

Suffocation Due to Saburra in the Upper Esophagus as a Result of Achalasia

Hiromichi Ohsaka, Youichi Yanagawa, Hiroki Nagasawa, Ikuto Takeuchi, Kei Jitsuiki, Akihiko Kondo, Kouhei Ishikawa, Kazuhiko Omori, *Ryo Wada

Department of Acute Critical Care Medicine, Shizuoka Hospital, Juntendo University

*Department of Pathology, Shizuoka Hospital, Juntendo University

*Corresponding author

Youichi Yanagawa

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Abstract: A 64-year-old male was found unconscious by a housemate. He had recently complained of dysphagia. When emergency medical technicians checked him, he was in a state of cardiopulmonary arrest. On arrival, he remained in cardiac arrest with asystole. Immediately after the stabilization of circulation, whole-body computed tomography revealed dilatation of the esophagus with a large amount of food and compression of the trachea pinched by saburra in the upper esophagus and sternum. He unfortunately did not regain consciousness and died on the third hospital day. An autopsy failed to show any significant anatomical stenosis in the esophagus. These findings suggested that cause of death in this case to be suffocation due to saburra in the upper esophagus as a result of achalasia. Physicians should pay special attention to the presence of food residue in the esophagus when a patient presents with suffocation in response to an amount of food normally deemed too small to induce fatal asphyxia and/or dysphagia.

Keywords: Suffocation; saburra; achalasia; cardiac arrest

INTRODUCTION

Achalasia is a rare esophageal motility disorder. The primary pathophysiologic abnormality in achalasia is the loss of intrinsic inhibitory innervation of the lower esophageal sphincter and smooth muscle segment of the esophageal body [1]. Diseases of the extrinsic (vagal) nervous system and esophageal musculature may be present [1].

However, local and systemic inflammatory autoimmune components associated with the presence of specific anti-myenteric autoantibodies as well as HSV-1 infection have also been implicated [2]. Achalasia is characterized by dysphagia, and patients often have chest pain, regurgitation, weight loss, and an abnormal barium radiograph showing esophageal dilation with narrowing at the gastroesophageal junction [3]. We herein report a case of suffocation due to saburra in the upper esophagus as a result of achalasia.

CASE REPORT

A 64-year-old male was found unconscious by a housemate. He had a history of depression without medication and had recently complained of dysphagia. When emergency medical technicians checked him, he was in a state of cardiopulmonary arrest. The initial rhythm was asystole. When an emergency medical technician performed tracheal intubation, multiple rice grains were observed in his oral cavity. On arrival, he remained in cardiac arrest with asystole. After 2 infusions of 1mg of

adrenaline every 4 minutes, a return of spontaneous circulation was achieved.

Suction with a tracheal tube revealed aspirated rice in his trachea. Immediately after the stabilization of circulation, whole-body computed tomography revealed the disappearance of the portico-medullary junction of the brain, dilatation of the esophagus with a large amount of food and compression of the trachea pinched by saburra in the upper esophagus and sternum. He unfortunately did not regain consciousness and died on the third hospital day. The autopsy with histopathological examinations revealed no fibrous lesion or neoplastic lesion with noted stenosis in the lower esophagus, while it showed that the degeneration or absence of the ganglion cells in the myenteric plexus (Auerbach's plexus) in the lower esophagus using immunohistochemically staining for S-100 protein, and therefore, this esophagus was concluded to be the state of achalasia. These findings suggested that cause of death in this case to be suffocation due to saburra in the upper esophagus as a result of achalasia.

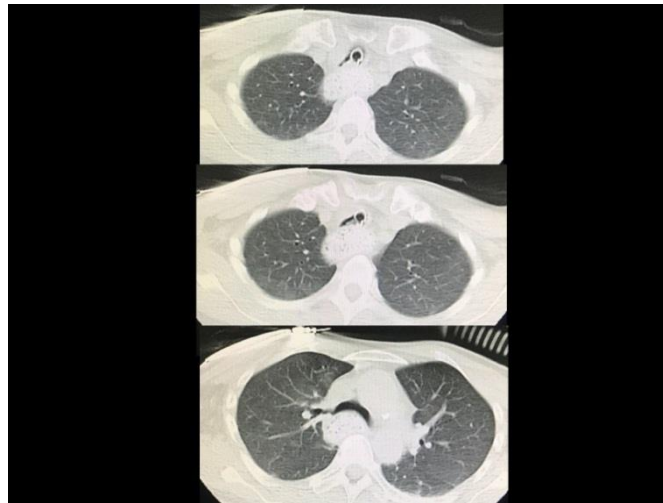


Fig-1: Computed tomography of the chest after return of circulation. Computed tomography of the chest reveals dilatation of the esophagus with a large amount of food and compression of the trachea pinched by saburrainthe upper esophagus and sternum.

DISCUSSION

The trachea is located between the upper esophagus and sternum. When a foreign body or tumor is located in the upper esophagus, the membrane portion of trachea can be compressed, resulting in fatal suffocation [4,5]. We found no cases of suffocation due to achalasia in the English literature. Schalinski *et al.* reported two fatal cases of achalasia [6]. The esophagus in one case was dilated with soft masticated food and bulging anteriorly, compressing the left atrium. The other case collapsed and suffered respiratory arrest while eating. An autopsy revealed narrowing of the cardio esophageal junction with marked proximal dilatation of the esophagus with soft semi-fluid masticated into a yellow food paste. As masticated food remnants were present in the upper and lower airways, this person was thought to have died by food aspiration. Both cases were suspected of having tracheal compression due to esophageal food remnants, although an autopsy failed to demonstrate compression of the trachea after removal of the thoracic cage with the sternum [7].

In Japan, there have been two case reports of suffocation due to saburrainthe upper esophagus in patients with achalasia, similar to the present case [8,9]. Accordingly, physicians should pay close attention to the presence of food residue in the esophagus when a patient presents with suffocation in response to an amount of food normally deemed too small to induce fatal asphyxia and/or dysphagia.

CONCLUSION

Physicians should pay special attention to the presence of food residue in the esophagus when a patient presents with suffocation in response to an amount of food normally deemed too small to induce fatal asphyxia and/or dysphagia.

DECLARATION

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