



PARASYMPHISIS MANDIBULAR FRACTURE- A CASE REPORT

Himanshu Thukral*¹, Tarun Mehrotra², Arun Mehrotra³, Nandita Bhowmik⁴, Aditya Bansal⁵ and Aarti Kumari⁶

¹Oral and Maxillofacial Surgeon, MDS, Delhi.

^{2,3}BDS, Sharda Dental Clinic, Delhi.

⁴MDS, Oral and Medicine and Radiology, Ghaziabad.

⁵Oral and Maxillofacial Surgeon, MDS, Madhya Pradesh.

⁶Senior Lecturer, Hazaribag College of Dental Sciences and Hospital, Demotand, Hazaribag, Jharkhand.

***Corresponding Author: Himanshu Thukral**

Oral and Maxillofacial Surgeon, MDS, Delhi.

Article Received on 20/11/2018

Article Revised on 10/12/2018

Article Accepted on 30/12/2018

ABSTRACT

The treatment of parasymphysis mandibular angle fractures involves several postsurgical complications and is in greater demand when compared to therapeutic approaches for other types of mandibular fractures. Such postsurgical complications as bleeding, swelling, infection, dehiscence, pseudoarthrosis and paresthesia might affect individuals in both sexes and at all age groups. The presence of a mandibular third molar, a cross-sectional area thinner than the tooth-bearing region, and biomechanical forces might hamper the surgery, making it longer and more complex. Internal fixation is aimed at undisturbed healing under condition of functional and without any period of intermaxillary fixation. Adequate fixation depends on different fracture types, patients' general health and compliance, and the timing of the operation. This case report involves a parasymphysis mandibular angle fracture successfully treated with the mini plate technique, a simple approach to treat one of the most common fractures involving the mandible, quickly restoring the patient's oral function.

KEYWORDS: Alternative technique, mandible fracture, trauma.

INTRODUCTION

Fracture of mandible occurs more frequently than any other fracture of facial skeleton. It is one of the serious facial bone injury that a practicing dental surgeon may expect to encounter. It is also a facial fracture which may have a misfortune to cause as a complication of tooth extraction. Maxillofacial fractures are less common in children. The incidence is less than 1% below age 5 and upto 8% in children younger than 12 years.^[1] Although in hospitalized pediatric patient mandibular fractures are most common and accounts for 56%.^[2,3] In pediatric patients symphysis and parasymphysis fracture accounts for 15-20% while body fractures are rare.^[4] Major cause of pediatric mandibular fractures are fall from height, road traffic accidents, child abuse, hyperactivity of child, assault etc.^[5]

The goal of the treatment of these fractures is restore the underlying bony architecture to pre-injury position, in a stable fashion as invasively as possible with minimal residual esthetic and functional impairment.^[6]

Fractures of Mandible may be classified as

1. Fractures with gross comminution of the bone and without significant loss of hard and soft tissue.

2. Fractures with gross comminution of bone with extensive loss of both hard and soft tissue.

CASE REPORT

A 18-year-old female patient with mandibular trauma reported in the Sharda dental clinic, Delhi. Clinically the patient showed swelling and trismus, tenderness at the parasymphysis, palpation and post traumatic malocclusion. A panoramic radiograph (Figure 1) was obtained and revealed a parasymphysis fracture. Moreover it showed the presence of right mandibular canine in the fracture line (Figure 1).



Figure 1: Preoperative panoramic radiograph showing parasymphysis in the fracture lines.

After taken the informed consent the surgery is started under local anaesthesia, fracture was exposed with intraoral incision. On this side the fracture was reduced and fixated with a 4hole with center space noncompression titanium miniplate (Synthes, Michigan,

USA) along the line of fracture (Figures 2). To assure a rigid fixation on the more displaced side a second 4-hole with center space noncompression titanium miniplate (Synthes, Michigan, USA) was applied.



Figure 2: Clinical and radiological with Placement of miniplate in parasymphysis mandibular fracture.

Postoperatively, an antibiotic therapy was stated, on 48hr follow up postoperative course was uneventful, and patient on the 15 days suture was removed.

DISCUSSION

Facial fractures in children account for the approximately 5% of all facial fractures.^[7] Male predilection is seen in all age groups. The etiologies of mandibular fractures in children are usually falls and sports injuries. Pediatric

patients present with a unique challenge to the maxillofacial surgeon because of type and frequency of fractures sustained by the children are often different from adults. Management of fractures in children differs from adults because of anatomic variation, rapidity of healing, degree of patient co-operation and the potential for changes in mandibular growth.^[8,9]



Figure3. Postoperative bandage



Figure3. Postoperative OPG

Most of the pediatric fractures are greenstick type, so conservative approach is preferred as the fracture heals rapidly as the child grows normally. Treatment of mandibular fracture in children depends on the fracture type and the stage of skeletal and dental development.^[3] Mandibular growth and development of dentition are the main concerns while managing pediatric mandibular fractures. Majority of pediatric body and parasymphysis fracture are undisplaced because of elasticity of bone and tooth buds. Slight occlusal discrepancies resulting from lack of perfect reduction correct spontaneously with the eruption of permanent teeth. Non displaced body or symphysis fracture without malocclusion can be treated by close observation, soft diet and avoidance of physical activity.

Exact method employed for immobilization depends upon child's age and stage of dental development. Under two years of age, no anchorage can be taken from teeth

as they are unerupted. In adults, absolute reduction and fixation of fracture is indicated, whereas in children minimal manipulation of the facial skeleton is mandated. The small size of the jaw, existing active bony growth centers and the crowded deciduous teeth with permanent tooth buds located in great proximity to the mandibular and mental nerves, all significantly increase the therapy related risks of pediatric mandibular fractures and their growth related abnormalities.

REFERENCES

1. Dodson TB. Mandibular fracture in children, OMS Knowledge Update, Vol. 1, part II, pp. 95107, 1995.
2. Slida, Matsuya T. Pediatric maxillofacial fractures; Their aetiological characters and fracture patterns. J Cranio Maxillofac Surg, 2002; 30: 4; 237-41.
3. Posnick JC, Wells M, Pron GE, Alpert B. Pediatric facial fractures: evolving patterns of treatment. J Oral Maxillofac Surg, 1993; 51: 8; 836-45.
4. Bataineh AB. Etiology and incidence of maxillofacial fractures in the north of Jordan. Oral Surg Oral Med Oral Pathol Oral Radiol Endod, 1998; 186: 1: 31-5.
5. Singh AK, Sharma NK, Verma V, Pandey A. Open Cap Splint Fixation with Circum Mandibular Wiring still best method in Management of Pediatric Mandibular Fracture. J Dentofacial Sci., 2014; 3(4): 55-8.
6. Baby J, Reena JR, Stalin A, Indumathi E. Management of mandibular body fracture in pediatric patients: a case report with review of literature. Contemp Clin Dent., 2010; 1(4): 291-6.
7. Aizenbud D, Hazan-Molina H, Emodi O, Rachmiel A. The management of mandibular body fractures in young children. Dental Traumatol, 2009; 25: 565-70.
8. James D (1985) Maxillofacial injuries in children. In: Rowes NL, Ji W (eds) Maxillofacial injuries, 1st edn. Edinburgh, Churchill Livingstone, pp 538-58.
9. Kaban LB (2004) Facial Trauma II: dentoalveolar injuries and mandibular fractures. In: Kaban LB (ed) Pediatric oral and maxillofacial surgery, 1st ed. Saunders, Philadelphia, pp 441-462.