

## Case Report

# Fate of an unapproachable sharp metallic foreign body in the gastrointestinal tract

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## Abstract

Sharp pointed objects carrying a risk of injury and perforation should be removed immediately with a flexible endoscope. In the present case, a 3-year-old boy ingested a sharp pin during a dental procedure. The only complain was mild pain in the throat. Chest X-ray done after 14 h of ingestion revealed a sharp pointed pin in the mid esophagus. On urgent endoscopy, no pin was found, but fluoroscopy (C-arm) image revealed same pin parallel to the endoscope at about 20 cm from incisors. It was planned for video thoracoscopic removal, patient referred to a pediatric surgeon, but, fortunately, the pin passed through stool after 3 days before any intervention.

## Key words

Sharp metallic foreign body, foreign body in esophagus, pediatric foreign body in GI tract

## Introduction

Foreign body ingestion in children occurs between the ages of 6 months to 3 years.<sup>[1,2]</sup> Children with foreign bodies are usually asymptomatic and are brought to medical attention by their parents because the ingestion was witnessed or reported to them.<sup>[3,4]</sup> 80–90% of foreign bodies that reach the gastrointestinal (GI) tract pass spontaneously, rest need endoscopic removal, and <1% require surgical intervention.<sup>[5-7]</sup> Mortality rate is very rare.<sup>[7,8]</sup> Sharp pointed objects carrying a risk of injury and perforation should be removed immediately with a flexible endoscope. In symptomatic patients foreign body beyond reach of endoscope needs surgical removal. This is an interesting case where the route of ingested metallic foreign body could not be explained, although, it is spontaneously passed out through stool.

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## Case Report

A 3-year-old child ingested a metallic foreign body during a dental procedure. Patient was admitted to a hospital outside, under ENT surgeon and had undergone rigid esophagoscopy for removal but failed. No previous reports and images were available during hospitalization. Patient was asymptomatic except mild pain in the throat. Chest X-ray done after 14 h of ingestion revealed sharp metallic foreign body in the esophagus [Figure 1]. Upper GI endoscopy was done immediately after hospitalization under general anesthesia. No foreign body was identified up to duodenum except two small mucosal defects at 20 cm from incisor. At the mucosal defect fluoroscopy image revealed the presence of the same pin [Figure 2]. So, it was thought that probably it remained parallel to the esophageal mucosa. Patient was planned for computed tomography scan of thorax and further management. The case was discussed with pediatric surgeon and planned for video thoracoscopic removal. As parents were willing to take to higher center, the patient was discharged to consult pediatric surgeon. As he noticed

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Figure 1: X-ray chest after 14 h of foreign body ingestion



Figure 3: Lateral X-ray on after 40 h of ingestion

downward migration on lateral X ray [Figure 3], patient was put on observation. Finally it was spontaneously passed in the stool on the third day [Figure 4] as observed by the parents.

## Discussion

Most foreign body ingestion in children occur between the ages of 6 months to 3 years.<sup>[1,2]</sup> The most common sharp-pointed objects ingested by children are straight pins, needles, and straightened paper clips; representing 5–30% of swallowed objects, carrying a risk of perforation of about 15–35%.<sup>[5,9]</sup> In case of ingestion of sharp pointed objects, immediate endoscopy should be performed even if radiological evaluation is negative, as many sharp-pointed objects are not readily visible by X-ray. Foreign body in the esophagus and stomach should be removed urgently with flexible endoscope. Sharp objects that pass beyond the reach of a flexible endoscope and then cause symptoms will require surgical intervention. If the object has passed into the small intestine and the patient is asymptomatic, it may be followed with serial radiographs

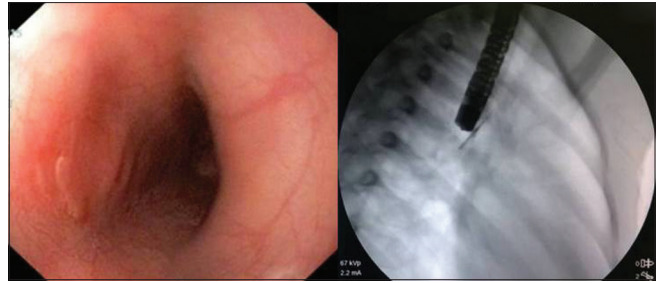


Figure 2: Upper gastrointestinal endoscopy and fluoroscopy image at hospitalization

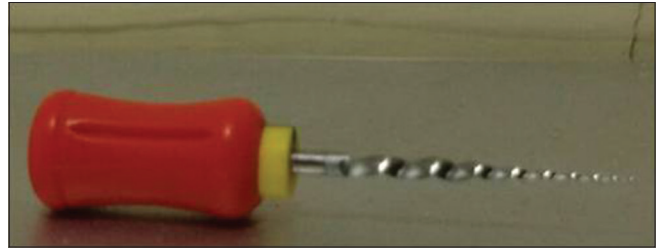


Figure 4: Foreign body removed spontaneously in stool after 72 h of ingestion

to document its passage. Surgical intervention should be considered for objects that fail to progress for three consecutive days or have abdominal pain, vomiting, fever, hematemesis, or melena.<sup>[10]</sup> In this case, the migration of sharp pin through the GI tract is difficult to explain. Most probably, it might have reentered the lumen and passed in stool. So from this case, it was obvious that one should have a close watch for minimum 3 days over a sharp unapproachable metal foreign body in asymptomatic patients for spontaneous expulsion to avoid surgical intervention.

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## Conflicts of interest

There are no conflicts of interest.

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