

## Unusual complications in maxillofacial trauma

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### Abstract

Trauma involving the maxillofacial region rarely leads to life-threatening complications in the absence of intracranial injury but they may occur and have to be kept in mind. In this article we present 2 cases of maxillofacial injury associated with rare systemic problems: juvenile nasopharyngeal angiofibroma (JNA) and pneumomediastinum. Patient with JNA was managed by surgical removal of tumor and the patient with pneumomediastinum received only supportive therapy. Both cases recovered uneventfully.

**Key words:** Juvenile Nasopharyngeal Angiofibroma, Pneumomediastinum, Trauma

### Introduction

Trauma involving the maxillofacial region is routinely seen which may be due to disrespect for the traffic rules or for whatever cause. It could range in the form of a simple laceration to a complicated fracture of facial bones. The proximity of cranium only adds to the problem. The face as we know is richly vasculated through an extensive anastomosis of blood vessels, damage to which can lead to extensive bleeding.

Though it is rare for a facial injury to lead to life-threatening complications but they may occur and have to be kept in mind

In this article we present 2 cases of maxillofacial injury associated with rare systemic problems and impress upon the readers to keep such rarities in mind while treating maxillofacial injuries.

### Case Report 1:

28 year old male patient with history of maxillofacial injuries following a road traffic accident had an acute episode of significant oral and nasal bleeding during primary and definite treatment for which he received massive transfusion. Bleeding was controlled with anterior and posterior nasal packs and the patient was referred to our unit for tertiary care.

Following 24 hours of uneventful observation, which included normal blood parameters, patient developed

profuse oral and nasal bleeding spontaneously. After controlling the bleeding with anterior and posterior nasal packs (Fig. 1), a CT scan with contrast was done which revealed a 9 cm x 5 cm nasopharyngeal mass on left side (Fig. 2), suggestive of Juvenile Nasopharyngeal Angiofibroma (JNA).

The tumor was excised through an existing palatal defect after adequate carotid control. Patient recovered uneventfully and underwent definite treatment of maxillary injuries.

### Case Report 2:

38 year old man was brought to our institution with a history of road traffic accident. On examination, he was conscious and oriented. He had a circumorbital edema around left eye with crepitus suggestive of traumatic emphysema. He suffered from a dentoalveolar fracture involving teeth 11, 21, 22, 23 & 24. He also had crepitus on palpation in the anterior and posterior triangles of left neck extending into the supraclavicular region. CXR showed an evidence of pneumomediastinum which was confirmed with CT scan (Fig. 3). The dentoalveolar fracture was reduced and fixed under monitored anesthesia care. Patient was put on supportive therapy. The crepitus resolved within 5 days with no intervention. No respiratory distress or cyanotic episode was noted during the hospital stay.

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Fig. 1: Patient with nasal packing



Fig. 2: CT scan showing the lesion in nasopharynx

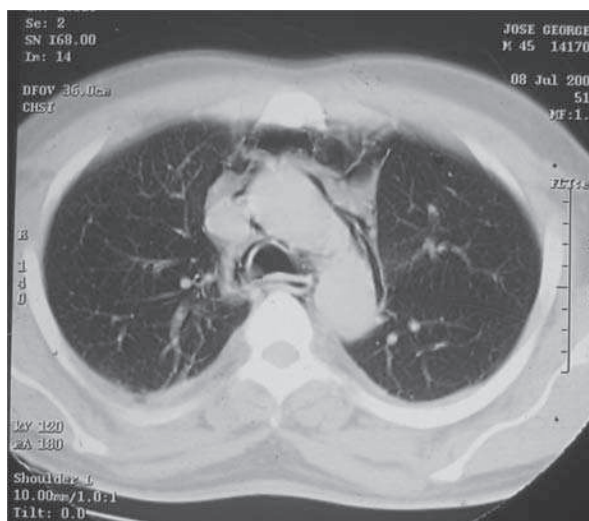


Fig. 3: CT scan revealing pneumomediastinum

## Discussion

### Case 1:

JNA is a rare benign neoplasm occurring almost exclusively in the nasopharynx of adolescent males<sup>1</sup>. The lesion usually manifests as nasal obstruction, epistaxis and sinusitis. It usually involves the sphenopalatine vessels.

The treatment is surgical excision, and can be accessed through Le Fort I osteotomy. The prognosis is good if diagnosed early. In case of uncontrolled bleeding, the external carotid artery can be ligated prior to tumor excision, as was done in our case<sup>2</sup>.

### Case 2:

Mediastinal emphysema or pneumomediastinum can be defined as air in the tissue planes of the mediastinum and its cervical extension<sup>3</sup>.

Air may reach the mediastinum through various routes; the deep fascial planes of the head and neck being one of them.

Surgical emphysema involving the tissue spaces of the head and neck following facial trauma or operative dentistry is considered to be due to air being forced through small breaks in the integrity of the mucosal lining of the nasal and oral cavities or the paranasal sinuses as a result of increased intraluminal pressure during nose blowing, sneezing or the injudicious use of compressed air appliances during dental procedures<sup>4</sup>.

A fracture through the posterior wall of the antrum and the lateral nasal wall puts the antrum and nasal cavity in

direct communication with the lateral pharyngeal space which is in turn continuous with the retropharyngeal space and provides the major route to the mediastinum from the nasal or oral cavities<sup>5</sup>.

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