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ABSTRACT

Introduction: Mandible fractures are extremely frequent in maxillofacial trauma, accounts for 36-59% and 19-52% involve the condyle. Mandible fracture if not treated or incorrectly treated can lead to significant functional and aesthetic sequelae including facial asymmetry, malocclusion, temporomandibular joint dysfunction and osteomyelitis. This case report presented a treatment of parasymphysis mandible fracture with open reduction and unilateral condyle fracture with closed reduction.

Keywords: Fracture of Parasymphysis, Fracture of Condyle, ORIF, Closed Reduction, Occlusion

Case Report

A 35 years old female patient on Thursday July 21st 2016 referred from Cibabat Regional General Hospital at Cimahi area to Oral Surgery department of Hasan Sadikin Hospital with bleeding from mouth and broke on the lower jaw. About 5 hours prior to admission the patient got an traffic accident. When the patient was riding a motorcycle at Padalarang area while she want turned to the right side with stop position, suddenly there was came another motorcycle from opposite direction and hit her, so she fell down with unknown mechanism. No history of using helmet, history of unconsciousness ± 15 minutes, there is no history of nausea and vomiting, there is no bleeding from ears and nose, there is bleeding from mouth. Then the patient was taken to Cibabat general hospital at Cimahi area and was performed head X-ray, injection of Anti Tetanus Serum (ATS) and Tetanus Toxoid (TT) and some medication (Cefixime, and Sodium diclofenac tablet). Then the patient was referred to Hasan Sadikin Hospital.

Diagnosis

Based on clinical and radiological examination, the patient was diagnosed fracture of right parasymphysis of mandible, fracture of right condyle, dentoalveolar fracture of teeth 12-22 and segmental dentoalveolar fracture of teeth 32-42 with avulsion of teeth 11, 12, 22, 42 and mobility grade 3 of tooth 21, lacerated wound at lower lip, vestibule of teeth 33-43, gingival of teeth 11-21, 32-43 and punctured wound at lower lip and labiomentale region.

Treatment

The ORIF elective was performed in general anesthesia with intubation via nasal. On the right parasymphysis mandible fracture we made of extra oral incision approach at submental region than dissection until visible of fracture line and then carried repositioning and reduction with two bars miniplate and screw on the right parasymphysis of mandible region and closure of soft tissue and skin (Figure 4).

Postoperative day one we application the embankment bites on the right molar region and intermaxillary Fixation (IMF) with elastic rubber at anterior and posterior left region. The patient were instructed to a liquid diet. Third day postoperative embankment bite was released and evaluation of occlusion and obtained occlusion is reached (Figure 5), the patient was discharged and instructed to control every week for exercise open and closed mouth and TMJ irradiation with solux.

Discussion

Open reduction has advantages of the reduction of the displaced bony fragment to the most ideal anatomical site by a direct approach to the fracture site. In addition, it can prevent complications such as respiration disorder, pronunciation disorder, and severe nutritional imbalance by shortening IMF period via rigid fixation. Disadvantage of open reduction that is an invasive treatment, which may cause injury of nerves or blood vessels during operation, and postoperative complications including infection. In addition, it has permanent scar though the surgery is conducted after designing the incision line considering aesthesis.¹¹

Advantages of closed reduction with functional therapy is relatively safe treatment. No injury of nerves and blood vessels occur during the treatment, and no postoperative complications such as infection or scar occurs. In particular, complications such as fracture, loss, and eruption delay of the growing teeth can be avoided in pediatric patients as no tooth germ injury occur because of no establishment of the crown of the permanent teeth. Longterm IMF has disadvantages of the injury of the periodontal tissue and buccal mucosa, poor oral hygiene, pronunciation disorder, imbalanced nutrition, mouth opening disorder and respiration disorder. In the case of conservative treatment using closed reduction, the growth disorder and excessive growth of the injured mandible may occur due to inappropriate reduction of bone fragments and the right and left displacement of the mandibular ramus or mandibular deviation upon opening may occur after conservative treatment.¹¹

Conclusion

In this case report open reduction was perform at right parasymphysis mandible fracture and closed reduction at right condyle and obtained satisfactory result. Selection of method appropriate to indication, condition of fracture and skill of operator. In this case the dental occlusion can be used as a guide to fracture reduction as a therapeutic tool.



Figures. Clinical picture facial profile and intra oral of emergency room



Figures. Radiological examination Skull AP, Lateral A and B, Panoramic C



Figures. Intra oral condition after fixation with miniplate and screw



Figures. Intra oral while wearing embankment bite with IMF rubber left and IMF eye when occlusion has been reached right



Figures. Control 2 month, normal mouth opening, no pain and deviation when opening or closing mouth, normal occlusion

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