

Case Report

Eminectomy for the management of unilateral chronic, recurrent temporomandibular joint dislocation: a case report

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ABSTRACT

In this case report unilateral chronic mandibular dislocation was managed by Myrhaug's procedure (eminectomy). Temporomandibular joint (TMJ) dislocation is a uncommon clinical entity and surgery is a more definitive option when it's come to the management chronic and recurrent TMJ dislocation. Eminectomy is shown to be efficient in preventing TMJ dislocations without affecting the maximum mouth opening, articulation and masticatory efficiency.

Keywords: Glenoid fossa, Articulation, Temporomandibular joint dislocation

INTRODUCTION

Temporomandibular joint (TMJ) dislocation is defined as an excessive forward movement of the condyle beyond the articular eminence with complete separation of the articular surfaces and fixation in that position.^{1,2} Dislocation of the TMJ is thought to be a relatively rare condition. If patients cannot reduce it, they have to consult a physician in an emergency. A variety of conservative and surgical management have been used to prevent the forward excursion of the condylar head beyond glenoid fossa, such as intra-capsular injection of sclerosing solutions, lateral pterygoidmyotomy, scarification of the temporalis tendon and bone grafting and augmentation with alloplastic materials or with vitallium mesh or titanium plates.³⁻⁶ Another surgical option is to reduce the height of eminence, thereby permitting unrestricted movement of the condyle.^{6,7} Here we report a case of unilateral recurrent TMJ dislocation managed with Myrhaug's procedure.

CASE REPORT

A 43 year old female referred to us with a chief complaint of Inability to close her mouth and pain in the

right oro-facial region since 14 hour. On clinical examination saliva was drooling from the side of patient's mouth with complete open bite with Deviation of mandible towards left side. Pathognomonic feature of TMJ dislocation pre-auricular hollowness on the right side was also evident.

Initially, patient was managed with manual reduction of TMJ and inter-maxillary guiding elastics were placed with the help of arch bars. Patient was also advised to avoid wide mouth opening and orthopantomogram (OPG) was done (Figure 1). OPG showed reduced joint spaces and placement of both the condyles against the articular eminences, and resorbed eminences bilaterally. Patient was apparently asymptomatic for 3 months and then she again had 3 episodes of right TMJ dislocation. Patient wanted permanent relief from this condition and was advised surgical intervention under general anaesthesia with right TMJ eminectomy (Myrhaug's procedure) with detachment of lateral pterygoid muscle and simultaneous coronoidectomy of the right side. Exposure of the TMJ was done using modified Alkayat-Bramley approach (Figure 3). After identification of the articular eminence, it was reduced using a no. 8 surgical round bur (Figure 4). The jaw movements were then checked for any

obstruction which might requires adjustment. Postoperative period was uneventful. Individual was followed up for two years without any symptoms.



Figure 1: Preoperative OPG with abnormal relationship of condyle and eminence (reduced height).



Figure 2: Exposure of the joint with Alkayat and Bramley incision.



Figure 3: Joint after eminectomy.



Figure 4: Postoperative OPG 12 months showing right eminectomy and coronoidectomy.

DISCUSSION

Surgery is a more definitive option when dislocation is chronic and recurrent.⁹ Multiple surgical procedures have been described in the literature for the management of TMJ dislocation based on either creating a mechanical barrier (positioning the disk anterior to the condyle, down fracturing of the zygomatic arch or by the insertion of implants into the eminence or reducing/removing the obstruction from the condylar path (eminectomy).^{6,9} Eminectomy was introduced by Myrhaug, since then it has produced good quality of clinical outcome in terms of the recurrence rate of dislocation and the absence of complications.^{1,7,10-16} Eminectomy or flattening of the articular tubercle and eminence may lead to mandibular hypermobility and increased mean post-operative inter-incisal mouth opening.¹⁷⁻¹⁹ But in our case opposite was observed, which might be because of fibrosis, following the surgical procedure.

The chief complaint of patients with TMJ dislocation is pain which is caused by the condyle locking anterior to articular eminence leading to stretching of articular components. Eminectomy has shown complete remission from pain after surgery. Any surgical intervention of TMJ can lead to the facial nerve injury and Injury to facial nerve can lead to loss of function of the frontalis and orbicularis oculi muscles.^{17,18} The incidence of such complications, following injury to the facial nerve, is very low, with rates varying from 9 to 18% and 1.5 to 32%.¹⁷⁻¹⁹ No facial nerve paralysis was observed in our case.

CONCLUSION

Myrhaug's procedure or eminectomy was shown to be efficient in the treatment of unilateral chronic mandibular dislocations in relation to recurrence and articular function and it also does not affect the maximum mouth opening and masticatory efficiency. We recommend Myrhaug's procedure for the treatment of chronic recurrent mandibular dislocation.

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