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Araştırma/ Research Article

OPERASYON ESNASINDA VE SONRASINDA GÖRÜLEN TEMPOROMANDİBULER EKLEM (TME) ARTROSENTEZ KOMPLİKASYONLARI

INTRA AND POST OPERATIVE COMPLICATIONS OF TEMPOROMANDIBULAR JOINT ARTHROCENTESIS

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ÖZ

Amaç: Bu çalışmanı amacı TME artrosentez komplikasyonlarının oranının belirlenmesi ve işlem sırasında-sonrasında görülen komplikasyon tiplerini rapor etmektir.
Gereç ve Yöntem: Süleyman Demirel Üniversitesi Ağız, Diş ve Çene Cerrahisi Anabilim Dalında 2014 yılı Ocak-Mayıs aylarında gerçekleştirilen artrosentez vakalarında komplikasyon görülen 22 TME artrosentez vakası analiz edilmiş ve komplikasyon oranları belirlenmiştir.
Bulgular: Ağrı (27.3%) ve Fasiyal paralizi(21.2%) TME artrosentezindeki en yaygın görülen komplikasyonlardır. Bayan hastalar erkek hastalara oranla ciddi şekilde fazla bulunmuştur. (81.82%)
Sonuç: Komplikasyon TME artrosentezinin bir parçasıdır. Komplikasyon tipi TME artroskopisinde görülene oranla azdır.
Anahtar Kelimeler: temporomandibuler eklem; artrosentez; komplikasyon

ABSTRACT

Aim: The aim of the study was arranged to define a complication rate for TMJ arthrocentesis and to report the types of complications which commonly seen in peri and post operative period.
Material and Methods: 22 TMJ arthrocentesis cases with complication performed in Suleyman Demirel University in 2014 January -May were presented. Complications were analyzed statistically and a complication rate were defined.
Results: Pain(27.3%) and facial paralysis(21.2%) are the most common complications in TMJ arthrocentesis. Female dominance(81.82%) reality is faced in this study.
Conclusion: Complications is the part of TMJ arthrocentesis. Complication type is less than TMJ arthroscopy.
Key Words: temporomandibular joint; arthrocentesis; complication

INTRODUCTION

Most important aims of lysis and lavage of the temporomandibular joint (TMJ) are to eliminate inflamed synovial fluid, release the disc, reduce the pain, and mobilize of the joint by flushing the upper joint space. To fulfill these aims effectively with fewer complications, different techniques are prescribed.[1] TMJ arthrocentesis for lysis and lavage was first described as a procedure performed to a patient under local anesthesia for irrigation of the superior TMJ space and release of the joint, with results showing improved function, increased range of motion, and decrease in pain.[2,3,4] TMJ arthroscopy and arthrocentesis have recently replaced open surgical procedures in selected patient groups with TMJ dysfunction syndrome, which mostly appeared in young and adult female who have chewing muscular problems (with and without disc displacement), failing to respond conservative management.[5,6] The complication rate following TMJ arthroscopy is reported between 1.8 and 4.4%.[7,8] The complication rate for TMJ arthrocentesis has not yet been defined, but is considered to be less than that for TMJ arthroscopy.[9]

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We present our complications to contribute to the literature regarding complication rate for TMJ arthrocentesis.

MATERIAL AND METHOD

Data of 22 patients with TMJ dysfunction referred to Suleyman Demirel University, Faculty of Dentistry, Department of Oral and Maxillofacial Surgery in 2014 January- May were included in this retrospective study. Patients were diagnosed after clinical and radiological examination. Panoramic radiographs were obtained all of the patients. The skin of the preauricular region was cleaned using povidine-iodine solution before the procedure. To perform TMJ arthrocenthesis, two points were marked; the first at 10 mm anterior and 2 mm inferior, and the second at 7 mm anterior and 2 mm inferior to the tragus on the cantus-tragus line showed by Alkan and Etöz[10]. After auriculotemporal anesthesia was established with 2 ml local anesthetic, the first 21-gauge needle was inserted from the first point, As the 2 mL lactate solution was injected, the second needle was inserted from the second point. The joint was transfused with a flow of 100 ml Ringer's Lactate solution depending on patients' pain tolerance and swelling of collateral tissues. No medication was injected into the joint and the joints were gently manipulated for further distention at the end of the procedure. Intra operative and post operative complications were recorded. Complications occured in our cases were discussed in this manuscript.

RESULTS

18(81.82%) of the patients were female and 4(18.18%) were male. The average age of the patients was 27.32, ranging from 17 to 73 years. Postoperative pain is the most common complication with 10 patients(Table 1). Analgesic drug was prescribed for pain relief. At the end of the first week pain was not observed in these patients. Long lasting pain is not observed in our patients as a complication.

Temporary paralysis of frontal and zygomatic branches of facial nerve were observed in 8 patients (Table 1). Among these complications, 3 of them were seen following anesthesia, 5 of them were seen after arthrocenthesis due to fluid extravasation. Swelling of tissues due to fluid extravasation were observed in 7 patients. These complications did not last more than one day following procedure.

Mandibular restriction were seen in 5 patients(Table 1). Of these 5 patients 4 cases of trismus and one case of restricted mandibular movement due to pain were observed. All these complaints were resolved in most one week.

Intraoperative bleeding due to injury of the temporal superficial artery was observed in 5 patients(Table 1). Bleeding was stopped by sponge press. Postoperative hematoma or ecchymosis were not observed.

Irritating dizziness was observed in 2 patients and resolved inless than 2 days(Table 1).

Table 1. Complications

Complications	N / Rate
Postop pain	**10 (27.3%)**
Fluid extravsation	**7 (18.92%)**
Temporary facial paralysis	**8 (21.62%)**
Bleeding	**5 (13.51%)**
Irritating dizziness	**2 (5.41%)**
Mandibular restriction	**5(13.51%)**
Total	**37 (100%)**

DISCUSSION

TMJ arthrocentesis is regarded as a simple, minimal invasive, inexpensive and highly efficient procedure.[2] The procedure may be performed under local anesthesia, with or without sedation, and its primary purpose is to clear the joint from inflammatory cells, degradation products of the inflamed synovium, blood, and pain mediators.[11] Several complications of arthrocentesis procedure have been reported which depends on the anatomy of the joint, its relation to the surrounding structures, and method differences. The frequency of these complications mentioned in the literature ranges-between 2% and 10%.[12] The potential complications of arthrocentesis are infection, external auditory canal perforation, fluid extravasation into the soft tissues, bite change, skuffing of the cartilage of the TMJ, and hematoma.[13] Temporary facial paresis or paralysis caused by the use of a local anesthetic, or swelling of the neighboring tissues caused by perfusion of Ringer's solution may occur during arthrocentesis. However, these effects are transient and disappear

within a few hours. Numerous other complications associated with arthrocentesis have been described.[14] Apart from this extradural haematoma, severe bradycardia during the procedure, development of arteriovenous fistula, bleeding into the joint, intracranial perforation, breakage of a part of the needle in the joint, unsuccessful introduction of the needle, injury to the superficial temporalartery, infected swelling in preauricular area, medial wall perforation of the joint capsule and facial paralysis, burning feeling, numbness of the lip and tongue due to accidentally alcohol irrigation were reported.[9,12,14-17.] In addition, an acute inflammation of the joint may occur, which may be accompanied by preauricular oedema, redness, pain, and restricted mouthopening.[12] Moreover, otologic complications can be serious in connection with the close proximity of the temporomandibular joint, the middle ear, and the cartilaginous wall of the ear canal. This includes perforation of the external auditory canal, the occurrence of blood clots in the external auditory canal, tympanic membrane injuries, partial hearing loss, a feeling of a blocked ear and dizziness.[1,12] In this study facial paralysis were observed in 8, fluid extravasation in 7, dizziness in 2, bleeding due to temporalis superficial artery injury in 5 cases.

In conclusion TMJ arthrocentesis is a method that is less invasive compared to other surgical methods and arthroscopy. Arthrocentesis and arthroscopy are not without risks. Generally, the potential complications of arthroscopy can also occur in arthrocentesis, but the incidence and extent of complications are lesser in arthrocentesis.[2] However, Al Moraissi[18] reported that there was no statistically significant difference between arthroscopy and arthrocentesis with regard to the incidence of postoperative complications. The surgeon must be very careful during the arthrocentesis and think about these possible complications.

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