

# Management Of Ingested Foreign Bodies: How Justifiable Is A Waiting Policy?

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## Abstract

Foreign body ingestion is a commonly seen accident in emergencies, usually in children (80%), elderly, mentally impaired or alcoholic individuals, whereas it may occur intentionally in prisoners or psychiatric patients. According to the literature, 90% of ingested foreign bodies pass through the gastrointestinal tract without complications, 10-20% necessitate endoscopic removal, while only 1% of them will finally need surgical intervention. In clinical practice we often face the dilemma of choosing the appropriate treatment modality. We present 13 cases treated in our department, emphasizing in a "waiting and close observation" policy. Among these cases, only one patient needed to be operated due to obstruction of ileocecal valve by a large coin. Indications for treatment where applicable, are also being discussed.

## INTRODUCTION

Ingested foreign bodies are commonly seen in emergencies, and generally they cause little morbidity if properly managed. Usually, up to 90% of them pass through the gastrointestinal tract spontaneously and 10% to 20% require endoscopic removal, whereas only 1% require surgical intervention (1).

Children account for 80% of ingested foreign bodies, which are usually coins, small toys, crayons or batteries (2). In adults, especially the elderly, mentally impaired, or alcoholic, foreign object ingestion may also occur accidentally, that is usually a poorly chewed bolus of meat, a bone, or dentures. However, prisoners and psychiatric patients may ingest foreign bodies intentionally, such as a razor blade or other sharp metallic objects, in order to impose transfer to hospital from a prison or psychiatric institution (3, 4). Purposeful ingestion of foreign bodies to facilitate drug trafficking also occurs (3).

The diagnosis is usually apparent from the patient's history. In children or adults unable to provide a history, a sudden refusal to eat or respiratory symptoms such as coughing or wheezing due to aspiration are reasons to suspect foreign body ingestion. Objects that have passed through the esophagus generally do not cause any symptoms unless perforation or obstruction occurs (3,5). A careful physical examination should therefore be performed to assess for signs of perforation such as subcutaneous emphysema or

peritoneal signs. Intestinal obstruction by a foreign body may cause abdominal distension, pain, and tenderness. Radiographs of the neck, chest and abdomen may reveal metallic objects and big bones as well as signs of perforation. Contrast examination should not be routinely performed because of aspiration risk or because it hinders subsequent endoscopic management. A computed tomography scan of the neck, chest and/or abdomen is indicated in case of perforation signs. Metal detectors have been also used to detect metallic object ingestion in children (3,5).

## CASE REPORTS

Our experience is based on thirteen cases of foreign body ingestion. Six patients were female (46.2%) and seven were male (53.8%). The average age was 45.6 years (range 17 to 74 years). In twelve cases (92.3%) the foreign body was accidentally ingested and in one case (7.7%) that was intentionally. Hospitalization ranged from 1 to 10 hospitalization days (average 3,4 days per admission). The ingested foreign bodies were: two coins (15,4%), five dentures (38,5%), three nails (23,1%), two needles (15,4%), and one razor (7,7%). In 12 cases the patients were asymptomatic, and after close observation the foreign body was spontaneously passed (92%). One patient presented with abdominal distention and pain. He had a history of an ingested coin fifteen days ago. ? colonoscopy confirmed that the foreign body was impacted in the ileocecal valve.

Endoscopic removal was impossible and the patient was operated.

### DISCUSSION

Treatment of foreign body ingestion involves hospitalization and close observation. Most authors agree that the majority of them will pass on their own, that is consistent to our experience as well. Endoscopic removal is indicated if the patient is in distress, when the foreign body is impacted, or when a danger to the patient is suspected. Impaction occurs at physiological narrowings or angulations and strictures (6,7,8). The physiological narrowings are the cricopharyngeus, aortic arch, left main stem bronchus, lower esophageal sphincter, pylorus, ileocecal valve, and anus. The duodenal sweep is a physiological angulation. Generally, objects greater than 2 cm in diameter will not pass through the pylorus or ileocecal valve and objects longer than 5 cm will not pass by the duodenal sweep. Endoscopic removal is contraindicated if the object is located above the upper esophageal sphincter, if there is clinical or radiographic evidence of perforation or if the foreign body is a package of cocaine. Objects located proximally to the upper esophageal sphincter should be removed by an otolaryngologist. Cocaine packets generally contain a lethal dose to the patient if ruptured and endoscopy should be avoided (5,6,7,8). Foreign bodies that pose a risk to the patient include sharp objects and batteries. Ingested sharp-pointed objects have the highest rates of perforation, (up to 35%) and those within the esophagus, stomach or duodenum should be removed endoscopically on an urgent basis. Surgical intervention is considered if endoscopic removal fails, if the patient develops symptoms or if the object fails to progress over 72h. Batteries may cause problems due to pressure, electrical discharge and chemical injury. Batteries within the esophagus should be removed on an urgent basis. Once the battery has passed into the stomach, it will usually pass through the gastrointestinal tract uneventfully if it is less than 2 cm in the diameter. Surgical management is considered if the patient becomes symptomatic and the battery has passed beyond the reach of the endoscope. The

most common blunt foreign bodies are coins. Blunt objects lodged in the esophagus should be extracted to avoid pressure necrosis with perforation and fistula formation. If the object has passed in to the stomach and is less than 2 cm in size, it will usually pass through the gastrointestinal tract without difficulty.

In conclusion, waiting and close observation is justifiable in the management of ingested foreign bodies, since the vast majority of them pass spontaneously and uneventfully. Endoscopic removal has certain indications. Surgical intervention is considered in a few selected cases.

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