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Case Report

Foreign Body Ingestion in an Adult not Associated with Mental Disorder: An Unusual Clinical Case Report

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Abstract: Gastrointestinal tract divide into mouth, pharynx, esophagus, stomach, and intestines. The intestine is divided into the small intestine and the large intestine. The small intestine extends from the pylorus to the ileocecal junction. The large intestine is about 1.5 m long and extends from the cecum in the right iliac fossa to the anus in the perineum. The frequent locations of impaction of sharp foreign body are duodenal loop, duodenojejunal flexure (Angle of Treitz), appendix vermiform and terminal ileum. Esophagus is a muscular and mucosal tubular organ with 4 physiological narrowing's that are preferred sites for the retention of foreign bodies accidentally or deliberately ingested. The latter form is frequent in people with mental disorders and prisoners. The aim of this case report is to draw the attention of the medical profession (ENT, Surgeon, Gastroenterologist, physician, etc.) that not all foreign bodies in adults have suicidal intent or are linked to people with mental disorders or prisoners. This case describes an incident in which a young man deliberately swallowed a key to hide evidence of theft. This is a unique case in the literature of deliberate ingestion in mentally healthy people and not part of the prison population. In the presence of intentionally and/or accidental foreign bodies ingested in adults, it is necessary to discard mental disorders or emotional or social factors. Due to the characteristics of the object and the presence of few symptoms, except hiccups, it was not necessary to subject the patient to any surgical intervention. Remember that some foreign bodies may be passing spontaneously in the family environment and without hospital intervention.

Keywords: Foreign body ingestion; Key ingestion; Gastrointestinal tract.

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1. Introduction

Gastrointestinal tract divides into mouth, pharynx, esophagus, stomach, and intestines. Esophagus it is the tubular part of the digestive tract that joins the pharynx to the stomach, crossing three regions in its path: neck, chest, and abdomen, passing through the diaphragm muscle through a hole, the esophageal hiatus. The stomach is the widest and most distensible part of the digestive tract, located between the esophagus and duodenum [1]. The intestine is divided into the small intestine and the large intestine. The small intestine extends from the pylorus to the ileocecal junction. The large intestine extends from the cecum in the right iliac fossa to the anus in the perineum and divided into four parts: Cecum and appendix vermiform, Colon, Rectum and Anal canal [1].

The frequent locations of impaction of sharp foreign body happen at acute angles or intestinal narrowing: duodenal loop, duodenojejunal flexure (angle of Treitz), appendix vermiform and terminal ileum [2].

Accidental foreign-body ingestion is a common event observed event in children. In adults, ingestion can be mainly accidental while performing work around the house, putting objects in the mouth (pins or sewing needles), jamming a large bolus, or by the presence of a disease that prevents normal progression of bolus through the oesophagus (tumor or stricture causing a spasm), but there are also cases of voluntarily and premeditatedly ingestion in individuals with mental disorders and prisoners [3].

The aim of this case report is to draw the attention of the medical profession that not all foreign bodies in adults have suicidal intent or are linked to people with mental disorders.

2. Case Report

A 34-year-old man, warehouse manager, observed at emergency department with severe abdominal pain and hiccups after key ingestion 2 hours before admission. The patient denied any mental disorder.

The physical examination was normal, and the mental evaluation was normal without any mental disorders signal or symptoms. Not of following complication signal or symptoms were found cervical-thoracic emphysema, dyspnea, dysphonia, trismus, sialorrhea, fever and dehydration. The patient lied in bed at anti-pain position. A simple abdominal X-ray revealed presence of a foreign body (a key) in the intestines.

The patient answer about how they swelled the key, he said that he did it to hide robbery evidence at workplace when he was sudden surprised. The patient was admitted for observation and pain control and were discharged after pain and hiccups ends, with a recommendation to check the stool during next coming days to identify the foreign body and return to hospital if any complications appear. The patient expels the foreign body naturally, without any medical intervention. No complications were observed.

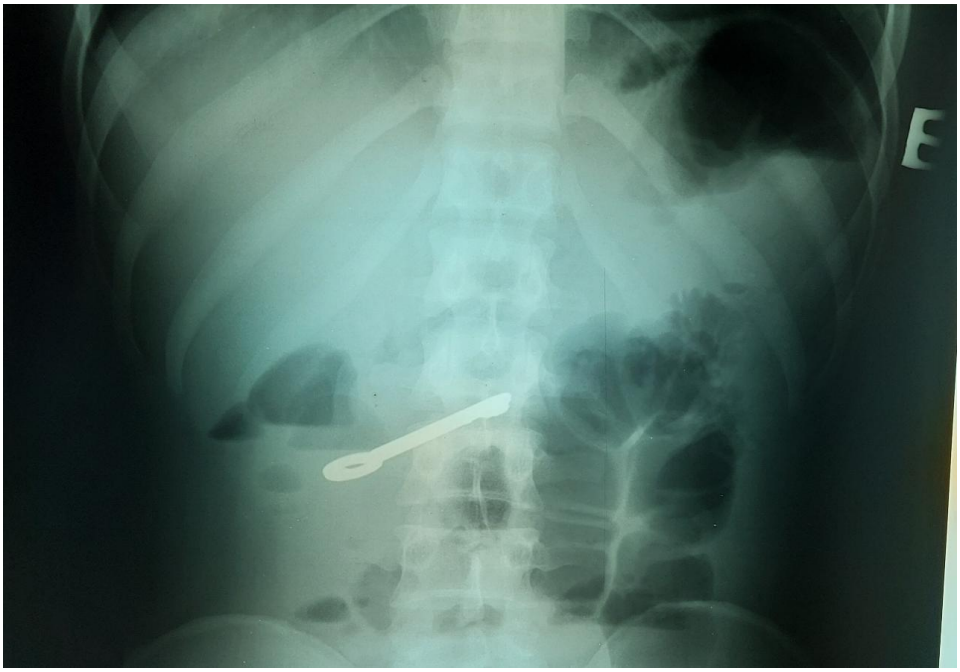

Figure 1. X-ray of the abdomen showing the gate key in the gut nasofibroscopy showing the presence of a cage device adhered to the posterior wall of the hypopharynx and advancing over the supraglottic region, causing partial larynx obstruction, not being possible to visualize the vocal folds; a = posterior wall of the hypopharynx / b = epiglottis / c= laryngeal inlet / * = cage device.

3. Discussion and Conclusion

Foreign bodies are a public health problem, related with huge ENT doctor's activities. It represents the first cause of ENT emergency services care. Although large foreign body ingestion is rare. The worldwide literature is full of articles related with little accidental foreign bodies ingestion, especially in children, such as coins, toys, fish bones and bones.

In adults the foreign bodies ingestion, can be accidentally and/or deliberately in patients with mental disorder, alcohol intoxication, prisoners, drugs and substance abuse disorders [4]. The present case report shows a unique feature of intentional foreign body ingestion to hide theft evidence. We did not find any similar cases described in the reviewed articles. In the beginning, the intense abdominal pain was due for the foreign body presence and passage through the cardia, while the hiccups resulted from the phrenic nerve irritation.

The hiccup is a reflex resulting from a sudden spasmodic contraction of the diaphragm muscle, causing tremors of the inspiratory muscles of the thorax and abdomen, followed by sudden closure of the glottis, which generates a characteristic noise as the air is violently expelled from the lungs. The phrenic nerve participates in the hiccup reflex [5]. The phrenic nerve is a mixed nerve that originates from the 4th cervical nerve with contribution from the 3rd and 5th cervical nerves carrying the only motor supply to the diaphragm and sensory fibers from the diaphragm, pleura, pericardium, and part of the peritoneum. Therapeutic phrenic nerve block is done to stop an intense bout of hiccups [6].

Between 80% to 90% of esophageal foreign bodies pass spontaneously to the stomach without any medical involvement [7, 8] which determines that only 10 or 20% of patients require endoscopic intervention, and only 1% require open surgical extraction [8]. In the suspicion of the presence of a foreign body in the digestive tract, the doctor must carry out radiological studies to confirm the suspicion, carrying out a detailed anamnesis and choosing the type of treatment to be chosen [9]. The complications are directly associated to the type of objects and the site of impaction inside the gastrointestinal tract [2].

Foreign bodies that pass through the esophagus are habitually asymptomatic unless perforation or obstruction happens. Perforation of the gastrointestinal tract leads to peritonitis and manifests abdominal pain, defending, and rebound tenderness, While intestinal obstruction causes abdominal pain, distention, and/or vomiting [10]. Most foreign bodies that pass into the small bowel usually make it through the rest of the gastrointestinal tract without complications [10].

Choosing the best therapeutic option depends on the shape, location, nature of the foreign bodies, symptoms and signs and patient stability and based on observation, sometimes endoscopic removal and rarely surgery. The presence of a sharp foreign object lodged in the gastrointestinal tract for several weeks' duration should be considered a serious condition and eligible for intervention, even in the absence of warning symptoms [9, 10].

The American Society of Gastrointestinal Endoscopy (ASGE) has divided removal of foreign bodies in three categories: emergent, urgent and nonurgent endoscopic removal as follows [11]. This guideline is very important, but it only refers to esophageal and stomach objects. When the diagnosis of foreign body ingestion is made, the next step is whether to remove the object or to manage conservatively. Some foreign bodies lodged in the intestines can be handled expectantly, with observation, while other objects considered at high risk (Button batteries, Magnets Sharp objects, bones, pins, razors, needles and Water beads) may require intervention for urgent or emergency removal [12].

Surgical management is habitually reserved for patients that present in emergency department with bowel obstruction, abscess formation, or bowel perforation secondary to the foreign body ingestion. These patients have traditionally need open surgery as a first choice, but actually, laparoscopic procedure is currently the most used, safest and cheap [13].

In the present report, despite the foreign body being large, but without sharp areas and because it had minimal symptoms (hiccups) and no signs of complications, it was decided to maintain a watchful attitude, with radiological control and monitor the exit of the key (foreign body) through of the feces. In the presence of intentionally and/or accidental foreign bodies ingested in adults, it is necessary to discard mental disorders or emotional or social factors.

Remember that some foreign bodies may be passing spontaneously in the family environment and without hospital intervention. As the clinical picture of patients with intestinal foreign bodies varies widely, from nonspecific vomiting to serious complications like acute intestinal obstruction, fistula formation, intestinal necrosis or perforation and life-threatening peritonitis, physicians must maintain a high level of clinical suspicion for ingested foreign bodies [12].

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Supplementary Materials: None.

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