

Ingestion of A Sharp Foreign Body by an Infant

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ABSTRACT

A four-month-old infant, previously healthy and developmentally normal, presented to the emergency department (ER) of a tertiary care hospital with hematemesis and pallor for one day, as well as a three-week history of irritability and intermittent vomiting. The infant was taken to various hospitals in their town, where he was given symptomatic treatment for vomiting and the mother was advised to feed infant. Nothing out of the ordinary was reported by the parents. The infant's symptoms were managed in the ER, and baseline labs were performed to determine the cause of the blood-stained vomiting and pallor. Except for a low Hb level, the baseline labs were normal. An abdominal x-ray revealed a stainless-steel blade in his stomach. The ingestion of a blade was unknown to the parents. The case was referred to pediatric gastroenterology for further treatment. The blade was removed through endoscopy, and recovery was uneventful.

Conclusion: The importance of supervising infants and young children under all circumstances is emphasized.

Keywords: Blade, Endoscopy, Foreign body, Hematemesis, Unexplained pallor.

How to cite this Article:

Shahzadi N, Satti NK, Gilani F, Hashmat N, Riaz Bm Khurshid H. Ingestion of A Sharp Foreign Body by an Infant. J Bahria Uni Med Dental Coll. 2022; 12(1):54-56 DOI: <https://doi.org/10.51985/JBUMDC2021081>

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INTRODUCTION:

Foreign body ingestion is common in children under the age of five years. Approximately half of all ingested foreign bodies go unnoticed, and the other half exhibit no symptoms.¹ The majority of foreign bodies pass through the gut, and only 1% require surgical intervention. Foreign bodies that

are commonly ingested include coins, pins, needles, batteries, toys, and sharp objects.^{2,3} The majority of cases of foreign body ingestion are unintentional, but some have occurred as a result of child abuse. Ingestion of sharp objects, such as needles and blades, can be dangerous and cause significant mucosal damage, resulting in blood loss and perforation.⁴ This may pose a diagnostic challenge in infants or toddlers whose parents are unaware of their ingestion. A case of stainless-steel blade ingestion in a four-month-old infant is presented in this case report, along with the presenting symptoms and signs, as well as the diagnostic and therapeutic approach used at our center.

CASE REPORT

A four-month-old infant, formerly healthy with normal development, presented to a tertiary care hospital's emergency department (ER) with hematemesis and pallor for one day. Over the previous three weeks, the infant had experienced bouts of vomiting and irritability. The infant was receiving formula milk in addition to breast milk, and no other symptoms such as cough, fever, loose stools, abdominal distension, rash, jaundice, bruising, or bleeding from any other site of the body were present. There were no reports of urinary or neurological symptoms. Nothing out of the ordinary was reported by the parents. The infant was cared by his mother, a housewife. The infant was developing normally, and his growth parameters were within normal limits for his age. The general physical examination revealed significant pallor due to hematemesis at the time of presentation. The systemic examination revealed no abdominal mass, and the rest of the findings were normal. During the history and examination, no concerns about child protection or abuse were raised.

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Received: 11-Oct-2021

Accepted: 20-Dec-2021

The infant was treated in the emergency room for his symptoms and was given a blood transfusion. The baseline labs, which included a CBC, renal profile, coagulation profile, liver function tests, serum electrolytes, septic screens, urine and stool analysis, were all normal except for the low Hb. An abdominal X-ray revealed a stainless-steel blade in the stomach [Figure.1]. The ingestion of a blade was unknown to the parents. The child was referred to pediatric gastroenterology for further action. The blade was removed via endoscopy [Figure2,3] and he was discharged one week later after an uneventful recovery. Despite the fact that this case raised concerns about child protection and safety, the psycho-social evaluation of the family and caregivers was inconclusive. Nonetheless, social service and child protection authorities were notified, and education regarding safeguarding the children was provided to the family and caregivers. The infant is doing well and is being followed in a pediatric and gastroenterology clinic.

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DISCUSSION:

Foreign body (FB) ingestion is particularly common in pediatrics because of the innate tendency of children to explore objects with their mouths. It has no sex predilection, reports⁵ showing almost the same incidence in both boys and girls. Coins are one of the most frequently ingested foreign objects. Buttons, batteries, toys, marbles, metallic balls, and rings are examples of blunt objects. Sharp objects such as blades, pins, and wires are uncommon particularly in under 6-month-olds.⁶

Overviews on FB ingestion are plentiful, but the ingestion of sharp objects, especially in pediatric patients, is rarely discussed, and guidelines regarding definitive management are infrequent. Generally, such ingestions reveal a variety of underlying intentional or unintentional reasons, but studies on sharps ingestion in adults establish a common presentation amongst prisoners⁷ or patients with significant psychiatric comorbidities.⁸ Multiple symptoms of varying severity have been attributed to FB ingestion depending upon its location. Gastrointestinal symptoms include anorexia, vomiting, globus pharyngeus⁹ (sensation of having a lump at the back of the throat), odynophagia, and dysphagia. Respiratory symptoms include cough, stridor, and breathing difficulty.¹⁰

History and examination form the key components for initial assessment and witnessed consumption. Warning signs in history are symptoms and their onset, history of previous ingestions, and accompanying conditions. Findings in physical assessment¹¹ that can indicate probable ingestion

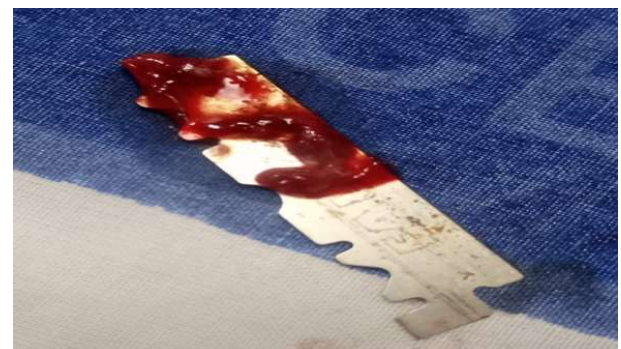
Figure 1 : Blade localized in stomach on Chest X-ray



Figure 2: Blade in stomach on Endoscopy



Figure : The retrieved blade after endoscopy



include vitals, respiratory and gastro-intestinal examination including breath and bowel sounds, abdominal tenderness, or rigidity. Consistent indicative findings have not been identified in presumed ingestions, but depending upon the location of FB, perforation may reveal mediastinal emphysema or signs of peritonism with pain, tenderness, and a rigid abdomen. Diagnosis¹² is majorly made on plain radiographs, as the metal is radio-opaque and can be reasonably localized, although one case employed computed tomography for precise localization. Blood reports including hematocrit, hemoglobin levels can also be suggestive of ongoing blood loss. Hematemesis, as in our case, is a major indicator of gastrointestinal blood loss.

The general agreement is the wait-and-see approach¹³ to allow for FB passage, but sharp objects warrant alarm. The lower esophageal stricture is frequently quoted as the location of perforation and often warranted as a reason for emergency intervention. Other zones of concern are the ileocecal junction, the hepatic and splenic flexures, and the rectosigmoid junction. Unless adequately managed, they can lead to complications like gastrointestinal ulceration and/or perforation, peritonitis, and aorto-esophageal fistula, and even death. There are no established guidelines¹⁴ for paediatric age groups. Acute presentation with pain, bloody emesis, or in stool are pointers towards emergency laparotomy.

CONCLUSION:

Sharp foreign body ingestion is extremely rare in infants, but any strange incidents must be brought to the notice of police and child protection societies, along with social care services. Parental education and counseling should be centered on child neglect, and safeguarding practices should be implemented in order to avoid similar problems in the future.

Authors Contribution:

Nagina Shahzadi: Acquisition of data, Case Management, Original Draft Preparation, Revising it critically for important intellectual content, Supervising, Final approval of the version to be submitted.

Naureen Kanwal Satti: Conception and design, Writing original Draft, Visualization, Revision, Final approval of the version to be submitted.

Fatima Gilani: Visualization, Writing, Review & Editing, Final approval of the version to be submitted.

Nadeem Hashmat: Review & Editing, Revising it critically for important intellectual content, Conception and design, Final approval of the version to be submitted.

Bushra Riaz: Revising it critically for important intellectual content, Conception and design, Final approval of the version to be submitted.

Humira Khurshid: Revising it critically for important intellectual content, Final approval of the version to be submitted.

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