

A food bolus obstructing the oesophagus in a patient with infantile cerebral palsy

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Abstract

Introduction: A foreign body (FB) in the upper aerodigestive tract is a fairly common encounter. Fish bones are the commonest FB seen in adults. The commonest presentation is odynophagia. Usually, the patient will point at the level of FB on the neck to indicate the location.

Methods: Clinical report.

Results: This case report describes a large FB in an adult with underlying infantile cerebral palsy. Besides dysphagia, it was associated with drooling of saliva and pain in the throat region.

Conclusion: FB ingestion with complete obstruction of the oesophagus is an emergency. It may cause total dysphagia as the passage of food is completely blocked.

Introduction

The most frequent location of an impacted foreign body (FB) in the oesophagus is at the upper third of the oesophagus, which constitutes 85.2%.¹ It is due to the presence of the first narrowing of the structure, which is the cricopharyngeus or the upper oesophageal sphincter. The most common FB in adults is fish bone while coins are more likely amongst children. Generally, the nature of FB can be divided into organic and inorganic.²⁻⁴ Accidental swallowing of a FB causing obstruction in the aerodigestive tract is common in children between 6 months and 3 years of age, possibly due to an uncoordinated swallowing reflex and lack of proper chewing due to the absence of molars. However, it is not uncommon in adults, especially those with an underlying neurological disorder such as cerebral palsy.

Case summary

A 31-year-old gentleman who had a history of infantile cerebral palsy and right spastic hemiplegia complained of anterior neck pain, dysphagia, odynophagia associated with hypersalivation and occasional cough. There was no history of dysphagia prior to this episode. Six hours prior to the presentation, he was admitted with a food bolus stuck in the throat that occurred during a meal. He had failed in multiple attempts to forcibly vomit out the food debris. His vital signs at the emergency department of our hospital were stable. His oropharynx and lungs were

clear, and he had no abdominal tenderness. A lateral neck radiograph revealed air trapping with widened prevertebral soft tissue at the level of C7 (**Figure 1**). Chest radiograph had no significant findings. Bedside flexible nasopharyngolaryngoscopy revealed pooling of saliva at the pyriform fossa but no FB or any other abnormality was seen.



Figure 1. A radiograph of lateral neck showing air trapping with widened prevertebral soft tissue at the level of C7

He was taken immediately for direct laryngoscopy but a FB was not detected. Rigid oesophagoscopy was performed and revealed a huge food bolus that mainly consisted of cartilage and meat was found 18 cm from the upper incisor and en bloc

removal was done (**Figure 2**). A repeat examination down to 25 cm distal from the upper incisors revealed a mild abrasion with oedematous mucosa at 19 cm from the upper incisor but no perforation seen. After the procedure, the patient was kept nil by mouth with Ryle's tube inserted. A chest radiograph after the procedure revealed no signs of oesophageal perforation or mediastinitis. Symptoms and signs of oesophageal perforation such as fever, chest pain, interscapular pain and tachycardia were not present postoesophagoscopy. He was allowed orally and the Ryle's tube was removed after the absence of any evidence suggestive of perforation. Subsequent recovery was uneventful.

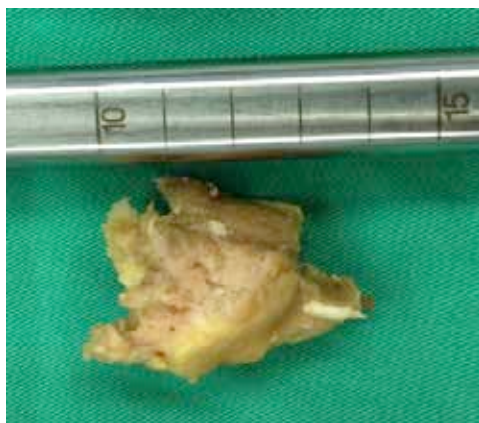


Figure 2. The food bolus removed measured 4 cm in its greatest dimension

Discussion

Our patient has a higher risk of FB ingestion compared to adults without disabilities due to his underlying neurological disorder. The acute onset of a high level oesophageal obstruction made it necessary for him to seek immediate medical treatment. Early medical treatment can prevent complications, such as pressure necrosis or perforation, which can result in life-threatening sepsis.^{5,6} The risk of perforation depends on the nature of the FB such as its shape, consistency, size and orientation.⁷

The caregivers of mentally challenged patients should have a high level of suspicion of FB ingestion, particularly in those who cannot give a proper history and those with a prior history of pica (eating disorder where non-food materials are ingested).⁸ In this case, the patient was able to tell the history himself combined with the history from his relatives. The patient was taking the meal by himself as usual.

Objects may get lodged in the tonsil, base of tongue, vallecula, pyriform fossa and oesophagus or sometimes in the upper or lower respiratory tract leading to medical or surgical emergencies, which are often challenging. Food bolus impaction in the alimentary tract can be differentiated from choking and aspiration. Choking and aspiration indicate that the FB had entered the airway. It is usually manifested as an episode of coughing or shortness of breath. When food is impacted in the oesophagus, the symptom is mainly dysphagia, which is relieved only after removal of the food bolus.

Complications of FB ingestion lodged in the upper oesophagus can be divided into immediate or delayed. Immediate complications such as mucosal abrasions, perforation and bleeding or haematoma formation should be anticipated. Typical perforation signs and symptoms are fever, chest pain, interscapular pain and/or tachycardia, which require a prompt response - usually, the outcomes are good. Chronic complications such as oesophageal stricture or fistula formation may need referral to other health care disciplines for further management.

When evidence of complete oesophageal obstruction is present, emergency removal of oesophageal food bolus impactions should be performed.⁹ The diagnosis can be established based on history, clinical and radiological examination.^{2,10} If this case is detected in primary care, we strongly recommend for urgent referral to the otorhinolaryngology department at the tertiary hospital for further prompt management. The best way to remove this FB is early rigid oesophagoscopy performed by skilled personnel.

Conclusion

FB ingestion in patients with underlying neurological disorder presenting with complete oesophageal obstruction should be diagnosed early with the help of history, clinical examination and imaging. The immediate removal of the impaction by a skilled surgeon is the best management.

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