

## Case Report

DOI: <https://doi.org/10.18502/fem.v5i4.6698>

# Unusual Esophageal Foreign Bodies in a Schizophrenic Patient: A Case Report

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Published online: 2020-03-16

## Abstract

**Introduction:** The possibility of foreign body ingestion should be considered in psychiatric patients. In some complicated cases, foreign bodies become problematic and require immediate surgical intervention.

**Case presentation:** A 45-year-old man with schizophrenia swallowed razor blades and pieces of glass resulting in esophageal perforation, pneumothorax, pneumomediastinum and urgent need for surgery. He was presented in shock state but successfully passed post-operative period in the intensive care unit and surgical ward and was ultimately transferred to the psychiatric ward.

**Conclusion:** Management of asymptomatic patients depends on the demographic factors of patients as well as the site affected in the gastrointestinal tract.

**Key words:** Esophageal Perforation; Foreign Bodies; Mental Disorders

**Cite this article as:** Zabihi Mahmoudabadi H, Mohammadi F, Bahreini M. Unusual Esophageal Foreign Bodies in a Schizophrenic Patient: A Case Report. *Front Emerg Med.* 2021;5(4):e46.

## INTRODUCTION

Incidental ingestion of foreign bodies is probable in all ages, especially in children and the elderly as well as those with a history of mental and psychiatric disorders (1). Foreign bodies in the esophagus may cause critical clinical conditions due to complications (e.g., esophageal perforation, mediastinitis, fistulization or airway obstruction) with high mortality and morbidity rates. Thus, accurate and timely diagnosis and treatment are required (2). In this article, we present a schizophrenic patient who ingested razor blades and pieces of glass, which resulted in esophagus perforation necessitating urgent thoracotomy.

The ethics of the study have been reviewed and approved by the Institutional Review Board of Tehran University of Medical Sciences. Written consent was obtained from the patient's guardian.

## CASE PRESENTATION

A 45-year-old male was referred to the emergency department of our university hospital due to a suicidal attempt by swallowing razor blades and pieces of glass and stabbing himself in the left posterior triangle of the neck, all of which had happened 12 hours earlier.

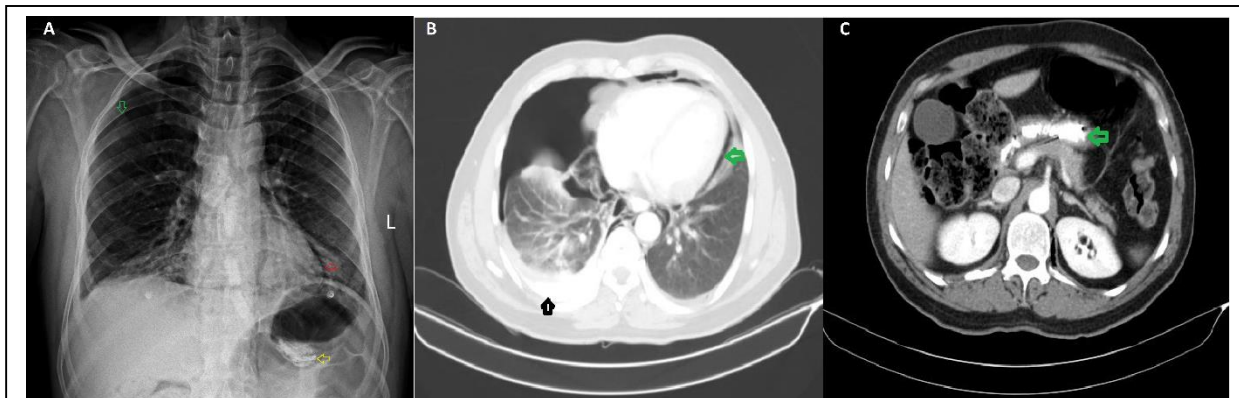
The patient had a history of admission to a psychiatric hospital because of schizophrenia, was taking haloperidol, risperidone, sodium valproate

and methadone, and had an addiction to oral opium.

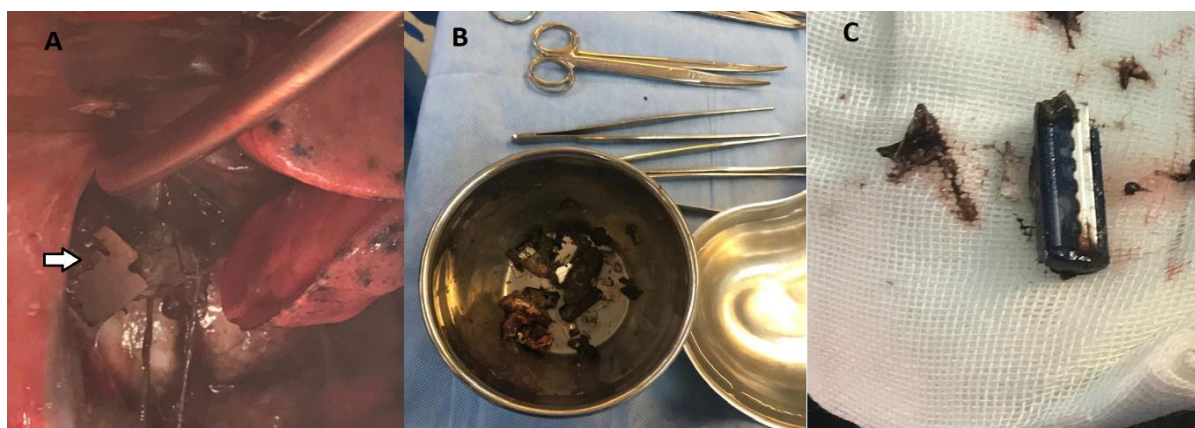
On admission, physical examination showed a laceration nearly 14-15 cm in length on the left posterior triangle of the neck. Vital signs were heart rate=104 beats per minute and blood pressure=95/60 mmHg. Abdominal distension and periumbilical region tenderness were observed. There was no sign of external bleeding. Laboratory results exhibited leukocytosis of  $25/2 \times 10^9/L$  with 89.1% neutrophilic reaction and a prominent metabolic acidosis with base deficit -14.

In primary evaluation, chest X-ray showed right-side pneumothorax, pneumomediastinum and foreign bodies in the stomach (Figure 1). Thoracoabdominal computed tomography (CT) scan was performed, in which gastrografin leaking into the left pleural space was observed, indicating esophageal perforation and the need for surgical intervention (Figure 1).

Therefore, the patient received intravenous piperacillin-tazobactam and vancomycin and was transferred to the operating room, where right posterolateral thoracotomy was performed. The middle third of esophagus in the anterior part had a laceration of 3-4 cm in length. Numerous glass materials and blades were seen in this site (Supplementary Figure). Thus, they were gently



**Figure 1:** A: Chest X-ray showed right-side pneumothorax (green arrow), pneumomediastinum (red arrow) and foreign bodies in stomach (yellow arrow). B: Computed tomography scan exhibited gastrografin leak into the left pleural space (black arrow) and pneumomediastinum (green arrow). C: Note foreign bodies in the stomach (green arrow).



**Figure 2:** Laceration of the middle third of esophagus with a razor blade (arrow) and glass materials.

removed. Necrotic tissues were debrided and the esophagus was closed by two-layer sutures and a pleural flap and then chest tube number 6 was inserted. Midline laparotomy and gastrotomy were performed and many pieces of blade and glass were removed. One blade was entrapped in the gastroesophageal junction, which was removed through gastrotomy (Figure 2). Finally, neck exploration was performed and the right sternocleidomastoid muscle was repaired. The patient was transferred to the intensive care unit (ICU) and received preventive measures for gastroparesis. After staying in the ICU for 5 days, he was generally well. He was discharged in fair condition from the surgery ward after one week, the gastrografin swallow did not show a contrast leak and thereafter, he was admitted to a psychiatric hospital.

## DISCUSSION

Foreign body (FB) ingestion may occur accidentally or intentionally. Commonly swallowed foreign bodies are chicken or fish bones, dentures, plastic cutlery, or metal safety pins. Generally, objects less

than 2 cm in size may pass through the normal adult esophagus without any problem. Most FBs can commonly pass through the rest of the gastrointestinal (GI) tract when they appear in the stomach. About 80% to 90% of the ingested objects can pass through the GI tract, spontaneously. However, sharp or jagged FBs may partially or completely lacerate the esophageal wall mostly in the normal anatomic narrowing of the esophagus (3).

Symptoms of foreign body ingestion may be initially absent and might start to present after some time. They depend on the site of remaining FB in the GI tract. Dysphagia, odynophagia or drooling may be noted in esophageal FBs (4). Patient history should lead to prompt use of diagnostic modalities in suspected patients. CT scan offers strong diagnostic accuracy in such cases (5).

The approach to an ingested foreign body depends on the size, sharp or smooth edges of the object, number, time from ingestion and the object location at presentation. Most FBs in the stomach can be removed endoscopically in the early stage of presentation. In contrast, observation is suggested

in delayed presentations or for whom endoscopic removal cannot be applied. If complications such as perforation, GI bleeding, or mechanical intestinal obstruction occur, surgical intervention is inevitable.

#### CONCLUSIONS

Selecting a suitable management option for a patient with esophageal foreign body depends on a number of factors including shape, size, and location of the foreign body, as well as patient's age and mental status. In patients with psychiatric disorders, the possible risk of foreign body ingestion should be considered.

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#### ACKNOWLEDGEMENTS

None.

#### AUTHORS' CONTRIBUTION

All the authors fulfil the criteria of authorship based on the recommendations of the International Committee of Medical Journal Editors (ICMJE).

#### CONFLICT OF INTEREST

None declared

#### FUNDING

None declared