth opening, clicking and tenderness. The patients were divided into two groups. Both groups were treated with arthrocentesis. Mandibular hard acrylic resin repositioning splint was constructed for group II and was worn after arthrocentesis. Clinical, biochemical and radiographic imaging (MRI) evaluations were carried out to assess the efficacy of arthrocentesis (lavage) of the inflammatory cytokines in the synovial fluid of the symptomatic TMJ. Also, the detection of glycosaminoglycans and glucuronic acid in both the serum and synovial fluid as markers of internal derangement and cartilage deterioration was done. We conducted from this study the following : Arthrocentesis decreased requirement for hospitalization, less operating time and therefore shortened anesthesia (local anesthesia). The combination treatment of arthrocentesis of the TMJ and mandibular repositioning splint gave the advantages of relief pain and considered as treatment modality before surgical intervention to avoid high morbidity associated with surgery. The increase of pro-inflammatory cytokines may be considered as sign of early cartilage degradation followed by structural loss of the bony components of the TMJ and clinical symptoms of pain in the joint area. The measurement of glucuronic acid in the serum provides indirect information about the activity of proteoglycan metabolism. The detection of proteoglycan and its product in the synovial fluid appear to be a marker of active cartilage destruction. MRI is the only direct objective, very sensitive and accurate imaging modality to test the validity and effect as well as the prognosis of lavage (arthrocentesis) and prosthesis treatment of TMD. Erosion of the disc is a sign of bad omen in the way of anatomical repositioning of the disc after different modalities of treatment.