

Natural Death Turned Unnatural

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Abstract

Acute airway obstruction or choking is reportedly commoner in children than adults. Most commonly aspirated material among the children is either vegetable matter or inorganic objects such as a toy. Foreign body aspiration (FBA) amounts to the fourth leading cause of death occurring at either home or community places, in the United States of America. The death rate in cases of FBA in adults is seven times higher among people of age >65 years than in children, though the prevalence of it is less. Cardiovascular diseases (CVD) including ischaemic heart disease and cerebrovascular such as stroke account for 17.7 million deaths. Such a case where the diagnosis of cardiovascular disease was much eminent, turned out to be of choking on autopsy is discussed in this case report.

Keywords: FBA; Choking; Elderly; CVD.

INTRODUCTION

Out of the exhaustive list of emergency health conditions, acute airway obstruction is a condition which is first handled by the general public at the time of occurrence and later by the health care providers. Literature suggests that the outcome of such a condition can be positively

increased by proper public education.¹ The aetiology behind this condition is varying according to the age group and so are the methods to handle it. Strategies followed by the other developed countries can be of use in India, in spite of the lesser available data on the condition.

Acute airway obstruction or choking is reportedly commoner in children than adults. Most commonly aspirated material among the children is either vegetable matter or inorganic objects such as a toy. Foreign body asphyxia (FBA) is a well-known aspect to the physician.

FBA is the fourth leading cause of death at home or community places in the United States of America. As compared to children FBA in adults occur due to aspiration of food particles, medicine tablets, loose dental implants or other inorganic materials.² The death rate in cases of FBA in adults is seven times higher among people of age >65 years than in children, though the prevalence of it is less.³

60% of all deaths occur due to non-communicable diseases such as cardiovascular disease (CVD),

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various cancers, chronic respiratory illnesses, and diabetes. Cardiovascular diseases including ischaemic heart disease and cerebrovascular such as stroke account for 17.7 million deaths.⁴

CASE PRESENTATION

A 60-year male was brought to the casualty of a tertiary care hospital, by his son in an unconscious state, for the last 30 minutes (Image 1). As per the history provided by the relatives, he was a known case of hypertension for the last 15 years, diabetic for the last 10 years and was on regular prescribed medication. All of a sudden he collapsed complaining of chest pain at night time. During the period of resuscitation, he was tested for Troponin-T, which turned out to be non-significant. Also, there were no obvious changes on the

electrocardiogram and normal blood sugar level. Resuscitation attempts were made but were futile. He was pronounced dead after the examination by the on-duty doctor. Since the cause of death could not be established, the body was subjected to a post-mortem examination.

On post-mortem examination, the heart weighed 378 grams. On dissection of the heart, 50% narrowing of the lumen of the left anterior descending artery was noted. The rest of the coronaries, valves and walls were unremarkable [Image 2]. The lungs were then examined, the right lung weighed 487 grams and the left weighed 468 grams. On dissection of the trachea, greyish-coloured soft gelatinous material was noted obstructing both primary bronchi, with hyperemia [Image 3]. On further dissection of the lungs, the greyish-coloured material was found till the terminal bronchus [Image 4].



Image 1: Elderly Patient



Image 2: Heart

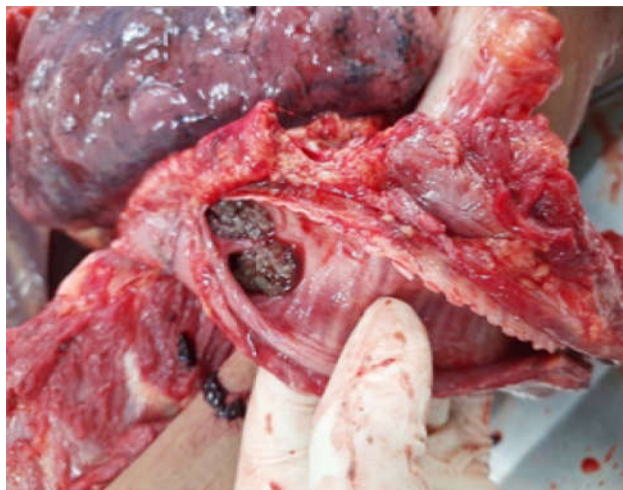


Image 3: Choking material in Trachea



Image 4: Choking material inside Lung

DISCUSSION

In 1963, Haugen was the first to coin the term "Café Coronary".⁵ FBA at the time of eating presents with severe dyspnoea. Hence, even after this long duration passed after the coining of the term, people still do not suspect choking and wrongly label them as coronary artery disease, when the patient is of old age. Home is the most common place where FBA occurs other than the old age homes in cases of elderly patients.⁶ This may be due to the non-affordability of trained personnel at home to take care of elderly people in India.

Berzlanovich AM et al. found in their study that among the cases brought to the emergency during their research study period, observers were present near the patient of FBA in 63% of cases. Moreover, only in 8% of cases, the fatal emergency was correctly identified. Most commonly misdiagnosis related to symptoms of FBA are epileptic seizures, and cardiac arrest in adult patients.⁷ The special aspect of FBA in the elderly is still at large not investigated in elderly patients in the current medical textbooks.

Elderly individuals take a long time in processing the food in their mouth before the small pieces can be swallowed.^{8,9} Hence, life-threatening conditions can occur if the feeding rate is increased leading to the overloading of deglutition. Thus, such fatal events may be preventable, subject to knowledge of the nature and frequency of FBA and its causes. The data to which can be collected from the medical health care centres and providers maintaining records of all such sudden and unexpected deaths.¹⁰

Various neurological conditions such as Parkinsonism, Alzheimer's disease, or haemorrhagic stroke leading to difficult mastication and incoordination can lead to increased incidences of FBA. Also, the usage of sedative drugs in certain conditions, with anti-dopaminergic or anticholinergic activity has been directly linked to an increased incidence of FBA.^{11,12}

Heimlich manoeuvre is life-saving in cases of FBA where the obstruction is at the level of the glottis and supra-glottic region.^{13,14} Simple insertion of fingers or specially designed curved plastic forceps insertion into the mouth and hypopharynx can also be used to remove the obstruction.¹⁵ The range of possible outcomes from the tracheobronchial foreign body includes self-resolution, pneumonia, lung abscess, asphyxia and death.

India is the fifth contributor to the world's death. Among the causes, cardiovascular disease (CVD)

is the most common. Moreover, among Indians CVD occurs a decade earlier compared to the western population. The conventional risk factors fail to explain the increased risk of Indians towards cardiovascular diseases.¹⁶ 28% of deaths and 14% of total disability-adjusted life years in 2016 were due to CVD as compared to 15% and 6.9% respectively in 1990.¹⁷

CONCLUSION

Most incidences of FBA occurring in presence of the public is preventable. Proper training of the general public in applying the Heimlich manoeuvre, can prevent the fatal outcome of choking. Thus, it is suggested for all first-hand physicians be well-oriented and trained to differentiate between choking and CVD. Both being fatal to the individual warrants urgent management.

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