

## Endoscopy- Surgery and Life Saver

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## 1. Abstract

**1.1. Case report:** We present a young male prisoner of twenty six years who intentionally ingested multiple foreign bodies and was admitted in a government hospital with complaint of pain abdomen and vomiting for last one week. He was symptomatically treated and on evaluation, X-ray abdomen revealed multiple radio-opaque foreign bodies. Hence, he was referred to our centre for Endoscopy. The patient was conscious, co-operative, afebrile, well oriented without any signs or symptoms of perforation or peritonitis. The patient was subjected to endoscopy which revealed multiple metallic foreign bodies and glass piece. It was a very tricky and risky endoscopy procedure which was completed within twenty minutes and sharp edged five metallic and one glass piece were successfully removed and thus major surgery was avoided and a precious life was saved.

**1.2. Conclusion:** Endoscopy is a lifesaving important procedure which can help in avoiding surgeries and can prove to be a game changer in management of patients of foreign body ingestion both voluntary and accidental.

## 2. Introduction

The endoscopic removal of foreign bodies is required in 10 to 20 percent of patients and surgical intervention is required in less than 1 percent of cases [1-3]. The mortality due to foreign body ingestion is extremely low, but rare deaths have been reported [2, 4, 5]. The ingestion of multiple foreign objects and repeated episodes are

uncommon occurrences and usually seen in children with developmental delay [6] but can be intentional for certain hidden benefits, as in cases of prisoners. In our case, the patient was prisoner and intentionally ingested multiple foreign bodies, so as to come out of jail and get admitted in hospital, thus to get bail on health grounds. There are many case reports where isolated single foreign bodies have been removed but rare case reports are in literature where multiple ones have been removed, as in our present case report.

## 3. Case Report

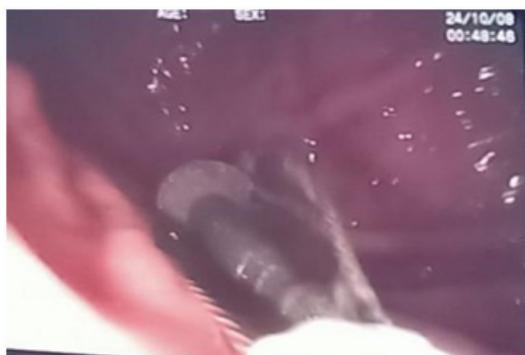
A twenty six year old male prisoner, a drug addict, not a known case of any chronic illness presented with history of pain abdomen and vomiting for last one week. He was initially admitted in a government hospital and on evaluation, X-ray abdomen revealed multiple radio-opaque foreign bodies. Hence, he was referred to our centre for Endoscopy and Colonoscopy. The patient was conscious, co-operative, afebrile, well oriented, haemodynamically stable without any signs or symptoms of perforation or peritonitis. His baseline biochemical investigations including complete haemogram, serum electrolytes, liver & renal function tests were essentially normal. The patient was subjected to endoscopy which revealed multiple metallic foreign bodies and glass piece. It was a very tricky and risky endoscopy procedure which was completed within twenty minutes and sharp edged five metallic and one glass piece were successfully removed with help of basket in three attempts, thus avoiding major surgery and a precious life was saved (Figure 1-4).



**Figure 1:** Digital X-Ray Abdomen Showing Multiple Foreign bodies in Stomach



**Figure 2:** Endoscopy View Showing Multiple Foreign bodies in Stomach



**Figure 3:** Endoscopy Showing Foreign bodies Being Removed With Basket



**Figure 4:** Showing Multiple Foreign bodies Which Were Removed from Stomach

#### 4. Discussion

The detailed history and physical examination is integral for proper diagnosis and avoidance of complication in foreign body ingestion [7]. The imaging helps in confirming the findings and localizing the site of the foreign body. The diagnostic steps and treatment depend on the patient's symptoms, the shape and location of the foreign body, and whether or not it is radiopaque [8, 9]. The cases in which abdominal examination reveals small bowel obstruction or perforation, mandates urgent surgical consultation. Patients with suspected foreign body ingestion should be first subjected to biplane radiographs of the neck, chest, and abdomen [10]. There are many foreign bodies like toys made of plastic or wood, and many types of bones are not easily seen on plain films [11, 12]. The gastrointestinal contrast studies preferably should be avoided as barium contrast may obscure visualization on subsequent endoscopy and risk of aspiration increases in cases of obstructed esophagus. Thus, endoscopy is preferred over contrast even if radiographs are inconclusive [12]. Urgent intervention is indicated if ingested object is sharp, long (>5 cm), with multiple magnets, disk battery, patient shows signs of airway compromise or near-complete esophageal obstruction or features suggestive of inflammation or intestinal obstruction [2]. Flexible endoscopy is preferred in most circumstances because the foreign body can be directly visualized and manipulated, and the surrounding gastrointestinal tract can be examined for potential complications [13-15]. The endoscopy can be done both under conscious sedation or general anesthesia, depending upon the patient's age, ability to cooperate, and the type and number of objects to be removed [16]. The most common sharp-pointed objects ingested are straight pins, needles, and straightened paper clips and represent 5 to 30 percent of swallowed objects. The risk of a complication caused by a sharp-pointed object passing through the gastrointestinal tract varies from 4- 35 percent [17]. The symptomatic sharp objects that pass beyond the reach of a flexible endoscope require surgical intervention. In an asymptomatic patient in whom object has passed into the small intestine, should be followed with serial radiographs to document its passage. Surgical intervention should be considered for objects that fail to progress for three consecutive days. In our case, the most challenging thing was presence of multiple metallic foreign bodies and a glass piece with multiple sharp edges and latter was not appreciated in X-ray, as it is not radio-opaque. This glass piece was last object to be removed and was caught during as a last check during endoscopy, once rest of other metallic foreign bodies were removed. As all of them were sharp edged, hence were specifically removed with help of basket which covers foreign body completely, thus avoiding any complication like perforation, sticking up or slipping mid-way while being removed. During endoscopy removal, there are two difficult, risky and narrow areas i.e. upper and lower esophageal sphincter, in which foreign body can get stuck, slipped or can cause perforation, thus have to be maneuvered intelligently and with lot of

patience. The patient's should be observed for at least few hours post procedure for timely detection of complications. Moreover, psychiatric consultation is must in those who intentionally and repeatedly ingest foreign bodies. There is utmost need for removal of circumstances which force somebody to ingest foreign bodies, especially in prisons. Sometimes, these foreign bodies are forced usually per rectally as a torture technique during investigation.

## 5. Conclusion

The Patients of foreign body ingestion can be asymptomatic or have symptoms of retrosternal pain, dysphagia, vomiting, pain abdomen or features of perforation and peritonitis. Adults usually given proper history, thus management becomes easier. Timely and urgent intervention is required for removal of foreign bodies which are sharp edged and long, as they can cause perforation or intestinal obstruction. The Upper gastro-intestinal endoscopy is diagnostic as well as therapeutic and can save many patients from surgery. In cases of voluntary ingestion, the reasons causing it should be addressed, including psychiatric consultation. There are many case reports where isolated single foreign bodies have been removed but rare case reports are in literature where multiple ones have been removed, as in our present case report.

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