



## Case Report

# Razor blade ingestion in an infant: A case report

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### Abstract

**Background:** Foreign body (FB) ingestion is common in children and most are observed to be between the age of 6 months and 3 years. Usually, majority of cases require no specific treatment and the swallowed foreign body passes through the digestive tract spontaneously without causing significant complications. Less than 1% of the cases complicate by gastrointestinal tract perforation, which is often caused by sharp objects, and warrants surgical intervention. The majority of razor blade ingestions involve prisoners and psychiatric patients, but in paediatric patients it is rare and no cases are reported yet. Our patient is a 9-month-old girl who ingested a razor blade while playing. On radiological investigation, a razor blade like foreign body was found in the stomach. After emergency laparotomy, a single 2.5×1 cm razor blade was detected and carefully and safely removed. The patient was subsequently discharged home on the 5<sup>th</sup> POD with recommended family diet.

**Keywords:** Foreign body, Razor blade

### Introduction

Ingestion of foreign bodies can be accidental - predominantly in children, or deliberate - occurring more commonly in adults. Most foreign bodies ingested by children are spontaneously passed through the gastrointestinal tract without any complication.

Small objects like coins, buttons, batteries, and round objects are usually accidentally swallowed by children. Sharp objects like straight pins, nails, sewing needles, and open hairpins may perforate the gastrointestinal tract. About 80%–90% of foreign bodies in the GI tract are passed spontaneously without any harm, about 10%–20% are removed endoscopically, and 1% require surgical removal<sup>1</sup>. The management of sharp object ingestion is challenging. The guidelines for the management of foreign body ingestion<sup>2-4</sup>, usually depend on the ingested object's - size, shape, and, importantly, the location of the object within the GI tract at the time of presentation to the doctor. Here, we aim to describe a case of accidental ingestion of a razor blade by an infant of only 9-month-old and its subsequent management.

### Case presentation

Our patient a 9-month-old female baby admitted to our hospital with complaints of accidental ingestion of a sharp blade 5 days back. She had no history of abdominal pain, nausea, vomiting, diarrhea, or any other GIT complaints. After ingestion of a foreign body, they first consulted with a local physician and did a plain X-ray upper chest including the abdomen, and found that the FB is impacted on the lower esophagus and referred the patient to a chest disease hospital. Then she was admitted to the chest disease hospital on 2/7/20 in the Covid-19 pandemic. After admission, there physician advised another plain X-ray upper chest including the abdomen. The FB was found in the lower esophagus and which was decided to remove endoscopically. Accordingly, all investigations were

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done and after planning date of endoscopy they did another X-ray where found that the FB was in the stomach. As the FB was in the stomach, they did not do the procedure and decided to refer the patient to BSH&I for further management. The patient was admitted at BSH&I on 6/7/20.

On admission to our hospital, after further evaluation, this was decided to remove the FB through laparotomy. Due to the Covid pandemic, the endoscopic procedure was suspended in our hospital at that moment. We did laparotomy and gastrotomy through supraumbilical right transverse incision on 7/7/20. Our finding was a broken razor blade ( $\frac{1}{4}$ <sup>th</sup>) about 2.5 cm  $\times$  1 cm on the greater curvature of the stomach. There was no injury mark on the stomach or any other FB. Then we closed the stomach in 2 layers after proper hemostasis. The wound was closed in layers and the skin closed intradermally. The postoperative period was uneventful and started a liquid diet on the 4<sup>th</sup> POD and was discharged on the 6<sup>th</sup> POD. On follow-up on the 14<sup>th</sup> POD patient was alright with no complication. Wound was healthy and dry.



**Fig.-1:** X-ray of chest and upper abdomen show FB in the lower end of the esophagus .



**Fig.-2:** X-ray upper chest and upper abdomen show razor blade impacted in the abdominal part of the esophagus.



**Fig.-3:** Removal of razor blade during operation.



**Fig.-4:** Removed razor blade

### Discussion

Literature regarding FB ingestion are numerous, but the topic of an ingested razor blade in paediatric patient, is less frequently discussed, and definitive management regarding position are rare. Foreign body ingestions reveal a wide variety of intentional and non-intentional causes, but in paediatric patient usual cause is accidental and in adults demonstrate a presentation of patients who are prisoners and/or have significant psychological illness<sup>5-11</sup>. Our patient is only a 9-month-old female baby who accidentally ingests FB during playing with her elder sister.

Initial suspicion of sharp FB ingestion like razor blades depends on witnessed consumption or history<sup>5,8,9</sup>. Diagnosis for razor blade ingestion is typically made on plain film radiographs which can be correlated with the position in the gastrointestinal tract, although one case series utilized computed tomography for more precise localization<sup>5,12</sup>. We got a history of FB ingestion from her parent and the witness was her elder sister. We made our provisional diagnosis from a serial plain X-ray abdomen. Initially, it was diagnosed as a case of FB in the lower end of the esophagus. Two days later, an X-ray was done and it was diagnosed as a case of FB in the stomach.

Sharp and pointed objects (>4–5 cm in infants and young children, those >6–10 cm in older children), or large and wide objects (>2 cm in diameter in infants and young children, >2.5 cm in diameter in older

children) that are located in the stomach, warrant endoscopic removal<sup>13</sup>.

The mean GI transit time for FBs in children is approximately 3.6 days<sup>14</sup>. If the FB does not complete passage from the GI tract after 4 days, a bowel perforation or a congenital anomaly is suspected, and surgical removal of the FB needs to be considered<sup>13,14,15,16</sup>. When the patient came to our hospital it had been already 5 days and the size of the FB was about 2.5 cm × 1 cm. Our endoscopy was not available at that time because of covid pandemic situation. So, we decided to do laparotomy.

### Conclusion

Accidental razor blade ingestion in paediatric patients is extremely rare and yet there is no literature found regarding razor blade ingestion in infants. It may be the first case report in infants. Endoscopic removal under general anesthesia in children is safe and ideal. However, if the razor blade is long (> 4cm) and width (>2 cm) and history of delayed presentation, there is a chance of injury in the endoscopic procedure, in such case surgical removal will be more preferable.

**Conflict of interest:** None

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