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LETTER TO THE EDITOR

Comment on: A Modified Technique of Temporomandibular Joint Arthroscopic Operative Surgery of the Superior and Inferior Joint Spaces

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Dr. Rosenberg has carried out a description of his temporomandibular joint (TMJ) arthroscopic technique in Journal of Maxillofacial and Oral Surgery (reference https://doi.org/10.1007/s12663-019-01291-0). Different techniques and modifications have been proposed in the literature [1–5], based on less invasive and traumatic arthroscopic surgery as possible. It was intriguing to observe the need for Steinman pins and distraction to access the temporomandibular joint, as we are progressing to less and less invasive techniques, more recently with 3D templates proposals to predictably access the joint [6].

The author refers in his paper "*An intra-articular injection of 2 ml of bupivacaine is then made into the posterior compartment of the superior joint space. The needle is inserted directly into the upper joint space on line (c) (Fig. 1) just below the rim of the glenoid fossa as determined by palpation. The aim of the injection is to distend the superior joint space further and for anesthesia and vasoconstriction of the bilaminar zone.* "First, the bupivacaine alone is not a vasoconstrictor [7]. Second, if bupivacaine is administrated with adrenalin to reach the vasoconstrictive effect, careful need to be taken, as the vasoconstrictor will mask possible signs of hyperemia, synovitis, especially in the bilaminar zone. Additionally, recent studies have hypothesized that local anesthetics could be chondrotoxic [8, 9]. Careful need to be taken, especially in compromised cartilages.

A major question remains as the necessity to perform a disc incision to access the inferior compartment. Dr. Raúl González-García, in 2018 discussed about the role of the inferior compartment TMJ arthroscopy, as it could be a relevant improvement [10]. However, the reported technique by Dr. Rosenberg, involving damaging the disc with an incision to access the inferior compartment: "*This involves an anterior release incision in the disc extending laterally and posteriorly to incise the disc, entering the lower joint compartment*", need to be interpreted carefully, as the disc is an important structure we should make an effort to preserve, avoiding possible iatrogenic damage. We are concerned with this approach, as it will possibly damage an undamaged disc with the purpose of inferior compartment access.

A final remark, regarding the use of steroids (dexamethasone) in the joint. More and more studies have demonstrated, dexamethasone in the joint can decrease synovial joint lubrication by inhibition of phospholipids biosynthesis [11], resulting in possible cartilage damage and chondrocyte toxicity [12]. Systematic review from Cochrane found equivalent effectiveness for the use of corticosteroid preparations or sodium hyaluronate [13]. Future studies will be more conclusive on corticosteroid chondrotoxicity effect, but special care must considered, specially in growing patients.

Compliance with ethical standards

Conflict of interest The authors declare no conflict of interest. The authors intention is not to disrespect the scientific work from Dr. Rosenberg. The authors main goal is to contribute for the best clinical practice and improve patient's safety and clinical results.

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