

CASE REPORT

Airway obstruction due to blood clot in a trauma victim

Maqsood Ahmad, FCPS*, Muhammad Saqib, FCPS**.,

* *Classified anesthesiologist, South Waziristan Scouts Hospital, Wana, South Waziristan (Pakistan)*

** *Classified anesthesiologist, Combined Military Hospital Sialkot (Pakistan)*

Correspondence: *Dr Maqsood Ahmad, FCPS Head, Anesthesiology Department, South Waziristan Scouts Hospital, Wana, South Waziristan (Pakistan)*

ABSTRACT:

Patients who have had blunt trauma chest after a road traffic accident present with a highly variable clinical picture and merit continued observation for any late development of the complications. At times an apparently stable patient may suddenly deteriorate necessitating immediate intervention to save his life. We present a case report of sudden blockage of airways with a blood clot in a blunt trauma victim, whose life was saved with quick intubation.

Key words: Blunt trauma; Road traffic accident; Apnea; Endotracheal intubation

Ref: Ahmad M, Saqib M. Airway obstruction due to blood clot in a trauma victim. *Anaesth Pain & Intensive Care* 2009; 13(1): 23-24.

INTRODUCTION

Airway blockage by foreign materials may result in fatal consequences if the obstruction is not relieved rapidly. We present a case report of a patient who had blunt trauma chest after a road traffic accident and had apneic spells of short duration. After one such episode of comparatively longer duration, endotracheal tube had to be passed and manual ventilation started. After active ventilation for a few minutes the patient coughed out a blood clot which was probably the cause of his airway obstruction, as afterwards, the patient remained symptom free.

CASE REPORT

During a road traffic accident, a young patient, 30 years of age, sustained blunt trauma chest and was brought to the hospital along with other casualties. After a thorough clinical examination, no gross abnormality was found and he was admitted in the surgical ward for observation. His ECG and chest radiograph were normal. On the second day of

admission, he had an apneic spell lasting for about 30 seconds from which he recovered spontaneously before any intervention. He was re-examined by a consultant and shifted to surgical intensive care unit (SICU) for further management. His clinical examination did not reveal any abnormal finding and a repeat chest radiograph was again inconclusive. In the SICU, close observation and continuous pulse oximetry were advised. His breathing remained normal and effortless for the next 24 hour, after which he suddenly went into apnea with some agitation while under observation in the SICU. Endotracheal intubation was immediately performed and he was ventilated with Ambu™ self-inflating bag with 8 lit/min of oxygen flow. After about 40 seconds of ventilation through Ambu™ bag, the patient started coughing and gagging with active efforts for respiration. Viewing the response of the patient, he was extubated, and about 5 cm of the middle portion of the endotracheal tube was found to be blocked with a blood clot. The patient started breathing spontaneously and regularly at the rate of 14-16

breaths per min. he was administered oxygen for a few minutes and then switched to room air. This whole incidence lasted for less than 03 minutes and the life of the patient was saved. He was observed closely in the SICU for another two days after which he was shifted to the surgical ward. Follow up was carried out regularly in the outpatient department without any significant ailment.

DISCUSSION

Airway obstruction is anything that causes narrowing or blocking of the air passages that result in decreased exhaled air flow. The causes of airway obstruction can be divided into upper airway and lower airway obstruction¹. Few common causes to mention are foreign bodies, blood clots, allergic reactions, infections, anatomical abnormalities and trauma. The onset of respiratory distress may be sudden with cough and there is often agitation in the early stage of airway obstruction followed by other signs and symptoms. The signs of respiratory distress include labored, ineffective breathing until the person is no longer breathing (apneic). Loss of consciousness occurs if the obstruction is not relieved². The blockage of airways creates emergency in all situations, demanding immediate intervention in most cases. In some cases, this is due to large blood clots³ in the airways after blunt trauma chest. Therefore, it is important to consider the possibility of clot plugged in the airway, as in our case, in order to avoid unnecessary diagnostic tests and to institute proper therapy. Airway obstruction caused by the presence of blood clot has been noted as a complication of bronchiectasis, tuberculosis, mitral stenosis, pulmonary infarction, pulmonary arteriovenous malformation, sarcoidosis, bronchial

carcinoma, and intrathoracic trauma. Similarly endobronchial blood clot is an unusual, although not rare, cause of airway obstruction. This entity should readily be considered in the differential diagnosis with or without evident hemoptysis in all cases of chest trauma. However, approximately 30% of endobronchial blood clots occur without evidence of hemoptysis⁴. In cases of high suspicion, diagnosis is established by direct endoscopic evaluation. Initial efforts at removal of the airway clot, if warranted, involve lavage, suctioning, and forceps extraction through a flexible bronchoscope. If unsuccessful, further management options include rigid bronchoscopy, Fogarty catheter dislodgment of the clot, and topical thrombolytic agents.⁵ Considering all this in relation to our case, blood clot was formed at some place in his airway after blunt trauma chest and fortunately it remained silent till the time it was removed unintentionally by the endotracheal tube. Although, it is a very strange method of removing a clot but the patient's life was saved in this manner.

REFERENCES:

1. Respiratory therapy cave online: The causes of respiratory obstruction and restriction 28 April 2008.
2. Medicine.Net.com: Definition of airway obstruction.
3. Arney KL, Judson MA, Sahn SA, Airway obstruction arising from blood clot. Three reports and a review of the literature. *Chest*; 2009.
4. Veronese S, Cutrone C, Innocente F, Ori C. Endotracheal tube and tracheo bronchial obstruction due to a large blood clot. Case report. *Minerva anesthesiol* 2002;68(6):561-5.
5. Arney KL, Judson MA, Sahn SA: Airway obstruction arising from blood clot: three reports and a review of the literature. *Chest* 1999, 115:293-300.

