CASE REPORT

TRAUMATIC SUPERO LATERAL DISLOCATION OF INTACT MANDIBULAR CONDYLE WITH SYMPHYSEAL SEGMENTAL FRACTURE - A CASE REPORT
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ABSTRACT: Non traumatic antero medial dislocation of mandibular condyle is common but traumatic posterior, superior and lateral dislocation of bilateral intact condyle is very rare and only 7 cases have been reported so far. Out of these 3 cases are reported to undergo closed reduction. Acute dislocation of condyle is amenable to conservative approach as the difficulty in reduction increases proportionally with time. We report a case of bilateral superolateral dislocation of condyle with segmental symphyseal fracture managed by closed reduction of condylar and open reduction with internal fixation of symphyseal fracture. We emphasize the importance of early 3 D CT and early intervention in such cases for adequate post-operative dental occlusion and mouth opening.

INTRODUCTION: Fractured condyle dislocations account for 28% of all mandibular fractures¹ but intact condylar dislocations are rare. It represents 3% of all reported dislocated joints.² Most commonly condylar dislocations are caused by non-traumatic measures precipitated by yawning, eating, endoscopy etc. Anterior dislocations are the most common variety which results from hindrance of normal muscle action when mouth is opened from extreme open position. We discuss a rare case of bilateral supero lateral dislocation of intact mandible condyle with segmental fracture symphysis managed adequately within an hour of presentation to emergency department.

CASE: A 35 year old male, driver by occupation reported to emergency department with the history of road traffic accident two hours back wherein while driving his car he hit a standing truck. There was no history of loss of consciousness. Apparently patient's chin hit the dashboard. Clinically he had abnormal occlusion, retruded mandible, anterior open bite, lower incisors hanging below with gum bleed. Bilateral fullness over zygomatic arch could be appreciated.

There was no other systemic organ injury. Intraoral examination showed restricted mouth opening approximately 1 cm with 14 mm symphysial segmental splay.

CT face with 3 D reconstruction was done. It showed bilateral superolateral dislocation of intact condyle with segmental mid symphyseal fracture with condyles hooked over zygomatic arch and as play of 12 mm.

Patient was taken to operation theater. After initial failed nasal intubation, oral intubation was done. Conservative manual reduction of dislocated condyle was done and mouth opening of 38 mm was achieved. The splay had also settled. Fractured site was openly reduced and rigidly fixed with plates.

In view of extreme bleed and laryngeal edema, patient was kept intubated on T piece for next 24 hours.
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Patient achieved normo-occlusion and was allowed soft diet after 48 hrs. He was discharged on 5th post op day. On follow-up he had adequate mouth opening, occlusion. There were no signs of facial nerve palsy.

DISCUSSION: The TMJ is a synovial joint. The right and left TMJ form a bicondylar articulation and ellipsoid variety of the synovial joints similar to knee articulation. Feature that differentiates and makes this joint unique is that its articular surface is covered by fibrocartilage instead of hyaline cartilage.

A dislocation of the temporomandibular joint (TMJ) represents three percent of all reported dislocated joints. Unfractured condylar dislocations are most commonly caused by non-traumatic measures as yawning, eating, dental treatment, endoscopy, or oral intubation resulting in excessive pull of muscles attached to the condyles especially lateral Ptregoid leading to antero medial dislocation most commonly. Condylar fracture with or without dislocations account for 25-35% of all mandibular fractures. Traumatic unfractured condylar dislocations are uncommon out of which posterior, superior or lateral dislocations are very rare. Only 19 cases of this type have been reported. The bilateral variety reported in them is seven in number and post operatively only 3 patients could undergo complete reduction following closed reduction. The accepted mechanism in traumatic dislocation is explainable by the direction of forces that drives one or both the condyles upwards against the posterior slope of glenoid fossa by a frontal impact over the chin in an open mouth position. An associated fracture at symphyseal area makes it easy for the mandibular segment to slide upwards. Li et al, had explained that after a primary impact on the chin causing fracture symphysia, a subsequent second impact results in dislocation of condyle.

Our patient had undergone road traffic accident, in which his chin had struck the dash board in open mouth position, explaining the mechanism of fracture and dislocation. He sustained segmental symphyseal and b/l superior lateral dislocation of unfractured condyles falling in grade II B with condyle hooked above zygomatic arch as per Allen and young classification. Though the suspicion of such kind of fractures can be made clinically by malocclusion and persistence of open bite after the reduction of symphyseal fracture or loss of ramus height or retrognathia. We advised 3 D CT to avoid delay in diagnosis and treatment as also suggested by Tauro et al. We could undergo 3 D CT in this patient within 15 minutes of admission and patient was taken to OT immediately. Conventional manual reduction of bilateral condyle was done and the anterior fracture was openly reduced and rigidly fixed with plates. Though manual reduction is first choice for condyle dislocation but it is possible only if there is no delay in procedure. Long standing delayed cases makes closed reduction difficult due tofibro-osseus ankylosis. As also suggested by previous report the diagnosis and treatment of these type of dislocations should be done as early as possible. Such type of cases should be performed under general anesthesia so that the option to perform open reduction if closed reduction fails, remains available. Post operatively our patient had normo occlusion and was advised rigorous mouth opening exercises to prevent fibrosis of joint as also suggested by Rattan et al. The literature also highlights the possibility of facial nerve damage in such cases. But in our case facial nerve was spared

CONCLUSION: Traumatic TMJ dislocations can sometimes be difficult to manage. An early and accurate diagnosis with immediate management is the key factors leading to successful attempts to conventional close reduction methods.
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