Case Report

Management of a Patient with Foreign Body Ingestion at Ndola Teaching Hospital, Zambia

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ABSTRACT

Foreign body (FB) ingestion refers to intentional swallowing of indigestible, non-nutritious solid substances. It is more common in children and psychiatry adult patients. Adult psychiatry patients have the highest incidence of recurrent ingestion of multiple FB that results from poor impulse control by care-givers and as a response to stress. Foreign bodies longer than 6cm, wider than 2.5cm and sharp edged are unlikely to pass without getting imparted or causing perforation. These warrant removal by endoscopy where available or laparotomy. We report on the management of a case of intentional swallowing of multiple FBs by a known psychiatric patient at Ndola Teaching Hospital, in Ndola, Zambia.

INTRODUCTION

Foreign body (FB) ingestion refers to the intentional swallowing of indigestible, non-nutritious solid substances.[1.] It is more common in children, with a male-to-female ratio of 1.5:1, respectively.[2] Children, psychiatric patients and illicit users of drugs and alcohol are most at risk.[2,3]Although FB ingestion is not common in adults, adult psychiatry patients have the highest incidence of recurrent ingestion of multiple Fbs that results from poor impulse control by care-givers and as a response to stress.[3]Though 80% FBs pass spontaneously, 20% require intervention, and with significant morbidity and mortality.[2]

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Oesophageal FBs are commonly retained due to underlying oesophageal disease such asstricture, oesophageal rings, malignancy, or achalasia.[2] Sharp retained oesophageal Fbs such as forks, knives, nails and spoons are recommended for removal by endoscopy.[2]A gastric FB is likely to be retained if its width is more than 2.5cm,since it would not be able to pass through the pylorus, or if its length is more than 6cm,since it would not be able to pass through the duodenum.[4]Intervention for retained oesophageal FBs is 20% by endoscopy and 1% by surgical intervention, especially if object has been retained for more than 24hours.[4]Oesophageal perforation requires up front surgery.[4]

We report on the management of a case of intentional swallowing of multiple FBs by a known psychiatric patient at Ndola Teaching Hospital, in Ndola, Zambia.

CASE PRESENTATION

A 24-year-old male presented to our facility with a one-week history of painful and difficult swallowing after ingesting foreign bodies for an unknown duration, associated with postprandial vomiting. There was also a history of central chest pain that was non-radiating and not associated with a cough or difficult breathing. The patient admitted to ingesting objects but denied having cravings for ingesting metallic objects. He had no history of constipation or abdominal pain and no associated history of constipation or passage of bloody stools. The patient was known to our psychiatry services

Keywords*: Foreign body, ingestion of foreign body, swallowing of foreign body.*

and was a defaulter on treatment for aschizo affective disorder because he was lost to follow-up.The patient lived with his uncle and grandmother and had a history of alcohol abuse and smoking. He denied illicit drug use. He was a high-school leaver, with an average academic performance. He was employed as a general worker in anindustrial company.

On examination, the patient was not in respiratory distress, and was well kempt. He was mildly dehydrated. His chest had equal air entry bilaterally. Abdominal examination revealed epigastric tenderness but with no guarding or rebound tenderness. His chest x-ray is shown below in Figure 1. He had a normal full blood count with a haemoglobin of 16.2g/dl and a normal kidney function test.

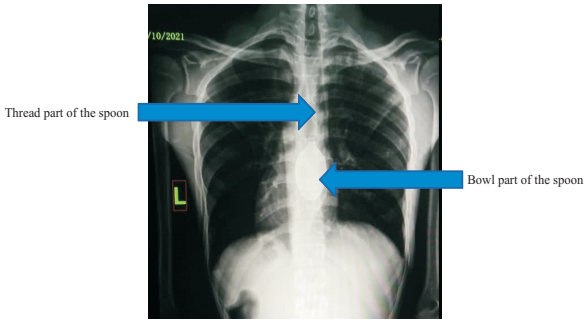

Figure 1 Showing spoon in the oesophagus. There was no esophageal perforation.

X-rays revealed a metallic a tablespoon in the third part of the oesophagus and four 4-inchnails in the stomach, as shown in Figure 2.

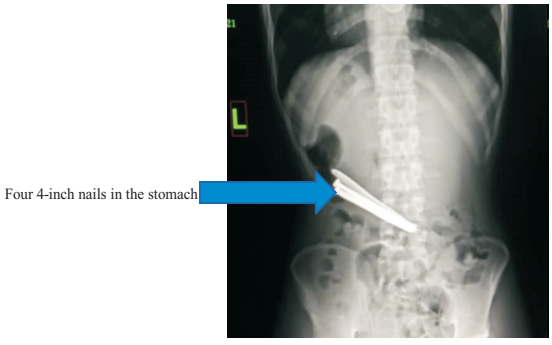

Figure 2; Abdominal x-ray showing nails in the stomach without gastric perforation.

The patient underwent an emergency exploratory laparotomy, with a gastrotomy along the body of the stomach, near the fundus.

Summary of operative procedure:

1. Upper midline laparotomy under general anaesthesia with endotracheal intubation.
2. Foreign bodies palpable in stomach and lower oesophagus. No other foreign bodies palpable in the rest of the bowels.
3. Anterior gastrostomy done, as shown in figure 3Afour-inch steal nails delivered from stomach.
4. Spoon palpable in abdominal oesophagus, delivered with Magill's forceps as shown in figure 3B.
5. Abdominal lavage and closure done.

Four 4-inch nails were extracted from the stomach. A Magill forceps was used to remove the spoon (3cm wide) from the oesophagus, located about 5cm from the gastroesophageal junction. Figure 3 shows the laparotomy, gastrostomy and foreign bodies that were removed.

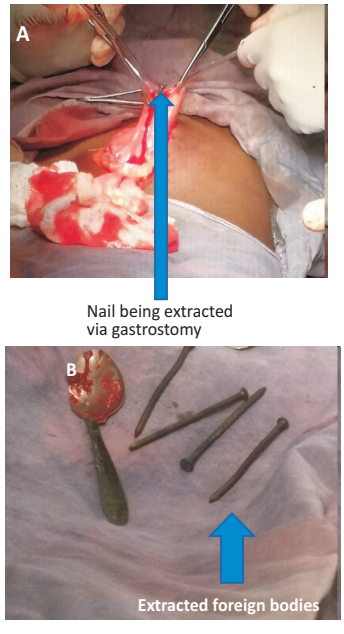

Figure 3; Showing a gastrostomy in (A) and extracted foreign bodies in (B).

He recovered well postoperatively and was reviewed and placed on treatment for schizoaffective disorder. The patient had a 30-day follow up without any postoperative wound complications. He was discharged from the surgical clinic and he has continued treatment with the Psychiatry Department.

DISCUSSION

Impacted oesophagea lFBs are commonly seen in children and are mainly symptomatic, including chest discomfort such as chest pain, dysphagia, and odynophagia.[2,5] Our patient was an adult who presented with odynophagia, dysphagia, and chest pain. He was known to our Psychiatry Department and was being treated for schizoaffective disorder with poor compliance. Though intentionally ingested FBs are less common in adults, they are commonly found in adult psychiatry patients and tend to be recurrent and multiple.[2] Our patient swallowed four nails and one spoon., This was his first presentation to the hospital, and we could not establish whether this was a first-timeingestion, as some FBs can be passed without symptoms.

Bekkerman *et al*[2] state that psychiatry patients ingest FBs intentionally due to poor impulse control by care-givers. Our patient was a general worker who lived with his uncle and grandmother, and these guardians reported that the patient spent most of his time by himself without anyone looking at controlling his impulses.

A plain chest x-ray isthe first line of investigation requested to evaluate patients suspected of having ingested FBs.[3] Though most ingested FBs are radio opaque, smaller objects may not be visualized.[3]Our patient had a chest x-ray and an abdominal x-ray as shown in Figures 1 and 2 respectively. The spoon was visualized in the chest x-ray and the nails in the abdominal x-ray. For objects not visualized in a chest x-ray, a computerizedtomography (CT) scan can be requested.[3]

Conservative management is advised for objects less than 2.5cm in width and less that 6cm in length, as these can pass through the duodenum.[2,5]The spoon in our patient was 3cm wide and the nails were 10cm long, they mandated endoscopic removal. In our hospital, endoscopy is not available, therefore laparotomy was done as shown in Figures 3A and 3B.

Our patient recovered without complications of wound infection or oesophageal perforation.

CONCLUSION

Intentional ingestion of FBs is common in adult patients with psychiatricdisorders with poor impulse control by care-givers and little support to reduce the stress on the patient as they deal with stressful conditions. Foreign bodies longer than 6cm, wider than 2.5cm and sharp-edged are unlikely to pass without getting imparted or causing perforation. These warrant removal by endoscopy where available or laparotomy.

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