Foreign Bodies Ingestion in Children: Conservatively Management of Nail Ingestion: Two Case Reports

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Abstract

Foreign body ingestion is a common problem in pediatric population with up to 75% of cases occurring in children under 5 years old. Foreign objects that pass beyond the gastroesophageal junction usually pass through the gastrointestinal tract without complications. The aim of this study is to report two cases of nail ingestion in the pediatric population that were conservatively managed and left digestive tract spontaneously and uneventfully. First patient, 2 years old, presented to the emergency 6 hours after ingesting a nail, asymptomatic. Conservatively managed, took three days for the nail to pass the ileocecal valve and was spontaneously eliminated 6 days after ingestion. Second patient, 5 years old, presented to the emergency a day after nail ingestion, nail easily passes the ileocecal valve and took four days to be eliminated. Foreign body ingestion is a common event in pediatric population. In cases where conservative treatment is chosen the patient has to be daily accompanied with clinical examination and X-ray. The cases reported here demonstrates that nail ingestion can be clinically followed and present good outcome.

Keywords: Foreign body ingestion; Nail ingestion; Conservatively management

Introduction

Foreign body ingestion is a common problem in pediatric population with up to 75% of cases occurring in children under 5 years old [1]. Often children put the objects that they are investigating into their mouths and the object is accidentally swallowed [2]. It is estimated that up to 40% of the foreign body ingestion in children are not witnessed [3]– therefore the number of cases of ingestion of foreign body in the childhood is higher when compared to the number reported. Most ingested foreign bodies either pass through the gastrointestinal system spontaneously without complication or they may become impacted, most commonly at one of the sites of anatomic constriction at the oesophagus - at the level of cricopharyngeus muscle (75%), level of the aortic arch or at the gastroesophageal junction [1,2]. Foreign objects that pass beyond the gastroesophageal junction usually pass through the gastrointestinal tract without complications [1]. The morbidity associated to foreign body ingestion is related mainly to the type of object ingested [3].

Case Presentation

The aim of this study is to report two cases of nail ingestion in the pediatric population that were conservatively managed and left digestive tract spontaneously and uneventfully.

Case 1

GPS, 2 years old, male, mother referred nail ingestion 6 hours before coming to the emergency room. Presented no complaints. Physical examination had no alteration, no pain or signs of peritoneal irritation. Inicially an X-ray was performed and presented (Figure 1).

The patient was hospitalized, physical examination was performed every 6 hours and a daily abdominal X-ray was taken. It took the nail three days to pass the ileocecal valve. The nail was spontaneously and uneventfully eliminated after 6 days of ingestion.

Case 2

LE, 5 anos, related nail ingestion one day before coming to the emergency room. Presented no complaints. Physical examination had no alteration, no pain or signs of peritoneal irritation. Inicially an X-ray was performed and presented (Figure 2).

The patient was hospitalized and a daily abdominal X-ray was taken. The nails easily passed...
through the ileocecal valve. It was spontaneously and uneventfully eliminated after 4 days of ingestion.

**Discussion**

Discussions indicates that the high prevalence of foreign body ingestion in younger children is due to the exploratory habits on this children and that gender involvement is not significant [4]. According to American data the peak age for foreign body ingestion is in the preschool years and more than 75% of the cases occured in children younger than 5 years [3]. The characteristics of the ingested foreign bodies are variable and usually include coins, magnets, batteries, small toys, pins, nails, plastic, button and pieces of food [5].

In most cases patients are asymptomatic. When a complaint is present usually include a sensation of something being stucked in the gastrointestinal system, salivation, cough, vomiting, bloody saliva, refusal of food, pain and respiratory distress [6]. In most children the physical examination is unremarkable [3].

Number vary from study to study, however, 50-90% of foreign objects pass spontaneously, 10-20% require endoscopic removal and less then 1% require surgical intervention [3]. Many objects can be observed if they have passed the stomach, as they will likely traverse the remainder of the gastrointestinal tract without difficulty [3,5]. Some objects in the stomach should still be removed – those include sharp objects, long objects, high power magnets or disk batteries [3]. The management of nails ingestion is still not well established but many studies relate that it can be conservatively managed [5-7]. Most ingested foreign bodies pass within 4 to 6 days with no morbidity or mortality, although some objects may take up to 4 weeks to pass [3].

Regarding specifically nails ingestion, there is a higher risk of complications as perforation anywhere along the gastrointestinal tract. Perforation is more likely to occur at angulated areas such as the C loop of the duodenum and ileocecal valve. When the ingested object is located in the stomach there is no consensus in literature but most authors recommend endoscopic removal. If the object has passed beyond the duodenum it should be followed with serial radiographs. If the object does not move downward for 4 days surgical intervention should be considered. Constant watch for signs ans symptoms of obstruction, bleeding or perforation must be taken [3,6,8].

Potential complication from swallowed foreign bodies include airway obstruction, tracheal edema, stenosis, erosion or perforation, abscess formation, bowel obstruction or perforation, mediastinitis, pneumothorax, severe hemorrhage, aortoesophageal fistula and migration into adjacent structures [9]. Potential risk factors for complications after foreign body ingestion include objects larger than 3 cm, sharp objects and impaction of the foreign body at the gastrointestinal constrictions [3].

**Conclusion**

Foreign body ingestion is a common event in pediatric population. Most part of them pass through the gastrointestinal tract without complications. In cases where conservative treatment is chosen the patient has to be daily accompanied with clinical examination and X-ray. When the foreign body remains in the same position for four days, surgery is indicated. The cases reported here demonstrates that nail ingestion can be clinically followed and present good outcome.

**References**