



CASE REPORT

Modified closed cap splint: Conservative method for minimally displaced pediatric mandibular fracture

Neeraj Kumar ^{a,*}, Richa ^b, Krishan Gauba ^c

^a Unit of Pedodontics and Preventive Dentistry, Oral Health Sciences Centre, PGIMER, Chandigarh, India

^b ESIC Dental College and Hospital, Rohini, New Delhi, India

^c Oral Health Sciences Centre, PGIMER, Chandigarh, India

Received 3 September 2017; revised 12 October 2017; accepted 7 November 2017

Available online 14 November 2017

KEYWORDS

Symphysis fracture;
Cap splint;
Modified splint;
Facial fracture;
Parasymphysis

Abstract Mandibular fracture in younger children is the most common facial fracture among all the facial fracture in the sequence of condyles followed by symphysis/parasymphysis and body of the mandible. Symphysis/Parasymphysis fracture of mandible can be minimally displaced or severely displaced depending upon the severity of the injury. This case report highlights the simple, reliable method of minimally displaced fracture i.e. modified closed cap splint for stability of the fracture segments in pediatric patients.

© 2017 The Authors. Production and hosting by Elsevier B.V. on behalf of King Saud University. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

1. Introduction

Mandibular fracture is the most common fracture among the facial fractures. Maxillofacial injuries are less common in children than adults. The incidence of maxillofacial trauma is 3.3% in children age 15 years or younger. In pediatric patients mandibular fracture accounts for the 36% among all the facial fractures. Condylar fracture followed by the symphysis/parasymphysis fractures are the most common type of fractures in the children (Boffano, 2015). Fall from height/stairs,

road traffic accidents, child abuse, assault etc. are the major causes of mandibular fracture in pediatric patients (Singh et al., 2014). The management of mandibular fracture differs in children when compared to adults because of the presence of the permanent tooth buds in the mandible. Open reduction with rigid fixation is not commonly used in pediatric cases. Fracture of the mandible may be associated with or without loss of both hard and soft tissues depending on the severity of the injury. The goal of the treatment of these fractures is restore the bone architecture in a stable position as less invasively as possible to restore the function and esthetic impairment (Baby et al., 2010).

2. Case 1

A 4 year old boy reported to the unit of Pedodontics and Preventive Dentistry with the chief complaint of pain and asymmetry of face. Patient had a history of fall from the height 1 week back. There was no history of loss of consciousness or

* Corresponding author at: Unit of Pedodontics and Preventive Dentistry, Oral Health Sciences Centre, PGIMER, Chandigarh, India.

E-mail address: dr.neeraj001@gmail.com (N. Kumar).

Peer review under responsibility of King Saud University.



Production and hosting by Elsevier

vomiting. Patient went to local hospital but no intervention was done. Intraoral examination revealed asymmetry of the mandibular arch (Fig. 1). Step deformity with tenderness along the lower border of mandible on right side of canine region was observed. Preoperative OPG shows right mandibular parasymphysis fracture with step along the inferior border of the mandible (Fig. 2). A diagnosis of mandibular parasymphysis fracture was made. The primary impressions were taken with alginate and two sets of casts were subsequently poured. A modified closed acrylic cap splint was fabricated with one



Fig. 1 Intraoral photograph showing space between 82 and 83 region.



Fig. 2 Preoperative OPG showing right mandibular parasymphysis fracture.



Fig. 3 Fabrication of Modified closed cap splint for reduction of Parasymphysis fracture.



Fig. 4 Modified closed cap splint cemented with luting GIC.

anterior and two posterior opening (Fig. 3). Displaced Fractured fragments were reduced under local anaesthesia and modified cap splint was cemented to the reduced fractured jaw with help of luting GIC (GC Fuji I) (Fig. 4). Oral hygiene instructions were given to the patient and analgesics were prescribed. After 6 weeks the splint was removed and the patient was asymptomatic (Fig. 5). An OPG revealed healing of the fracture site after 6 months of follow up (Fig. 6).

3. Case 2

A 4 year old boy reported to the unit of Pedodontics and Preventive Dentistry with the chief complaint of pain in the right mandibular region while chewing food. Patient had a history of road traffic accident (collision with motorcycle) 1 week back. Intraoral examination revealed asymmetry of the arch and gap in the 82 and 83 region (Fig. 7). The primary teeth were carious. Preoperative CT scan showed right mandibular parasymphysis fracture along the inferior border of the mandible (Fig. 8). A diagnosis of mandibular right parasymphysis fracture was made. A modified closed acrylic cap splint was fabricated with one anterior and two posterior opening (Fig. 9). Fractured fragments were reduced and modified closed cap



Fig. 5 Reduction of mandibular right parasymphysis fracture and after 6 months follow up.



Fig. 6 OPG showing reduction of parasymphysis fracture and 6 months follow-up.



Fig. 7 Intraoral photograph showing gap between 82 and 83 region.

Download English Version:

<https://daneshyari.com/en/article/8586319>

Download Persian Version:

<https://daneshyari.com/article/8586319>

[Daneshyari.com](https://daneshyari.com)