Case Report

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Small bowel obstruction due to foreign body ingestion in jail inmates: a case series

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ABSTRACT

Foreign body ingestion is a common clinical problem in children but is relatively uncommon in adults. Foreign body ingestion in jail inmates presents a challenge as a preoperative diagnosis is difficult to make. Drug trafficking is an important underlying cause. We report a case series of five cases - all jail inmates who presented with small bowel obstruction. All underwent exploratory laparotomy-3 for acute obstruction and 2 for failure of conservative treatment. Polythene wrapped drug pouches were retrieved from small bowel. Foreign body ingestion in the form of polythene packed drug pouches is an important cause of small bowel obstruction in jail inmates. Surgical intervention is invariably required.

Keywords: Foreign body, Small bowel obstruction, Jail inmates. Drug trafficking

INTRODUCTION

Foreign body ingestion is a common clinical problem in children but is relatively uncommon in adults.¹ It has a wide clinical spectrum of presentation and a variety of diagnostic and therapeutic options.

Foreign body ingestion in adults has been reported to be due to accidental swallowing of dentures or simply food bolus impactions.² Accidental ingestion of varied objects may be associated with psychiatric problems.³ Intentional Foreign body ingestion by jail inmates has been reported from many countries for myriad reasons like getting admitted to a hospital to escape from prison,³ a self-injurious behavior,⁴ drug trafficking,⁵ and psychiatric illnesses like hallucinations, depression, attempts to suicide, schizophrenia etc.³ A high index of suspicion is required for diagnosis as a definite history is difficult to elicit especially in drug trafficking and psychiatric illnesses.

Watchful waiting results in spontaneous expulsion in majority of asymptomatic patients, a few require endoscopic retrieval and fewer still need exploratory laparotomy.⁶

We present a case series of five jail inmates from Tihar jail (Asia's largest prison) of foreign body ingestion causing small bowel obstruction and requiring laparotomy.

CASE REPORT

We report a case series of 5 cases - all inmates of Tihar jail presenting with small bowel obstruction due to foreign body ingestion. All the inmates were male patients with age ranging from 24 to 33 years. All the inmates presented with features of small bowel obstruction i.e. Pain in abdomen, distension of abdomen, constipation and multiple episodes of vomiting. It was acute in two cases and sub-acute in three. Only one of the

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five cases gave history of foreign body ingestion at the time of admission.

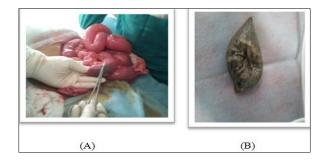


Figure 1: Pouch of drug in jejunum.

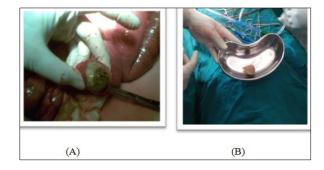


Figure 2: Pouch of drug in ileum.

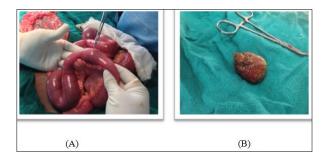


Figure 3: Pouch of drug in ileum.

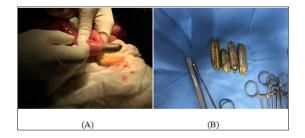


Figure 4: Multiple ingested pouches of drug.

The mean duration of symptoms was 1.7 days, ranging from one to three days.

On examination, in all the cases, the abdomen was soft and distended with a vague mild tenderness present all over the abdomen. There was no guarding or rigidity of the abdomen in any of the patients. The bowel sounds were exaggerated. X-ray abdomen in erect position showed multiple air fluid levels in all cases. Ultrasonography revealed dilated bowel loops with to and fro movements suggestive of small bowel obstruction.

Exploratory laparotomy was done in all the five patients acute small bowel obstruction in two cases and for failure of conservative management in three cases. The foreign body was found to be obstructing the lumen of the bowel at the level of terminal ileum in three patients and distal jejunum in two patients. Enterotomies were performed in all the cases which revealed myriad foreign bodies - a large pouch of tobacco in one case, a large wad of Rs. 1000 notes in the other, and pouches of drug powder in three cases. Two layered closure of enterotomies was done and all the patients had an uneventful recovery.

Psychiatric assessment was carried out for all five cases. None of the patients suffered from any psychiatric or behavioral disorder. Three of the patients later admitted to having ingested drugs wrapped in polythene in the past and retrieving them by inducing vomiting mechanically by causing throat irritation with fingers.

Table 1: Summary of cases.

Patient No.	Age & sex	Previous history of ingestion	History of psychiatric illness	Disclosure in present admission	Motive of ingestion	Time of presentation after ingestion	Indication of operation	Site of impaction
1	24 M	Yes	No	Yes	Drug trafficking	3 days	Acute small bowel obstruction	Jejunum
2	26 M	No	No	No	Drug trafficking	6 days	Failure to conservative management	Ileum
3	33 M	Yes	No	No	Drug trafficking	7 days	Acute small bowel obstruction	Ileum
4	25 M	Yes	No	No	Drug trafficking	3 days	Failure to conservative management	Ileum
5	33 M	No	No	No	Smuggling money	4 days	Failure to conservative management	Jejunum

DISCUSSION

Foreign body ingestion is a rare cause of small bowel obstruction.⁷ It may be accidental or intentional.¹ The majority of accidental foreign object ingestions occur in the pediatric population with a peak incidence between six months and six years of age.² In adults, true accidental foreign object (non-food items) ingestion occurs in patients with psychiatric disorders, mental retardation or alcohol intoxication and old patients due to dentures.⁶ Food items like Meat or food bolus,^{6,7} shells, pork, chicken and fish bones⁸ and even dried apricots,^{7,9} can get impacted.

Intentional ingestion of foreign objects for a number of psychological reasons other than suicide has been reported in prisoners from many countries. The is usually done to obtain an advantage that occurs secondary to the real illness. The most common secondary gains are temporary release from jail for treatment in a hospital or in drug addicts, gaining access to narcotic analgesia. Or it can be a deliberate, self-injurious behavior which is distinct from suicidal behavior and usually lacks lethal intent. Another interesting psychological perspective mentioned is that it could be surgical equivalent of a hunger strike and is used to force the prisoner's will upon the prison authorities as a form of attack against the judicial system. 12

There have been reports of psychiatric disorders in patients of foreign body ingestion viz. auditory hallucinations, schizophrenia and seizure disorder.³ In prison inmates, various ingested foreign bodies are razor blades, ^{3,6,10} metallic star, wire, and needles, ¹¹ metallic coin, ¹³ specially designed cross made from sewing needles¹⁴, tooth brushes, ¹⁴ ball-tipped pens, ¹¹ nails.⁶ Repeated ingestions and multiple foreign bodies ingestion has been reported. ^{3,13}

Foreign body impactions due to ingestion of pouches of drugs are seen in areas of high drug trafficking. In our series, plastic wrapped pouches of narcotics were the most common ingested foreign bodies in jail inmates. The main intent of the inmates in this series was to sell the substances of abuse inside the jail to other inmates. These pouches being non-metallic, do not raise an alarm while passing though the metal detectors routinely used in jails. In the routine course the ingested pouches would be retrieved mainly by inducing vomiting by manual irritation of throat with fingers and if not retrieved, waiting for them to pass in stools. This kind of foreign body ingestion comes to light only after the pouches cause small bowel obstruction requiring hospitalization.

Drugs wrapped in plastic, balloons or latex condoms concealed internally has been reported from areas of high drug trafficking. "Aptly called body packers, drug mules or body stuffers, they would ingest drugs in carefully prepared packages which are often multiple and may rupture or cause obstruction". 1,5

Prisoners obviously do not give an accurate history. In view of patient intentionally hiding the fact of having ingested the foreign object, it is difficult to make a preoperative diagnosis. The diagnosis is invariably made peroperatively. Hence a high index of suspicion is should be maintained in these patients.

An abdominal scar of previous laparotomy may provide a clue in repeated offenders. A record of sorts was reported in 1982. A patient underwent laparotomy 17 times over a 12 year period for ingesting safety pins, needles, hairpins, toothbrush, and spoons etc.³

Presenting symptoms vary depending on site of impaction, type of ingested foreign object and presence of complications. Patients with impaction in small intestine present with symptoms of vomiting, abdominal distension, and constipation.⁷

Radiological investigations have limitations in studying bowel obstruction caused by foreign bodies, especially if they are not radio-opaque.⁷

American Society for Gastrointestinal Endoscopy practice guidelines recommends avoiding contrast radiographic examination prior to removal of foreign objects or food impaction.²

Asymptomatic patients should be carefully observed till the object passes through alimentary tract as 90% of the ingested FB pass through GI Tract without complications. ^{6,13}

Endoscopic removal is indicated when the object causes oesophageal obstruction, impaction, or the objects are likely to cause complication viz disc batteries, sharp, pointed objects which are >5 cm long or >2 cm diameter. About 10-20% of ingested foreign body necessitate endoscopic removal. 1.2

Packages of narcotics should not be removed endoscopically irrespective of the site of impaction as the risk of rupture and leak of the toxic substance by the retrieval accessory is high posing a risk of drug toxicity. Conservative management should be done with serial radiographs and monitoring for drug toxicity. Surgical intervention is indicated when the packets fail to progress or if the signs of small bowel obstruction are present.²

There is no published epidemiological data describing the true prevalence of foreign body ingestion in the prison population, more so those specifically causing small bowel obstruction.

CONCLUSION

Foreign body ingestion in jail inmates presents a challenge as a preoperative diagnosis is difficult to make. A psychological or psychiatric disorder or drug trafficking may be the underlying cause. Polythene

wrapped drug pouches ingested for drug trafficking are generally retrieved by induced vomiting. If not, they tend to get impacted in small bowel causing sub-acute or acute small bowel obstruction. Surgical intervention is invariably required for retrieval of drug pouches and relief of obstruction.

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