

Arthrocentesis associated with viscosupplementation in a case of anterior disc displacement and attachment in temporomandibular joint

Introduction: Temporomandibular disorders (TMD) are a group of conditions that cause pain and dysfunction in temporomandibular joint (TMJ), masticatory muscles, and/or associated structures. Signs and symptoms include pain, joint sounds and/or joint dysfunction [1 Chantaracherd P, John MT, Hodges JS, et al. Temporomandibular joint disorders impact on pain, function, and disability. *J Dent Res.* 2015;94(3 Suppl):79S–86S. doi:10.1177/0022034514565793] [Crossref], [PubMed], [Web of Science ®], [Google Scholar], 2 De Leeuw R. Orofacial pain: guidelines for classification, assessment, and management. 4th ed. Chicago: Quintessence Publishing; 2008. p. 315. [Google Scholar]]. The aim of this study is to report the clinical case of a patient with TMD, articular disc sounds, associated with arthralgia. who underwent arthrocentesis with biodynamic irrigation and subsequent viscosupplementation in order to reestablish ATM biomechanics and promote pain relief.

Materials and methods: Detailed clinical evaluation and examination of magnetic resonance imaging demonstrated an anterior displacement with the attachment of the TMJ disc to the posterior wall of the articular tubercle. This was accompanied by joint sound and severe pain (VAS =7), difficulty in chewing, as well as decreased interincisal distance (28.06 mm), which lingered for more than 5 years. Treatment consisted of arthrocentesis under local anesthesia without sedation, with two needles technique, using a total volume of 200 mL of saline solution followed by synovial fluid replacement with 10 mL of 0.5% 1200 kDa molecular weight sodium hyaluronate solution (Viscoseal®) under joint manipulation. After

this procedure, 1 mL of 1% 1000-2000 kDa molecular weight sodium hyaluronate solution (Osteonil®) (viscosupplementation) was performed. Oral pharmacological control with non-steroidal anti-inflammatory and analgesic was also included.

Results: Immediate results to therapy consisted of a increased mouth opening with a interincisal distance of 45.09 mm, reduction in joint sound, and restoration of mandibular movements. Supervised home physiotherapy was established in order to maintain function and mouth opening. The exercises were performed for 20 seconds, 3 times a day. After two months, significant progress was observed with gain of 17.03 mm in the interincisal distance, absence of pain (VAS = 0) and great decrease in right articular sound.

Discussion and conclusions: Specifically in this case, this minimally invasive approach has shown successful clinical outcomes for arthralgia and biomechanical control of the temporomandibular joint. However, in the future, a larger case-control study is necessary to ascertain its promising potentialities