

# A Curious Case of Untreatable Chronic TMJ Dislocation

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## ABSTRACT

A temporomandibular joint is said to be dislocated when the condyle of the mandible is displaced from its position in the glenoid fossa and requires manipulation to bring it back into its anatomical and functional position. Dislocation of the mandible occurs when the condyle moves out of the glenoid fossa and becomes locked anterior to the articular eminence. Yawning, mastication and dental treatment are probable causes. Various treatments are presented in the literature. For acute TMJ dislocations, a manual reduction is the treatment of choice. But chronic dislocations resist manual reduction and require surgical intervention. In this article, we present a case of chronic TMJ dislocation where none of the treatment options were feasible and had to be managed conservatively.

**KEYWORDS:** Dislocation; Chronic Dislocation; Manual Reduction; Mandibular Condyle; Temporomandibular Joint

## INTRODUCTION

The great Shakespearean question of “To operate or not to operate” dictates the first rule of ethics that states “first do no harm.”

Dislocation of the TMJ is the dislodgement of the head of the condyle from its normal position in the glenoid fossa. The TMJ dislocation can be classified as:

- Partial or complete
- Unilateral or bilateral
- Acute or chronic or protracted or chronic recurrent<sup>1</sup>.

If the dislocation presents within 2 weeks it is called as acute dislocation and it can be easily reduced by Hippocratic maneuver. Beyond that time, the masseter and temporalis muscles show spasms and shortening of muscle fibres takes place. Due to this, manual reduction of the condyles becomes difficult and hence leading to commencement of chronic protracted dislocation.<sup>1</sup>

Here we present a case of protracted bilateral TMJ dislocation, treatment of which presented us with a ginormous conundrum due to unforeseen underlying medical conditions.

## CASE REPORT

A 75-year-old female patient reported to our department of oral and maxillofacial surgery with the chief complaint of inability to close the mouth for the past 20 days. She gave a history of forceful mouth opening by a dentist during treatment at a private clinic. No relevant medical history was reported.

On examination, mandible was protruded with no

posterior or anterior occlusion (figure 1). Mandibular Anterior teeth (43 to 33) were supra-erupted with chronic localized periodontitis. Hence a reverse jet type of appearance was seen. Pre-auricular hollowing was noted. Radiograph (OPG) revealed and confirmed bilateral TMJ dislocation with the condyles anterior to the articular eminence.



Figure 1: occlusion at the time of presentation to the hospital.

Manual reduction of the dislocation was attempted on her first visit to the OPD. The attempt was unsuccessful. The patient was put on muscle relaxants and recalled in 3 days. Again, a manual reduction was attempted under LA (bilateral). The TMJ could not be reduced. We decided to take up the case under general anesthesia. The treatment options being considered were- manual reduction under GA/condylotomy/eminectomy/condylectomy/lateral pterygoid myotomy under general anesthesia.

General pre-anesthetic work-up was carried out. Patient's

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chest PA view radiograph revealed a suspicious looking radioopacity. The pulmonologist advised for a CT of the thorax. CT thorax revealed lesions in the patients left and right lung that indicated a neoplastic disease.

The patient was advised to undergo a biopsy to confirm the diagnosis. And the further treatment of the TMJ dislocation under GA was halted since fitness for anesthesia was a concern.

The patient refused to undergo any treatment/biopsy due to financial reasons and wished to be treated for the chief complaint (of inability to close mouth) only.

Nonsurgical conservative management of the TMJ dislocation was planned. Upper and lower impressions were recorded (figure2), and a posterior bite plane( about 6mm height)(figure3) was constructed. Meanwhile, upper



Figure 2: patient's bite being recorded



Figure 3: fabrication of bite plane



Figure 3: fabrication of bite plane

and lower Erich's arch bars were placed. After seating the bite plane, class III elastic traction was placed so as to move the lower jaw posteriorly. The patient was followed up every three days and elastics were replaced each visit (figure 4). This was continued for 3 weeks. No improvement was noted, and the patient opted out of treatment citing financial reasons.

## DISCUSSION

The diagnosis of TMJ dislocation is often clinically based. The classical signs and symptoms of patients with dislocation of the TM Joint are pain, difficulty to chew/bite into occlusion, anterior cross bite, and prominent preauricular depressions. However, diagnosis is confirmed by radiograph<sup>2</sup>

Akinbami<sup>1</sup>, based on the position of head of the condyle in relation to the articular eminence, classified the TMJ dislocation as follows:

Type I The head of the condyle is directly below the tip of the eminence

Type II The head of the condyle is in front of the tip of the eminence

Type III The head of the condyle is high up in front of the base of the eminence

Clinically the forward dislocation of the temporomandibular joint (TMJ) can be divided into 3 groups<sup>3</sup>; a dislocation that occurs only once, a recurrent dislocation and a prolonged dislocation. The prolonged or long-standing dislocation has its own special problems. Manual reposition is not possible anymore in most cases. As the time between onset of the dislocation and reposition increases, the prognosis diminishes.

**Table I.** Predisposing factors for luxation of the TMJ and their number found in 33 case reports of long-standing dislocation (Miller & Murphy)<sup>4</sup>

Birth-related	0
Iatrogenic	12
Trauma	9
Drug induced	0
Physiologic	2
Systemic	7
Others	3

A prognathic jaw relation in protracted dislocation may make correct diagnosis very difficult, especially when a neoarthrosis is formed and a proper degree of jaw mobility is possible.<sup>5</sup>

The various treatment options available are:

- Closed reduction
- Open reduction under general anesthesia
- Condylectomy
- Osteotomy
- Parital eminectomy (Myrhaug)<sup>6</sup>
- Temporal myotomy<sup>7</sup>
- Lateral pterygoid myotomy

Sato et al.<sup>8</sup> used regular erichs arch bars with elastic traction to pull the condyles into their anatomic position in a case of recurrent dislocations along with functional exercises of the mouth.

It is well known that functional exercise sometimes repositions the dislocated TMJ. On the basis of the above, they used a new nonsurgical treatment method for recurrent dislocation of the TMJ. These muscular exercises may re-regulate faulty muscular coordination, counterbalance movement of the jaw and thus presumably prevent dislocation of the TMJ.

In a case report by Pradhan et al.<sup>9</sup> elastic traction and bite block was used to reduce a chronic TMJ dislocation case successfully. Nawab et al. also used the same technique and were successful<sup>10</sup>.

In our case, we planned a similar type of conservative/nonsurgical method for treatment. Upper and lower jaw impressions were taken, and the casts were poured and later articulated in their current position, and an acrylic posterior bite plane was delivered along with class 3 elastics to pull the condyles backward and upward into the condylar fossa.

The patient was followed up every 3 days for a change of elastics. This was continued for about 3 weeks. No satisfactory results were obtained.

## CONCLUSION

The current case was a classic indication for surgical intervention under general anesthesia. But for the medical contra-indication against the use of general anesthesia, we were unable to carry out the ideal treatment plan. The helplessness of the surgeons in view of the general condition of the patient drew attention to the choice of conservative treatment. Since atleast one month had elapsed between the time of dislocation to the starting of the conservative treatment, none of the time- tested approaches helped in bringing the condyles back into their position in the glenoid fossa. Thus, in dilemma of whether to treat or not to treat surgically in liu of the underlying medical condition, by following the principle of “primum non nocere,” i.e., first to do no harm, we

decided to leave it as is. This perplexing situation presented to us was one of a kind. With this case, it could be learnt that inspite of thorough knowledge of the condition, access to all treatment options and resources, impossible situations like these arise, and a life-saving decision has to be undertaken for the greater good of the patient.

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