

## Case Report

Inferolateral Dislocation of Intact Mandibular Condyle,  
Infrequent Finding: A Case ReportMadhumita Srivastava<sup>1</sup>; Gaurav Vishal<sup>2</sup>; Sanjoy Chowdhury<sup>3</sup><sup>1</sup>Oral and Maxillofacial Surgeon, Specialist, Bokaro General Hospital, 3/c, 223, Bokaro Steel City, Jharkhand, India<sup>2</sup>Senior medical Officer, Bokaro General Hospital, Bokaro Steel City, Jharkhand, India<sup>3</sup>Joint Director, Bokaro General Hospital, Bokaro Steel City, Jharkhand, India

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## Abstract

Anterior dislocation of the mandibular condyle is common, but an inferolateral dislocation of an intact condyle is quite rare. This type of dislocation is often misdiagnosed or overlooked and hence inadequately addressed. A case of inferolateral dislocation of the condyle with intact dentate mandible is presented. Diagnostic features and management of it have been discussed in detail.

**Keywords:** Inferolateral Dislocation; Intact Mandible; Mandibular Condyle.

## INTRODUCTION

Mandibular condylar dislocation is uncommon (3%), compared to the other joints in the body.<sup>1</sup> Dislocation is a common and debilitating condition of the facial skeleton. Anterior dislocation is far more common than a lateral dislocation. Fracture dislocation is a common injury of the mandibular condyle, is typically caused by indirect force. In most instances, this dislocation is in an anterior or medial direction. The occurrence of Inferolateral dislocation is unique and rare. This case report presents an unusual traumatic inferolateral dislocation of condyle without associated mandibular fracture.

## CASE REPORT

The patient, a 56-year-old homemaker slipped and fell on the ground at her home and reported to our OPD with the chief complaint of inability to open mouth and pain since 10 hours. A thorough history was taken and examination was done. She felt facing her chin with mouth open. There was no other significant injury. Post-injury she was unable to open her mouth and felt as her mouth is locked. She was fully conscious, maintaining her own airway without difficulty. There was no history of loss of consciousness, vomiting, ear, nasal and mouth bleed. Her previous medical history was unremarkable.

Examination revealed swelling at mandibular symphysis and left TMJ region. Tenderness and bony hard swelling on the left preauricular region were also felt. There was no mouth opening. Also, there

was an absence of lateral movements and occlusion was deranged. No evidence of facial nerve palsy was there. Ct scan showed inferolateral subluxation of left mandibular condyle (Figures 1, 2, 3).

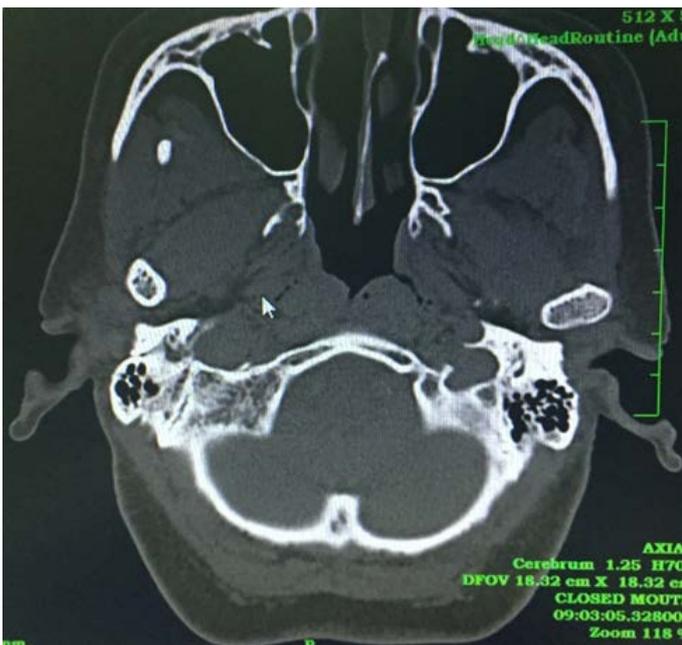
Figure 1. 3D CT scan



Figure 2. CT scan Coronal section



Figure 3. CT scan axial section



Anaesthesia was a challenge in this case so initially under local nerve block (bilateral mandibular nerve block and auriculotemporal nerve block) reduction of the laterally dislocated left condyle was tried, but with no results. Therefore, the reduction was planned under general anaesthesia. Due to restricted mouth, opening direct oral intubation was difficult; also, the patient was not ready for blind nasal intubation, so the patient was intubated through a nasal route using fibre optic. Proper mouth opening was achieved and Erich arch bar was placed in maxillary and mandibular teeth. Intermaxillary fixation was done via class I guiding elastics (Figures 4 & 5) and occlusion was achieved. The patient was advised to be on a liquid diet for the next month. The patient was advised to be on weekly follow up for the same. At every sitting

occlusion and lateral bony protuberance was checked. IMF was kept for 45-days. On the day of IMF removal, no bony protuberance felt extra-orally, she was able to perform lateral excursive movements, occlusion was maintained and mouth opening was there (Figure 6). Further to increase mouth opening physiotherapy was advised and the patient was prescribed tab. Thiocolchicoside 4 mg twice a day for two weeks. These are the pictures of mouth opening post physiotherapy 21<sup>st</sup> (Figure 7) and 60<sup>th</sup> (Figure 8) day.

Figure 4. Intramaxillary fixation with class I elastics



Figure 5. Class I elastics maintaining occlusion



Figure 6. Mouth opening immediate after IMF removal



Figure 7. Mouth opening 21<sup>st</sup> day after IMF removal



Figure 8. Mouth opening 60<sup>th</sup> day after IMF removal



## DISCUSSION

As far back as 3000 BC in Egypt, Hippocrates first reported a dislocation of the mandible. Dislocation of the temporomandibular joint (TMJ) occurs when the joint is subjected to high amplitude of movement, or suffers an injury, when condyle leaves the glenoid fossa due to move beyond the normal range of TMJ.<sup>2</sup> A subluxation is a self-reducing, incomplete dislocation of a joint in which the patient is able to close his or her mouth without assistance.<sup>3</sup> True dislocation (or luxation) is a condition where a joint is displaced from its articulations and requires manipulation by another individual to return to its normal position. Close or open, either of the manipulations may be required for reduction of the same.

According to the direction of displacement, mandibular condyle can be dislocated from glenoid fossa in anterior, posterior, lateral, superior or inferior. Dislocation in superior direction is less frequent, but there is literature available mentioning the same.<sup>4</sup>

Inferior direction dislocation is very rare. In 1985 a case was reported in which an edentulous intact mandible right condyle was dislocated in posteroinferior direction. The condylar-head was palpated in external auditory meatus.<sup>5</sup> Cases of superolateral dislocation have been mentioned along with a fracture of other sites of the mandible.<sup>6</sup> Also, cases of lateral dislocation without fracture of the mandible are mentioned in the literature.<sup>7-10</sup> To best of our knowledge, none of the literature had mentioned the case of, inferolateral dislocation of condyle without mandibular fracture in the dentate patient.

Subluxation and dislocation may be indistinguishable radiographically. In classic cases, the condylar position is anterior to the articular eminence when the mouth is wide open.<sup>11,12</sup> In this present case, the patient had inferolateral dislocation of the left condyle, said so because the condyle did not reduce to its normal position by self. This may have occurred, by the lateral deflection of the condyle out of glenoid fossa, together with over closure of the mandible. This may have caused impaction of the coronoid against the zygomatic arch. Reduction of this dislocation did not prove straightforward and we had to reduce the condyle under general anaesthesia and stabilize it with intermaxillary fixation via continuous traction by guiding elastics. A patient presented to us in golden time, we were able to manage conservatively, else delay may had cause fibrous adherence and hence ankylosis. Once fibrosis occurred, it would have been difficult to manage conservatively.

Also, the tomographic examination is a useful and must adjunct to investigation and it has even been advocated as a routine procedure in all injuries occurring in the particular region.

## CONCLUSION

Several factors are responsible for inferolateral dislocation of the mandibular condyle. Such as anatomy of joint, type of impact, the direction of impact, the magnitude of impact, dental status, other associated fractures, the position of mandible either open or closed, etc. Reduction of unusual mandibular dislocations may be hindered by the structural complexity of the TMJ region. Inferolateral dislocations of the condylar head require careful preoperative assessment. While it is evidently worthwhile attempting a closed manoeuvre to relocate the condyle, the patient and the surgical and anaesthetic team should be prepared to proceed with an open reduction if required. Anaesthesia team play a major role in such cases where the patient has no mouth opening. Also, detail examination and investigation are key to a good diagnosis.

## CONFLICTS OF INTEREST

We hold that we have no conflicts of interest with any consistency.

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