

## **MANAGEMENT OF BILATERAL CONDYLAR FRACTURE AND RIGHT PARASYMPHYSEAL MANDIBULAR FRACTURE IN A MALE INDIVIDUAL WITH THE HABIT OF ALCOHOLISM AND ABSENCE OF HELMET WEARING: A CASE REPORT AND REVIEW OF LITERATURE**

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### ***ABSTRACT***

*The mandible is a prominent bone of the face and mandibular fractures are the most common maxillofacial fractures. Mandibular condyle and parasymphysis region remains difficult to manage. The most important etiology for facial fractures are accidents and falls. Around 40-50% of untreated cases are mentioned in the scientific literature. In the present, bilateral condylar fracture and parasymphysis fracture treatment modality are discussed.*

***KEYWORDS:*** MSMEs, Performance, Investment, Exports

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### **INTRODUCTION**

Most severe facial injuries are caused by automobile accidents, sports, physical assaults, home accidents, industrial and workplace accidents or gunshots. Next to nasal bone, mandible fractures have the highest incidence among facial bone fractures during facial trauma [1]. Fractures of the mandible are classified based on the anatomic location of the fractured site involved and the degree of dislocation of the articular head. Also, the location, anatomy and low stiffness binding of the mandibular condyle head and high stiffness binding of mandibular ramus are attributed to the high incidence of mandibular condylar fractures with 25%–35% of occurrence rate while fractures of ramus and coronoid process are rare [2][3]. Management of mandibular condylar fractures has various options which include conservative management and surgical management.

Conservative management includes observation only protocol, arch bar and intermaxillary fixation [4]. [5]. Bilateral condylar fracture leads to a decrease in height of the mandibular ramus, visible anterior open bite, disrupted articular surface and muscle attachment. Both open and closed reduction management of bilateral condylar fracture has its own complications. Open reduction can sometimes lead to facial nerve injury, sialocele and external scar while closed reduction can cause open bite, deviated mouth opening, inadequate mouth opening and improper occlusion [2]. Only one side of the fractured mandible is managed surgically while the other side is treated conservatively. In the literature, there

are very few studies regarding the outcome of surgical reduction on both sides of the mandible in bilateral condylar fracture [6]. In this article, a case report of mandibular fracture managed surgically and the outcome of open reduction on both sides of the bilateral condylar fracture followed by fixation with plating is discussed.

## **CASE REPORT**

An individual of about twenty-seven years of age reported of bleeding from the facial region. Clinical examination showed diffuse swelling with facial asymmetry (Clinical Images 1,2,3,4). Three dimensional facial computed tomography revealed bilateral condylar fracture and right parasymphiseal fracture (Radiological images 5,6,7,8,9,10,11). Bilateral condylar fractures were dealt with ORIF surgical procedure. Surgery was uneventful and regular follow-up was done. patient reviewed after 2 months, there was normal mouth opening, lateral movement and protrusion of mandible was not restricted. His occlusion retired to normal.

## **DISCUSSION**

Intermaxillary fixation using wire and arch bar followed by maintenance of the intermaxillary fixation for 2 to 4 weeks for closed reduction is done. On the other side, open reduction with internal bone plating is done with various approaches such as preauricular, retroauricular, submandibular, retromandibular and endoscopic transoral methods. Closed reduction works well for intracapsular fractures as in open treatment postoperative scarring of the tissues around the articular capsule occurs restricting the joint movement [7,8,9,10]. Stephanus Christiano et al in their case report on the bilateral condylar and symphysis fracture of a 19-year-old male concluded that the non-surgical approach is as effective as other treatment methods. He used a bite raising appliance which gave an effective and satisfying treatment outcome [11,12,13]. The masticatory system can be improved by mandibular movements, occlusion, and symmetry. More damage is seen in bilateral fracture cases than in unilateral cases. Decreased asymmetry, pain and malocclusion were observed in ORIF cases than in conservative cases. Conservative cases develop pain in the temporomandibular joint region, trismus, malocclusion and deviation of the lower jaw. Two to four weeks of intermaxillary fixation goes hand in hand with ORIF in order to maintain occlusion and reduce deviation. ORIF resulted in more excellent lateral excursions and protrusional movements. Important parameters are jaw deviation, lateral excursions and protrusive movements. Indications for ORIF are dislocation into the middle cranial fossa, dislocation into the external auditory canal, lateral extracapsular displacement, malocclusion and an open wound with foreign body contamination. Bone remodelling and functional adaptation occur. Condyle plays an important role in mandibular growth. Condylar fractures when not managed properly can lead to numerous problems like ankylosis, facial asymmetry, muscle spasm facial nerve injury, infection, condyle resorption, malocclusion, deviation of the jaw on opening, osteonecrosis and diminished mouth opening [14-16]. Choosing the right treatment plan and proper approach is very important to minimize postoperative complications. The ultimate aim of the treatment is to restore pre traumatic phase occlusion and mouth opening to facilitate adequate mastication with minimal injury to surrounding soft tissue and nerve [17][18]. There are very few studies in the literature which determine the outcome of bilateral condylar fractures treated on both sides as in most of the studies one side is treated conservatively and the other side is treated with surgical management. In our study, both sides were managed surgically by ORIF which showed a very good prognosis and no noticeable complications.



**Figure 1**



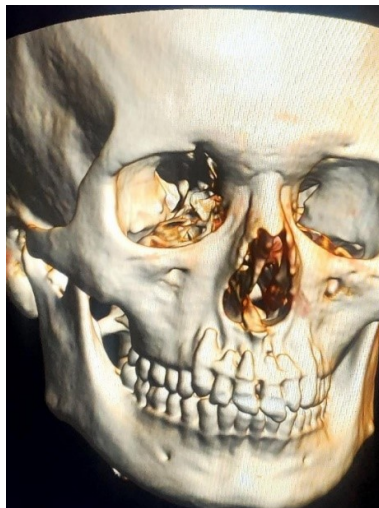
**Figure 2**



**Figure 3**



**Figure 4**



**Figure 5**



**Figure 6**



**Figure 7**

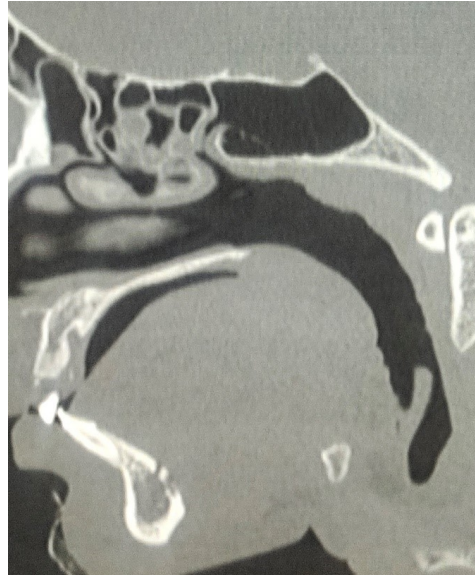


**Figure 8**



**Figure 9**





**Figure 10**



**Figure 11**

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