

**BILATERAL EMINECTOMY FOR RECURRENT TMJ DISLOCATION IN THE
MENTALLY CHALLENGED PATIENT UNDER NEUROLEPTIC DRUG THERAPY – A
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ABSTRACT

Treatment of Chronic or Recurrent dislocation of the Temporomandibular Joint (TMJ) is always a point of much discussion with modalities varying from the Conservative to the Aggressive Surgical. The Bilateral Eminectomy has been proposed as a treatment option with high success rate. Recurrent dislocations are seen commonly in the Mentally Challenged patient especially one on neuroleptic drug therapy, however there is no significant literature addressing the same. The authors present the successful outcome of a Bilateral Eminectomy performed on a mentally challenged 23 year old male on Neuroleptic drug therapy with a history of recurrent dislocations. The patient underwent surgical treatment and at up to 6 months follow up reported no episode of dislocation.

KEYWORDS: Recurrent TMJ Dislocation, Bilateral Eminectomy, Mentally Challenged patient, Neuroleptic drug therapy.

1. INTRODUCTION

Mandibular Dislocation occurs when the condyle is displaced anterior to the articular eminence and fixed in that position by muscle spasm, with the patient being unable to close his mouth. Recurrent Temporomandibular Joint (TMJ) dislocation in Mentally Challenged patients has been difficult to address in the past especially as these patients do not conform to conservative management modalities. Acute/recurrent dislocations treated by Bilateral Eminectomies have shown a high success rate in literature.^[1, 3]

Extra-Pyramidal symptoms occur in around 75% of patients under Neuroleptic therapy. Acute dyskinesias which occur within a few days of neuroleptic drug administration show symptoms which include forced jaw opening, protrusion of the tongue, trismus and glossopharyngeal contractions among others.^[9]

The reasoning behind presenting this case report for publication is to address the issues associated with Recurrent TMJ dislocation in the Mentally Challenged patient who may/may not be on Neuroleptic therapy. Few articles in the English language present the use of the Bilateral Eminectomy in such a scenario. None however describe its use in the Mentally Challenged patient, who is quite prone to dislocations. The authors

aim in this report, to describe a case of Recurrent TMJ Dislocation in a mentally challenged individual on neuroleptic drug therapy treated surgically by way of a bilateral eminectomy.

2. CASE REPORT

A 23 year old mentally challenged male reported to the hospital clinic with the chief complaint of recurrent dislocation of his lower jaw with family members requesting a definitive treatment. At the time of arrival, the mandible was in a dislocated state for the past hour with the patient uncooperative and in evident discomfort. A detailed history revealed that the patient was mentally challenged from birth and suffered also from seizure disorder for which he was on regular drug therapy – Sodium Valproate, Risperidone, Lamotrigine and Oxytol. A physical examination revealed bilaterally dislocated TMJ with tenderness on palpation, pooling of saliva intra-oral and a mouth opening of 62 mm. The dislocation was reduced and a bandage splint was used as a temporary option.

As the patient was uncooperative, routine radiographs (OPG, TMJ Views) were ruled out and a diagnostic CT scan was performed under sedation. The CT revealed a mild flattening of the Condylar Head on the left side and prominent Articular Eminence bilaterally (Fig 1).

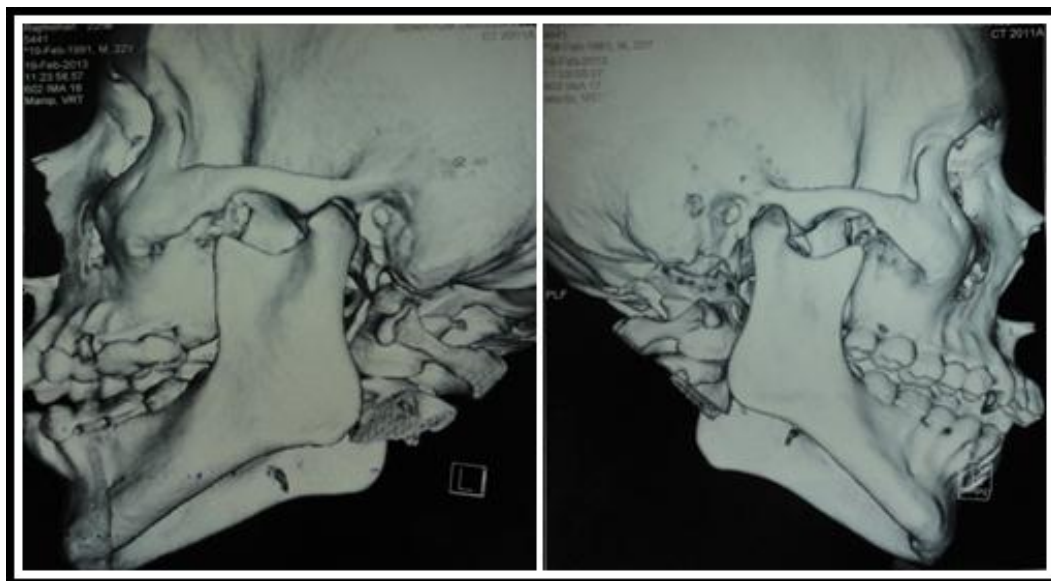


Fig 1: Pre operative diagnostic CT images of the Left and Right TMJ.

Based on the patient history, examination and CT imagery, a diagnosis of Chronic Bilateral TMJ Dislocation was arrived at. A treatment plan of Bilateral

Eminectomy under General Anaesthesia was formulated and relevant Pre-Surgical Lab Investigations performed.



Fig 2: Outline of the Planned Incision.

Surgical Procedure

The patient was intubated via the Naso-tracheal route under General Anesthesia. Standard surgical preparation and draping was done. Local Anaesthesia with 1:2,00,000 concentration of adrenaline was infiltrated in the Right Pre-Auricular region. A classical Pre-auricular incision with Rowe's modified extension was placed (Fig 2). Sharp dissection was done till the Temporalis fascia followed by blunt dissection in an anterior direction. A horizontal incision was made in the Temporalis Fascia over the Zygomatic Arch. Periosteal stripping was done until the Articular Eminence was identified and exposed (Fig 3). Eminectomy was performed using a saline cooled oscillating saw with final separation achieved via an osteotome. Care was taken to protect the Internal

Maxillary artery from inadvertent trauma. The sharp margins were smoothed via Carbide bur (Fig 4). Ab-Gel was placed in the defect and the wound closed in layers with Vicryl and Prolene. The procedure was repeated on the Left side. Compression dressing was placed over the closed wounds. The patient was violent at extubation for which 1.5 ml of Midazolam was administered intra-venous.

Post operative recovery was uneventful. The condyles were palpated during excess mouth opening and showed no signs of any hinderance or lock. The patient was discharged on the 4th day post surgery. Patient was reviewed at 1, 3, 8, 12 and 24 weeks post operative (Fig 5). There was no recurrence of dislocation.

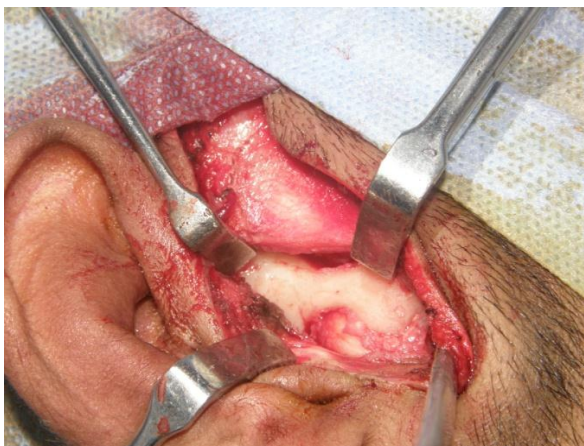


Fig 3: The Articular Eminence after surgical exposure.

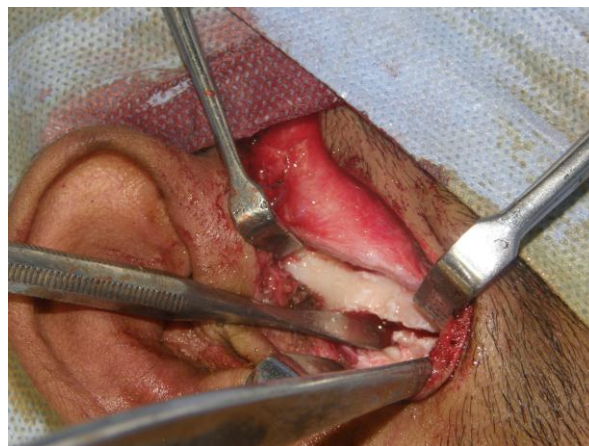


Fig 4: Flattened margins after performing the Eminectomy.

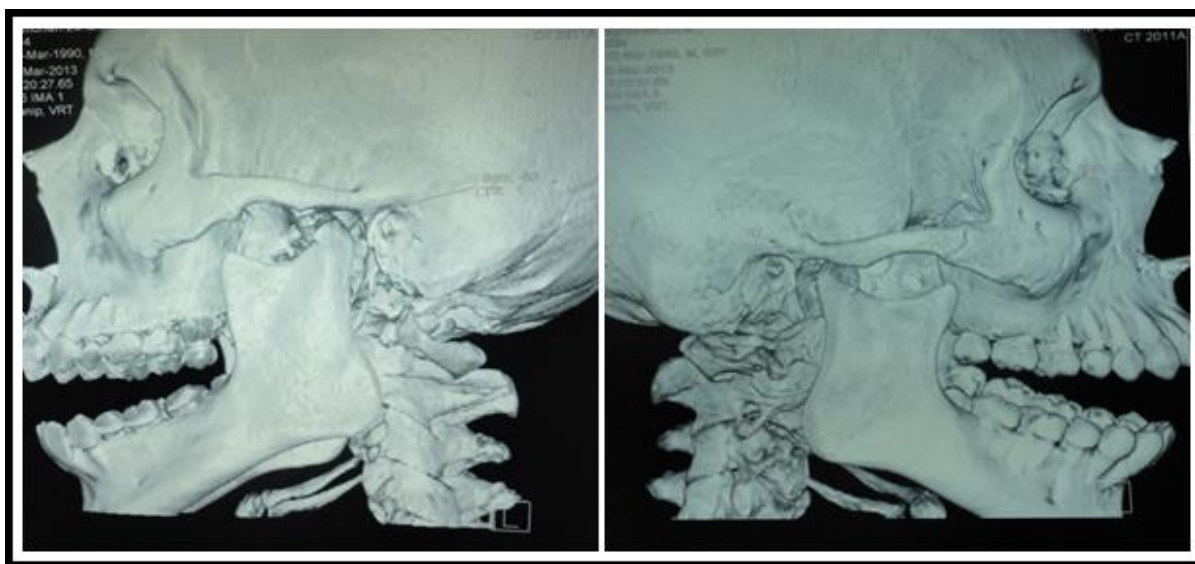


Fig 5: Post eminectomy follow up CT images.

3. DISCUSSION

Temporomandibular joint (TMJ) dislocation is defined as the displacement of the condyle beyond the glenoid fossa without the ability to reduce itself.^[3] In chronic/recurrent cases, conservative management is an ineffective and inefficient option, with surgery being necessary. Surgical management of chronic cases may be grouped into 2 broad categories – Procedures aimed at limiting the translation of the condyle which include augmentation of the articular eminence, capsular placcation, down-fracture of the zygomatic arch, lateral pterygoidmyotomy, theuse of implants to limit translation. The other group include procedures aimed at removing obstacles in the path of the condyle such as the Eminectomy and Condylotomy.^[2]

Eminectomy has proven to be a versatile technique in the management of different types of patients, with different complexities and with no age limit. The bilateral eminectomy applied to cases of recurrent mandibular dislocations is a completely viable option, with few

complications; it is currently presented as a well-known procedure that is constantly being modified to optimize the indications and their results. The bilateral eminectomy was first discussed by MYRHAUG in 1951^[5], IRBY in 1957^[6], with modifications by others such as HALE^[7] and WESTWOOD et al. Advantages include ease of surgery, normal functional movements, minimal morbidity, ability to check directly condylar-meniscal movements, and removal of the need to place and secure implants. Careful smoothening of the bony margins is of utmost importance as the condyle may get trapped by muscular tension under sharp bony margins. The disadvantages of the procedure are as with any TMJ surgery, hemarthrosis or joint degeneration.^[2]

The point that eminectomy is irreversible is true but the eminences themselves are felt to be accessory anatomy less than beneficial to normal function.^[8] Surgical management for recurrent TMJ dislocation due to increased muscular tension as a result of neuroleptic medication has been discussed in literature as being

controversial with many arguing that treatment should be conservative with modification of the drugs.^[2] However in the present day scenario with neuroleptic drugs undergoing vast changes we feel that surgical management is the best option as highlighted by this case.

4. CONCLUSION

The Bilateral Eminectomy has been shown to be the most suitable surgical approach in the definitive management of Recurrent TMJ Dislocation with a high success rate. Its use in the mentally challenged patient under neuroleptic drug therapy has been highlighted here with successful outcome.

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6. **Funding:** None.

7. **Ethical approval:** Not required.

8. **Patient consent:** Obtained from Patient's relative.

9. REFERENCES

1. Oatis GW Jr, Baker DA. The bilateral eminectomy as definitive treatment. A review of 44 patients. *Int J Oral Surg*, 1984 Aug; 13(4): 294-298.
2. Undt G, Weichselbraun A, Wagner A, Kermer C, Rasse M. Recurrent mandibular dislocation under neuroleptic drug therapy, treated by bilateral eminectomy. *J Craniomaxillofac Surg*, 1996 Jun; 24(3): 184-8.
3. Mayrink G, Olate S, Assis A, Sverzut A, de Moraes M. Recurrent mandibular dislocation treated by eminectomy. *J Craniofac Surg*, 2012 Sep; 23(5): e516-20.
4. Bastian HL. Bilateral eminectomy in the management of recurrent jaw luxation. (Article in Danish) *Tandlaegsbladet*, 1992 Feb; 96(3): 97-9.
5. Myrhaug H. A new method of operation for habitual dislocation of the mandible. *Acta Odontol Scand*, 1951; 9: 247.
6. Irby WB. Surgical correction of chronic dislocation of the temporomandibular joint not responsive to conservative therapy. *J. Oral Surg*, 1957; 15: 307.
7. Hale RH. Treatment of recurrent dislocation of the mandible: review of literature and report of cases. *J. Oral Surg*, 1972; 30: 527.
8. Helman J, Laufer D, Minkov B, et al. Eminectomy as surgical treatment for chronic mandibular dislocations. *Int J Oral Surg*, 1984; 13: 486Y489.
9. Andrew HG. Clinical relationship of extrapyramidal symptoms and tardive dyskinesia. *Can. J. Psychiatry*, 1994; 39(9 suppl 2): S76-S80.