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Case report

Condylectomy: treatment of recurrent unilateral dislocation of the temporomandibular joint in a patient with Ehlers-Danlos syndrome

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Abstract

We report the use of unilateral condylectomy to treat the recurrent dislocation of the temporomandibular joint (TMJ) in a 21-year-old woman with Ehlers-Danlos syndrome. Eighteen months after operation the patient had no further dislocation on full mouth opening, and no surgical complications.

Keywords: TMJ; dislocation; jaw; condylectomy

Introduction

Ehlers-Danlos syndrome is a heterogeneous, inheritable disease of the connective tissue that causes hypermobility and hyperextensibility of the joints.[1] The temporomandibular joint (TMJ) is composed mainly of collagen, the metabolism of which is altered in Ehlers-Danlos syndrome.[1] De Coster et al in 2005 assessed the oral health of 31 affected patients, and all had symptoms of disorders of the TMJ such as displacement of the disc, myofascial pain, joint pain, and recurrent dislocations.[2]

Case report

A 21-year-old woman with Ehlers-Danlos syndrome had already attended accident and emergency 26 times with a left-sided dislocation of the TMJ (of mixed aetiology) and laxity of the joint. She had had the joint replaced under sedation each time, and subsequently had considerable trismus but no occlusal imbalance.

She had been treated at four other hospitals and had tried courses of self-help; injections of Botox and steroids; physiotherapy and psychotherapy; all with no improvement.

She then had a left-sided condylectomy at the most caudal level of the eminence, and was subsequently placed in intermaxillary fixation for four weeks (Figs. 1–3).

At follow up after 18-months, she had a mouth opening of 50 mm without dislocation; no hesitation in mouth opening; no crepitus or clicking; a return to comfortable eating; normal occlusion; and no further dislocations.

Discussion

Dislocation of the TMJ displaces the condyle,[3] stretches the ligaments, and is associated with spasms of the muscles that open and close the mouth. In recurrent dislocation, conser-

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Fig. 1. Postoperative orthopantogram.

Fig. 2. Left lateral occlusal photograph.

Fig. 3. Right lateral occlusal photograph.

vative management tends to be unsuccessful and operation remains the only option.

Many procedures have been described over the decades with no long-term data on outcomes. Eminoplasty, with bone grafts or metal plates, aims to obstruct the anterior displacement of the condyle, and involves the usual risks associated with grafts and implants. Dautrey's procedure has also been described, which involves infracture of the zygomatic arch to obstruct the path of the coronoid, and can cause cosmetic deformity as well as the risk of resorption of the unsupported fragments of zygomatic bone. Bone may re-heal after a condylectomy as part of this procedure, but could result in repeated dislocation.

The more widely practised operative technique is eminectomy. The aim is to act on the bony obstacle to prevent the condyle locking, but in some instances it can be difficult to remove all of the obstruction without breaching vital adjacent structures (particularly in cases with a deep fossa and prominent eminence, as seen in our patient). Recurrence of dislocation after the procedure has been reported as 0, 7%, 13%, and 25% in various studies.[4–7] Complications such as new TMJ noises,[6] and persistent deviation of the mandible on opening or closure,[8] have been described. We think that eminectomy is equally as invasive and destructive to the joint as condylectomy.

The use of condylectomy to treat dislocation of the TMJ has not been widely reported. Patients who have had it for hemimandibular hyperplasia have been reported to have had no functional changes or complications at two years (n = 6),[9] a normal range of mouth opening and lateral movements (n = 14), noise (n = 3), and discomfort (n = 2).[10] These data support a low incidence of complications, even though they are usually used to indicate other procedures.

Conclusion

Condylectomy avoids the morbidity associated with other procedures, but further research is needed to assess its long-term efficacy. We have reported a successful use of the procedure with no complications or recurrence. While a bilateral condylectomy would not be advocated because the risk of malocclusion, a unilateral condylectomy to treat unilateral recurrent dislocation of the TMJ may be considered as a first-line treatment.

Conflict of interest

We have no conflicts of interest.

Ethics statement/confirmation of patient's permission

Ethics approval was not applicable and the patient gave her permission for the use of the material in this paper.

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