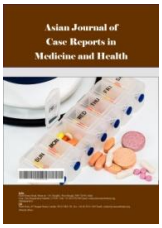

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A Curious Case of Accidental Foreign Body Ingestion with a Mini-review of the Literature

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Authors' contributions

This work was carried out in collaboration among all authors. Author BGVK drafted the article, did the analysis, interpretation of the data and manuscript preparation. Author PK drafted the article and did the manuscript preparation. Authors AK and RG drafted the article and revised its intellectual content. All authors read and approved the final manuscript.

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Case Study

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ABSTRACT

Foreign body ingestion is a frequently occurring event. Pediatric patients and mentally handicapped are at high risk of foreign body ingestion than adults. Most patients get away with conservative management only. However, some complicated cases require surgical interventions. We report an interesting case of foreign body ingestion.

Keywords: Foreign bodies; gastrointestinal tract; risk assessment; endoscopy; flow chart.

1. INTRODUCTION

Foreign body ingestion is commonly encountered in emergency and sometimes are challenging for both gastroenterologists and surgeons. History should brief about timing, size, and the type of foreign body ingested and intervene accordingly. The majority of foreign bodies ingested might pass spontaneously, and unnoticed through the gastrointestinal (GI) tract, with only a few,

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requiring some kind of intervention. Surgical options are only considered in those cases who present with serious complications. A comprehensive review from Standard guidelines advises structured treatment options for different types of swallowed foreign bodies. We report an interesting case of abdominal discomfort after waking up early in the morning on evaluation found out to be accidentally ingested nose ring the caused abdominal symptoms and extrapolate a flowchart that unifies the expectant management approach in foreign body ingestion.

2. CASE REPORT

A 28-year-old female presented to the emergency department with a nonspecific epigastric pain abdomen starting 24 hours before the presentation to the hospital. Her pain started in the early morning when she woke up, and this was associated with nauseating feeling. She has no known prior comorbidities. Her vital signs were stable, and abdominal examination was unremarkable. Her routine blood investigations, including her serum amylase and lipase levels, were also within normal limits. The ultrasound abdomen was also normal. Esophagogastroduodenoscopy was performed because of dyspeptic symptoms and revealed only mild mucosal erythema in the lower oesophagus with the otherwise normal study. On further interrogation, she revealed that she was unable to find her nose ring when she woke up in the morning and was having nasal pain. An urgent abdominal x-ray showed a metal nose ring in the lower abdomen (Fig. 1). A conservative approach was followed as the nose ring was a small foreign body. She was followed up with serial abdominal x-ray, which subsequently showed spontaneous clearance of nose ring over the next 48 hrs.

3. DISCUSSION

Foreign body ingestion is a frequently occurring event. The majority of the foreign bodies ingested may pass spontaneously, and unnoticed through the gastrointestinal (GI) tract [1], and only some groups of patients require some intervention in terms of endoscopy retrieval (<10-20%) or surgery (<1%) [2]. Patient groups who are at high risk of foreign body ingestion are the paediatric population [3], mentally disabled, and the older age group, which ingestion is either intentional or accidental [4]. Risk groups in the adult population include prisoners and intoxicated patients [5]. Most commonly swallowed foreign bodies are food bolus and non-food

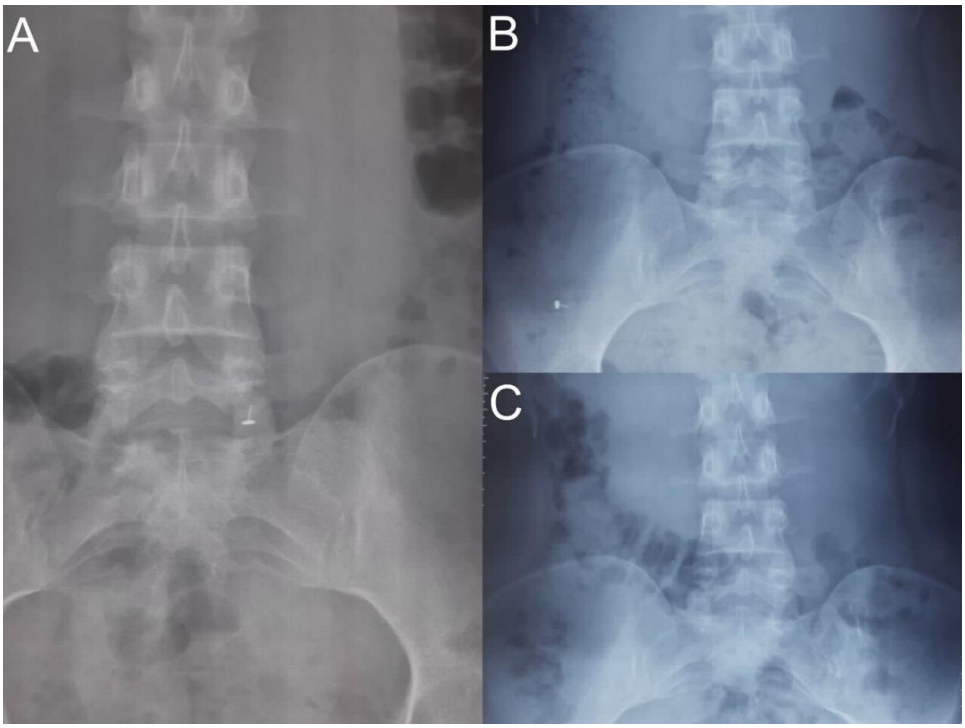

Fig. 1. A plain X-ray of the abdomen showing a metal nose ring (A, B) in the GI tract, which is cleared subsequently (C)

objects (true foreign bodies) such as coins, batteries, metals, and for that matter, anything that can be clenched and engulfed/ inserted. Iatrogenically placed instruments, clips, plastic, and/or metal stents can cause symptoms due to migration or dislodgement. Objects such as false dentures, oral or nasal prosthetics, and body piercings may accidentally be dislodged and can cause foreign body ingestion, which has happened in our case. Common sites of retained foreign bodies are physiologically angulated and narrowed areas of the GI tract such as upper oesophageal sphincter, aortic arch, left mainstem bronchus, lower oesophageal sphincter, pylorus, duodenal loop, duodeno-jejunal junction ileo-caecal valve, appendix, and anus and in patients with associated anatomical abnormalities or motility disorders of GI tract [6]. Clinical symptoms of foreign body ingestion can be varied, which include localized discomfort, pain, globus sensation, dysphagia/odynophagia and vomiting [7]. Complicated cases may present with signs of intestinal obstruction, mediastinitis, or peritonitis. Other complications like abscess, fistula formation, and pneumothorax were also possible [8]. Bi-plane radiographs are the first-line investigation in identifying the location, size, number, and further any associated complications. Plain computerized tomography (CT) is also a sensitive tool that can be ordered in selected cases. However, they characteristically identify radioopaque objects. Contrast radiographs are not usually endorsed due to the risk of aspiration with no added benefit. Use of Endoscopy is precise and can be both diagnostic and therapeutic in the retrieval of the objects but sometimes limited to the site of approach, timing, and associated case related complications. Since the majority of blunt and small foreign bodies pass spontaneously, observation is advocated [9]. Medium-sized objects that fail to pass after 72 hrs can be considered a non-urgent indication for endoscopic removal. Emergent to urgent indication (Fig. 2) for foreign body retrieval is reserved for high-risk foreign bodies such as disc batteries, large/long and sharper objects, magnets, toxic objects, and impacted food bolus [10,11]. Use of appropriate retrieval devices along with protective devices for sharp and long objects to prevent mucosal injury is an effective method [12]. Non-endoscopic/ surgical retrieval is recommended in ingested narcotic packets in drug traffickers who are suspected with packet

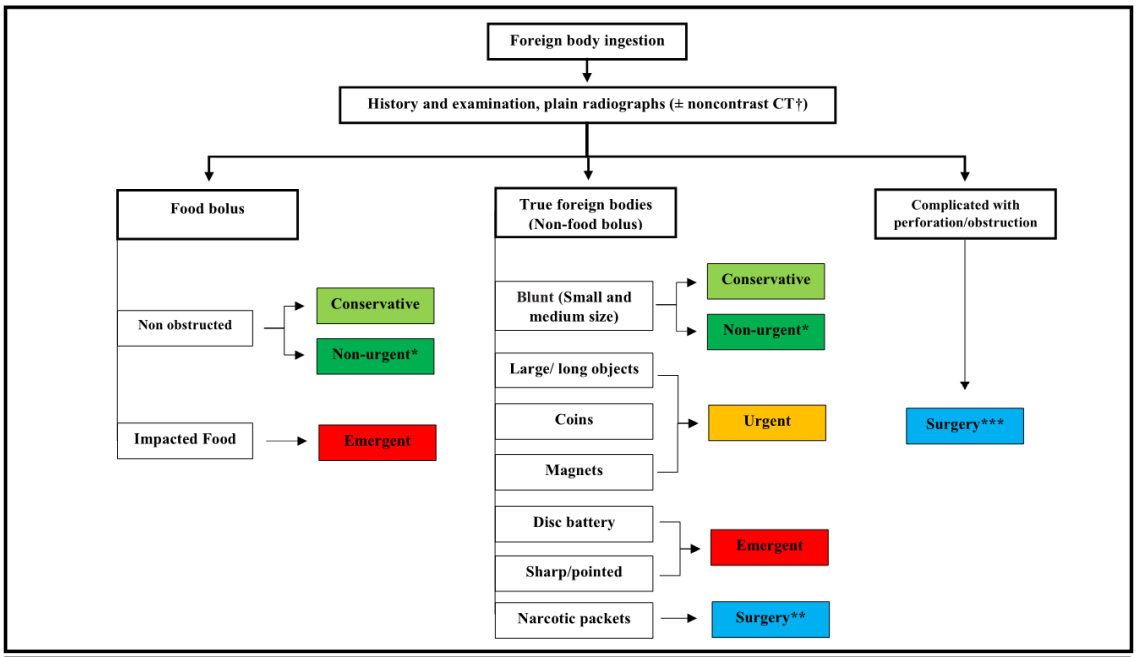

Fig. 2. Flow chart of appropriate intervention for ingested foreign bodies

rupture, failure of packets to progress, or intestinal obstruction [13,14]. Other indications for surgery include an object that cannot be extracted through endoscopy, multiple foreign bodies, and complicated cases (perforation, obstruction, and abscess) [15]. In our case, the clue in diagnosis was made from the history of missing nose ring. The object being a small metal ring could pass easily through the GI tract without any possible complications.

4. CONCLUSIONS

Foreign body ingestion is commonly encountered in GI emergencies. Management approach depends on timing, size, and type of foreign body ingestion. It is essential to recognize a possible complication related to foreign body ingestion and manage accordingly. Majority of patients are managed conservatively with only selective groups of patients requiring surgical intervention.

CONSENT

Written consents obtained from the patient by the author(s).

ETHICAL APPROVAL

As per international standard or university standard written ethical approval has been collected and preserved by the author(s).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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