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Recurrent Temporomandibular Dislocations: The Interest of the Dautrey Procedure in the Treatment of This Dysfunction

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Abstract: Introduction: *Recurrent dislocations of the temporomandibular joint (TMJ) are complex and disabling pathologies that have significant repercussions on the quality of life of patients.* ***Patients and methodes :*** *We report the experience of our maxillofacial surgery department in Rabat, in the surgical management of recurrent TMJ dislocations. This is a retrospective study of 08 patients operated on in our department, from January 2017-January 2021, for recurrent TMJ dislocations. The surgical technique used in all our patients is the Dautry abutment.* ***Results :*** *No case of recurrence was reported after a follow-up of 03 years for 3 patients and 1 year for the others. Facial nerve function was preserved bilaterally.* ***Discussion :*** *Many surgical techniques have been described for the treatment of anterior temporomandibular dislocation. Most of these techniques aim to limit the forward travel of the condyle. The osteotomy of the zygomatic arch proposed by Gosserez and Dautrey is a simple procedure that has been proven to be effective.*

Keywords: Recurrent temporomandibular dislocations, Dautrey procedure

Introduction :

Recurrent temporomandibular joint (TMJ) dislocations are complex and disabling pathologies that have significant repercussions on the quality of life of patients.

We report the experience of our department of maxillofacial surgery in the management of recurrent TMJ dislocations using the DAUTREY abutment technique.

Through this work, we will underline the interest and effectiveness of this technique in the treatment of these dislocations.

Patients and methodes :

This is a retrospective study of 08 patients operated on in our department, from January 2017-January 2021, for recurrent TMJ dislocations.

All of our patients were women between the ages of 18 and 45.

The most common symptomatologies were recurrent dislocation and pain. A few patients have reported a limitation of the mouth opening after a dislocation episode.

The radiological assessment in all our patients was a CT of the facial mass, mouth open, mouth closed.

The surgical technique used in all our patients is Dautry's procedure. First the approach was by preauricular incision with temporal extension of 1cm (Figure 1), wich helped as to have a total exposure of the zygomatic arch. Than a downward and forward oblique osteotomy was created in the zygomatic arch just in front of the articular eminence. The distal portion of the arch was carefully mobilized and displaced caudally, which created a mechanical obstruction in the condylar path (Figure 1,2).

Figure 1: picture showing the preauricular approach, and the osteotomy performed in zygomatic arch

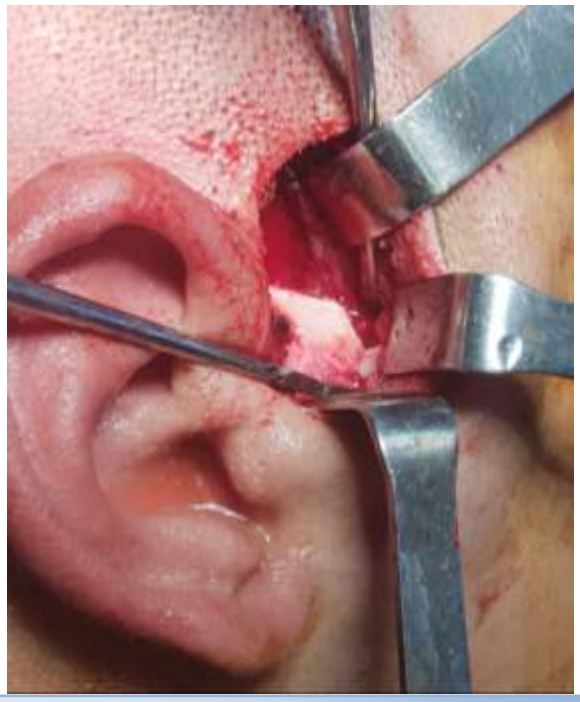

Figure 2: picture showing, the oblique osteotomy, caudal displacement of the distal segment of the zygomatic arch

Results :

The disappearance of the symptomatology was noted in all cases. Absence of pain, and no further episodes of dislocation had occurred postsurgery. Facial nerve function was preserved bilaterally.

The results we achieved were favorable. No case of recurrence was reported after a follow-up of 03 years for 3 patients and 1 year for the others.

Discussion :

Recurrent temporomandibular dislocations is defined as an involuntary forward movement of the mandible beyond the articular eminence, with the condyle remaining stuck in the anterior-most position [1].

Many treatment have been described for the treatment of anterior temporomandibular dislocations, either conservative or surgical.

The non-surgical therapeutic strategies to address the condition are : intermaxillary fixation (IMF) or head bandages, intracapsular injection of sclerosing solutions or autologous blood, and intramuscular injection of botulinum toxin type A [1,2]. In patients with chronic recurrent dislocation, these treatments often result in failure and the surgical solution is the alternative.

There are 2 surgical procedures to manage the TMJ dislocations, one that enhance the path of condylar movement and the one that inhibit the path of it. The most common procedure in the first category is eminectomy. And for the second one is the osteotomy of the zygomatoic arc [1,2], described by Gosserez and Dautrey in 1967[3], that is known as the Dautrey procedure.

This surgical technique is a simple and effective solution for patients with TMJ disclocations, wich interest have been proven by this article.

TMJ dysfunctions often begin between the ages of 15 and 45 [4], with a clear predominance of women [5].

TMJ subluxation is the major sign to look for during physical examination outside of a painful period. Also the pain is very common with a significant impact on daily life. Most often with just the clinical outcomes the indication of surgery can be established.

This hyperlaxity is physiological and painless for a large part of the population, but for others, this significant muscle stretching leads to a reflex contracture responsible of pain and limitation of mouth opening during crises [4,5].

Open- and closed-mouth TMJ scans remain useful for diagnosing spontaneously reducible dislocation or subluxation of the TMJ [6].

The CT scan in coronal and sagittal sections will allow visualization of the bone surfaces. Profile MRI in open and closed mouth has the advantage of objectifying the articular meniscus, its dynamics during opening and closing movements and the condition of the articular surfaces and muscles [7,6].

The goal of surgical treatment for recurrent TMJ dislocations is to first restore a normal function of the TMJ, eliminate pain and stop the progression of the disease [7,8].

The Dautrey procedure is the reference technique in our department. It has allowed us to achieve the desired goals of the surgery and helped patients to enhance the quality of there lives.

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