



Contents lists available at ScienceDirect

Journal of Oral and Maxillofacial Surgery, Medicine, and Pathology

journal homepage: www.elsevier.com/locate/jomsmmp



Case report

Blunt laryngeal trauma in patients with mandible fracture: Report of 3 cases

Praveen Ganesh*, Ranjit Kumar Peravali, Abhijit Joshi, K. Gopalkrishnan

Dept. Oral & Maxillofacial Surgery, Craniofacial Unit, SDM College of Dental Sciences & Hospital, Dharwad, Karnataka State, India

ARTICLE INFO

Article history:

Received 14 March 2011

Received in revised form 2 June 2011

Accepted 29 June 2011

Available online 19 August 2011

Keywords:

Mandible
Blunt trauma
Larynx
Arytenoids
Hoarseness

ABSTRACT

Three cases of mandibular injury with blunt laryngeal trauma in 2 different age groups are presented. In the common presenting sign of hoarseness of voice and its implication in the recognition of blunt laryngeal trauma, the role of direct laryngoscopy in the diagnosis is discussed. Arytenoid cartilage dislocation associated with maxillofacial injury is rare and infrequently diagnosed cause of vocal cord immobility. One case in our series had arytenoid involvement and both the cases had restricted vocal cord mobility, confirmed by direct laryngoscopy. ORIF of the mandibular fractures and conservative management of the laryngeal injury were carried out. Prompt history, careful examination, initial medical line of treatment followed by voice rest and voice therapy led to gradual decrease in the hoarseness.

© 2011 Asian Association of Oral and Maxillofacial Surgeons. Published by Elsevier Ltd. All rights reserved.

1. Introduction

Laryngeal injuries are rare accounting for less than 1% of all reported trauma in the United States [1]. Epidemiologically, its incidence is estimated at 1 in 30,000 emergency room visits [2]. Our incidence is 0.19% (3 out of 1533 maxillofacial trauma cases). Patients who sustain maxillofacial injuries may also have concomitant injuries to the hard and soft tissues of the neck [3]. Rarity of this type of injury increases in children, adolescents and in an associated mandibular fracture. Mortality rate associated with a laryngeal trauma could range between 1% and 15% [2].

Dyspnea, dysphonia and/or dysphagia are cardinal signs of laryngotracheal dysfunction in a typical laryngeal injury [4]. These signs may be masked in an obtunded patient leading to a missed diagnosis and further complications. The consequences associated with laryngeal injuries range from airway obstruction, voice compromise and permanent hoarseness of voice.

In this article, we present three cases of laryngeal trauma comprising of 1 pediatric and 2 adult patients. Interestingly, all the three had an associated mandibular fracture.

2. Case reports

2.1. Case 1

A 14-year-old boy presented to the surgery unit one day after a motorcycle accident complaining of difficulty in swallowing and bleeding from the mouth. His past medical history was unremarkable. Examination revealed a compound fracture in the left parasymphysis region of mandible with associated edema of the floor of the mouth and submental area. An orthopantomograph was done which confirmed the diagnosis (Fig. 1). The patient had a moderately harsh and whispery voice with poor volume. Neck examination revealed a small abrasion of about 1 cm in the midline, with minimal swelling and positive laryngeal crepitus. There was no associated respiratory distress. Radiographs of cervical spine, soft tissue radiograph of the neck and chest radiographs were normal. Indirect laryngoscopy was performed and fracture of left arytenoid was suspected. The patient was admitted to the hospital and started on a regimen of oral steroid, humidified oxygen, nebulizer and intravenous antibiotics. Direct laryngoscopy revealed fracture of the left arytenoid, restricted mobility of right vocal cord and fixed left vocal cord (Fig. 2). Voice analysis was done by the speech pathologist and strict voice rest for 3 weeks was advised which would be followed by voice therapy.

An open reduction and internal fixation of the fractured mandible was carried out under local anaesthesia through intraoral approach (Fig. 2b). Steroid regimen was gradually tapered down. After three weeks, patient was referred to the voice clinic and voice therapy was started. The fracture site healed well, his voice started improving gradually and had no difficulty in swallowing.

* Corresponding author at: Department of maxillofacial surgery, Craniofacial unit, SDM college of dental sciences. Tel.: +91 9972152140.

E-mail addresses: pgmaxface@gmail.com (P. Ganesh), drranjitkumar.omfs@yahoo.co.in (R.K. Peravali), drabhi@gmail.com (A. Joshi), gops15@gmail.com (K. Gopalkrishnan).



Fig. 1. Preoperative radiograph of case 1 showing fracture mandible.

The patient has been reviewed on a regular basis since the past one year and has made considerable good progress.

2.2. Case 2

A 32-year-old male reported to us with complaints of pain and swelling in the lower jaw. He gave a history of road traffic accident 3 days back wherein he was thrown forward from a moving motorcycle, falling chin first onto the ground. He lost few teeth from the lower jaw at the accident site. There was no history of loss of consciousness. Patient also gave history of developing hoarseness

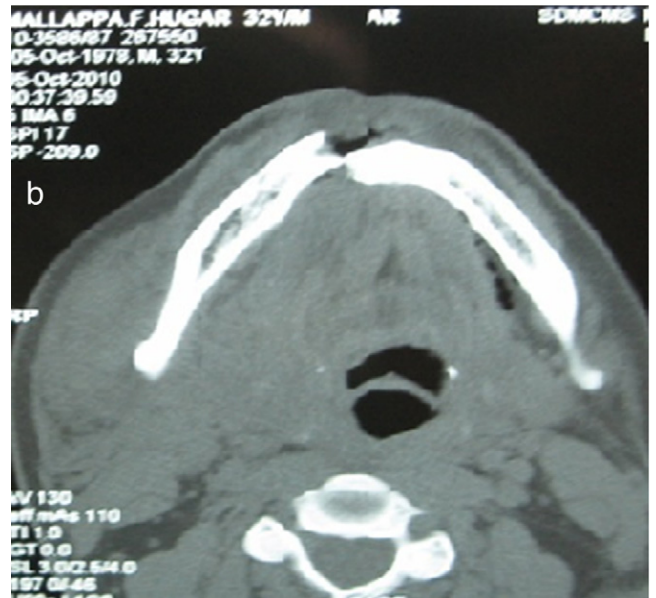


Fig. 3. (a) Preoperative photograph of case 2. (b) CT axial section showing evidence of linear displaced symphyseal fracture of mandible with air pockets.



Fig. 2. (a) Laryngoscopic findings in case 1 revealing left arytenoid fracture, right vocal cord restricted mobility and fixed left vocal cord. (b) Open reduction and internal fixation of the fracture mandible.

of voice after the accident. On questioning, he recollected sustaining an impact to his throat from the handlebar of the motorcycle. He did not give history of any major systemic ailments except for frequent heart burns, which was diagnosed as Gastro Esophageal Reflux Disorder (GERD).

Clinical examination revealed a lacerated wound in the chin region which was compounding intraorally with edema of submental, submandibular region extending till the preauricular region over the right side (Fig. 3a). On palpation there was a step deformity in the symphysis. Intraorally mild ecchymosis over the floor of the mouth lateral to the lingual frenum was noted. Neck examination revealed a mild tenderness over the trachea on palpation. No crepitus could be elicited. His CT scan showed evidence of linear displaced symphyseal fracture of the mandible with soft tissue emphysema in the left submandibular space (Fig. 3b).

Taking into account the hoarseness of voice, following the accident, an opinion from the otolaryngologist was sought. Flexible laryngoscopy was carried out which revealed submucosal hematoma in the left vallecula and both aryepiglottic folds. The right vocal cord showed restricted mobility (Fig. 4a, b). No contraindications for intubation were suggested. The anesthetists were made aware of the restricted mobility of right vocal cord.

Download English Version:

<https://daneshyari.com/en/article/3159946>

Download Persian Version:

<https://daneshyari.com/article/3159946>

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