

The Use of Arthrocentesis in Patients with TMJ Dysfunction		Healthcare
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Abstract
<p style="font-size: small;"> Aim: The aim of this study is to demonstrate the use of Arthrocentesis as a medical therapy in patients with TMJ dysfunction. Material and Method: There are studied the clinical signs in 10 patients with the TMJ disfunction, before and after treatment with Arthrocentesis. The patients before Arthrocentesis had pain in TMJ region, click and difficulties in mouth opening. To evaluate the pain is used Visual Analog Scale. The patients are treated and followed up in Maxilo Facial Service, French Hospital “Claude Bernard”, University Hospital Center, Tirana. Results: Through the lavage of the intra articular space, it is seen the improvement in mouth opening till 35 mm, and the pain in TMJ was reduced. Conclusions: The use of Arthrocentesis was shown to be effective in reducing pain and improving the mouth opening in patients with TMJ disfunction, so we suggest the use of it in these series of patients. </p>

Introduction

Arthrocentesis of TMJ is a technique which consists in the lavage of the intraarticular space with sodium chloride 0.9% or Ringer solution and/or antiinflammator. The aim of this technique is to eliminate necrotic materials, blood and pain mediators from the intraarticular space. (Barkin, Weinberg 2000). Arthrocentesis is described for the first time in 1991 from Nitzan, as the simplest surgical technique in TMJ.

Indications

Arthrocentesis is used in internal dysfunction of TMJ in which the therapeutic treatment has failed. It is used also in anterior dislocation of the disc, with or without reduction of it, in the adhesions of the disc, in cases of synovitis or capsulitis, in reduction of mouth opening, in patients with click or pain in TMJ, as a palliative method in degenerative rheumatoid arthritis.

Material and Method

There had been a lot of patients with pain in TMJ during mouth opening, with reduction of mouth opening and click in TMJ from October 2015-April 2016 in the Oral and Maxilofacial Surgery Service. After therapeutic treatment with bite splint, myorelaxant, physiotherapy and analgesic, ten of them didn't get any improvement. We took these patients in the study and applied in them the arthrocentesis. To evaluate the pain in TMJ before and after treatment is used VAS (Visual Analog Scale).

This technique consists in the drawing of a line which goes from the corner of the eye to the tragus of the ear. The first point is signed 10 mm before the tragus of the ear and 0.5 mm below the line. The second point is signed 20 mm before the tragus and 1 mm below the line. Then we put two needles with size 40x12 in each point and with a syringe we inject 0.9% sodium Chloride 250 ml, under continuous pressure. After that we inject Kenacort solution.

Action Mechanism: Arthrocentesis changes synovial fluid viscosity between disc and articular head. In addition, when performed under pressure and combined with shearing forces generated by jaw manipulation it could break down early adhesion, thus improving mouth opening. Pain decrease or elimination is possibly due to the lavage of intraarticular space, which eliminates chemical pro-inflammatory mediators.

Complications

The use of this method can give some complications which we should take in consideration. There may be zygomatic branch or facial nerve temporal branch paresis caused by local anesthetic block or the edema itself; zygomatic or buccal branch paralysis due to needle trauma; periauricular hematoma; bradycardia and extradural hematoma.

Results

All the patients had improvement in mouth opening. In two of them the pain was reduced, and in eight of them the pain was eliminated.

Discussion

Arthrocentesis is a very suitable technique that we use in the internal degenerations of TMJ. Many times before when the therapeutic treatment failed, for the treatment of anterior disc location there were made surgical treatment as reposition of the disc and arthroplasty. Today arthrocentesis plays a big role in patients with pain in TMJ, limitation in mouth opening and difficulties in the movement of the mandibula. In this study all the patients shows reduction of pain after arthrocentesis. This reduction of pain, is a result of lavage with high pressure, which eliminates the inflammatory mediators. This result is similar with the study of (Frost 1992, Laskin 2000, Nitzan 1997). There are no longitudinal studies to compare the success and lack of success of this approach, and further studies are required to scientifically demonstrate the indication and predictability of results.

Conclusions

Arthrocentesis of TMJ is a minimal invasive method which is located between conservative therapy and surgical one. It is a technique which does not generate scars and doesn't need suture. After applying this technique the pain is reduced, the disc is less adherent and the mouth opening is improved. The therapeutic success, however, depends on numerous factors involving chronicity of the disease and its characteristics, on adequate diagnosis, on patients cooperation, on the technique used and on professional experience of the surgeon. We recommend arthrocentesis as a valid treatment opportunity for the patients with low and medium dysfunction of TMJ.



(a)



(b)

Figure 1(a,b). Demonstration of the technique in patients

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