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#639 - Oral

Management Of Temporomandibular Joint Degenerative Disorders With Human Amniotic Membrane: Hypothesis Of Action

TMJ Disorders

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Objectives

Approaches providing the positioning of human amniotic membrane (HAM) within the intra-articular space of arthritic TMJs have never been investigated. This contrasts with the increasing amount of evidence suggesting the potential positive effects of HAM on a number of surgical conditions, even included the interpositional arthroplasty for TMJ ankylosis. The benefits of HAM positioning in TMJs with severe inflammatory-degenerative disorders could be related with its anti-inflammatory and anti-microbial and analgesic properties as well as its low immunogenicity. .

Methods

A recent literature review (Guarda Nardini et al., Med Hypoth 2017) retrieved five papers of possible interest, but none of them addressed specifically the clinical research question if human amniotic membrane positioning is effective to reduce symptoms and restore jaw function in patients with severe inflammatory-degenerative disorders of the temporomandibular joint.

Results

Studies in which HAM is positioned within the joint space of patients with severe TMJ degeneration, either as a disc-replacing film during major surgeries for discectomy and arthroplasty or as an injectable solution that can be needle-inserted after an arthrocentesis procedure, should be designed to test the hypothesis. In the former condition, comparison should be made against existing disc-replacement materials, in line with current case series on the use of HAM in combination or instead of temporalis fascia for interpositional arthroplasty in patients with TMJ ankylosis. As for joint lavage procedure, HAM preparations could be used as an alternative option to viscosupplementation following joint lavage. Comparison trials should be performed to assess the two techniques and test the potential of HAM as a joint tissue regeneration enhancer.

Conclusions

Based on these premises, the present communication will discuss some clinical cases to report first encouraging findings of HAM placement within the temporomandibular joint space, to help finding a rationale for use and a refinement of its indications.