

## Original Article

### FOREIGN BODY INGESTION: THREE CASE REPORTS

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#### ABSTRACT

Foreign body ingestion in adults is rarely reported in our environment. While the incident is commonly deliberate in adults, it is often accidental in children. As illustrated in these case reports, diagnosis is often challenging if the act is not witnessed or reported by someone, even at the onset of complications.

1. A seven-week-old boy ingested a used razor blade given to him by his three-year-old sister. The incident was reported and the object removed at laparotomy.

2. A 38year old woman deliberately swallowed a padlock-and-key apparently to attract her husband's attention. Plain X-rays demonstrated a radio-opaque object first in the chest and then in the stomach. Both padlock-and-key were removed at operation.

3. A 24-year old male with a psychiatric disorder was brought for treatment of an abdominal surgical wound that had failed to heal four months after appendectomy. Wound treatment failed and exploration of the wound and laparotomy extracted metals and plastic objects.

Diagnosis of foreign body ingestion in our environment is achieved by documenting a proper history, physical evaluation and often, plain X-rays. Removal of the ingested object(s) is accomplished mainly by surgical intervention. Recovery and prognosis in most patients are usually satisfactory.

**Key words:** Foreign body ingestion, metals, nails, razor blade, padlock-and-key, plastics, psychosis, deliberate, adult, child.



discharged home.

## INTRODUCTION

Foreign body Ingestion in adults is not commonly reported in our environment. Over 100,000 cases are reported in the United States of America (Kramer,2015). Eighty per cent of reported cases affect children majority of whom are accidental or as a result of oral fixation (Kramer).

Ingestion of foreign body may be accidental or deliberate. The former is commoner in children probably as a result of oral fixation and the latter in the elderly, alcohol intoxication, prison inmates (Ambe, 2012) or psychiatric patients. The literature is scanty on the subject of foreign body ingestion in our sub-region. Deliberate ingestion of foreign body among prison inmates or psychiatric patients is sometimes undertaken to end one's life or to seek special favours (Palta, 2009). Some adult patients with no history of psychiatric illness, as in one of our cases, would ingest a foreign body to attract attention. Except a patient volunteers information of foreign body ingestion, it is often impossible to suspect the diagnosis in asymptomatic patients or those presenting with complications indistinguishable from other gastrointestinal conditions.

We present three consecutive cases of foreign body ingestion and discuss their management in our austere environment.

### Case Report 1

ML a seven-week-old baby boy developed a distended abdomen after allegedly ingesting a used razor blade given to him by his three-year-old sister. When the girl could not retrieve the razor blade from his brother's mouth, she reported the matter to the parents. The baby was taken to the Hospital when they noticed his abdomen was distending.

On examination the baby looked well, the abdomen was slightly distended but not tender. The chest and cardiovascular systems were normal. A plain abdominal X-ray revealed a radio-opaque object in the *right* upper quadrant.

The baby was prepared, and exploratory laparotomy under general anaesthesia was done, and the razor blade was retrieved from the pyloro-duodenal junction. Recovery was uneventful, and the patient was

### Case Report 2

NF a 38-year-old woman was referred to the Accident and Emergency Unit for chest pain and difficulty swallowing after allegedly ingesting a padlock-and-key two days earlier. The patient was said to be jealous of her husband who was working in another town. She ingested a padlock-and-key after a quarrel with him. She attempted to abort the process by forceful vomiting acts aided by pushing and pulling on the neck with her fingers.

On examination, she was calm and coherent. She had scratch marks on the anterior surface of the neck. A Chest X-ray revealed a radio-opaque object in the chest. After 24 hours another plain X-ray indicated that the padlock-and-key had reached the stomach. The patient was prepared, and the padlock-and-key were retrieved at exploratory laparotomy. Recovery was uneventful, and the patient was discharged home.

### Case Report 3

E B K twenty-four-year-old male patient was referred to the surgical outpatient clinic on account of a persistently discharging surgical wound in the abdomen. He was operated for appendicitis in a private facility four months earlier, but the wound had not healed.

He dropped out of school and was living with his uncle. His mother and father were divorced. There was no known history of substance abuse. He had very little other information to contribute apart from the fact that the smell from the wound was tormenting him.

He appeared calm, but his expressions were disconnected and hallucinatory. His abdomen was not distended. The wound in the right iliac fossa was dirty and discharging offensive fluid. Schizophrenia and wound infection were diagnosed. Daily dressings for the wound were ordered. There was no improvement in the wound after two weeks of treatment. A decision was taken to explore the wound, and when a metallic object was removed, the procedure was converted to a full exploratory laparotomy. A variety of metal, plastic and other objects were removed (Table 1 and Fig 1-4).

**Table 1: Foreign bodies extracted at laparotomy**

No	Foreign body type	Location extracted/seen	Extracted
1	4" Nail	Terminal Ilium	yes
2	6" Nail	Terminal Ilium	yes
3	Toy marble	Terminal Ilium	Yes
4	Adult size toothbrush	Sigmoid colon	Yes



**Fig 1: 4 " nail from abdominal wound**



**Fig 2 Toothbrush, nails, toy marble and appendix**

Other intraoperative findings included a single



**Fig 3: Post-operation abdominal x-ray showing coins, beads and pins/needles; drain in situ**

perforation in the ileum and faecal contamination of the abdominal cavity. The perforation was closed. Copious peritoneal lavage using saline was done. Recovery was uneventful, his surgical wound healed by primary intention. The patient was reviewed by a Psychiatrist while he was in the surgical ward. An abdominal X-ray was done two weeks after surgery and showed an assortment of items including coins, paper pins, injection needles and beads. Although there was heightened nurse surveillance on him, he still continued to ingest foreign materials. He was discharged home in a fair state of health under psychiatric care. He visited the Psychiatrist a few times and stopped. He also informed the surgical team that he had stopped using the drugs prescribed by the Psychiatrist. He was lost to follow-up shortly after.

**DISCUSSION**

Among adults, deliberate foreign body ingestion is commonly seen in alcohol intoxication, psychiatric patients and prison inmates either seeking to end their lives or gain attention or favour. Except the incident is reported or witnessed by someone, the diagnosis could be difficult and might only be suspected at the onset of complications or confirmed at surgical exploration.

While foreign body ingestion is commonly accidental in children, it is not so in adults. The only child in our

report was given a used razor blade by his three-year-old sister. The object was placed in his mouth and accidentally ingested. Dereci et al (2015) showed that 72% of foreign body ingestion occurs at play. Safety-pins and coins are the most frequently ingested materials amongst the pediatric population (Aydogdu et al, 2009 and Kay et al, 2005). The lack of toys at play for the rural children in Sierra Leone could cause them to play with whatsoever is at their disposal. The diagnosis of ingestion of razor blade was made because the act was witnessed and reported.

The motivation for foreign body ingestion in adults varies and includes attempted suicide, seeking attention or favour from others or psychiatric disorder. The motive of our second patient was probably to seek the attention of her husband whom she confessed was no longer giving her the attention she was used to. She seemed to have had a change of mind after ingesting the padlock-and-key by trying to forcefully vomit it out using her fingers to aid her efforts while it was already beyond her reach. Ambe et al. (2012) noted that the area of discomfort did not always correlate with the site of impaction. This might indicate a fear of death and losing the husband or not wanting to distress him.

Psychiatric disorders such as hallucinations seem to play a significant role in the deliberate ingestion of foreign bodies as illustrated by our last patient. He could have been seeking attention from his parents who were not living with him. However, his psychotic disorder might have stemmed from a shattered family as observed by Alao et al. (2006). Substance abuse was not established in this case. A psychiatric patient, according to Gebresellassie(2016), implanted foreign bodies in his sigmoid colon after self-mutilation. Our third patient clearly did not mutilate and insert the objects himself since the abdominal wound was made at appendectomy though the appendix itself was not removed in the process(fig, 2). He continued to ingest foreign bodies soon after he was operated in spite of the heightened surveillance by nursing staff and others.

Physical evaluation alone is unhelpful in asymptomatic patients without a fair knowledge of the incident. Plain radiography, the most commonly available mode of radiological evaluation in our institution has false-negative rates of up to 47% (Pfau, 2014). Despite this drawback, it is useful and recommended for the assessment of the presence, site, size, shape and number of ingested materials (Chiu, 2012) .

Endoscopy is the gold standard as a diagnostic and therapeutic tool especially when the foreign body is not opaque, or it is lodged in the oesophagus (Birk, 2016). The resources and skills required in carrying out endoscopy are not universally available in our environment. Two of our cases could have benefited from gastroduodenoscopy, although the third EBK would still have needed surgery. In the European Union, less than 1% and 10%-20% of cases of foreign body ingestion require surgery and endoscopy respectively for their removal. The majority are spontaneously passed (Birk 2016; Sugawa 2014).

Until resources and skills in the use of endoscopy for the evaluation and treatment of cases of foreign body ingestion are acquired, surgery will remain the most widely available means of treatment in our environment

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