

# A Rare Case of Foreign Body Ingestion, Mimicking as Mesenteric Cyst. "Case Report".

## Case Report

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## ABSTRACT

**Background:** Foreign body ingestion by children is a commonly encountered problem and accounts for a significant emergency visits among pediatric population. Although these ingested foreign bodies pass spontaneously and uneventfully, a subset of such bodies may become trapped in the digestive tract, eventually leading to significant injury. Most of these bodies are radio-opaque and detectable radiologically, but some radio-lucent may become a diagnostic dilemma and subtle management issue.

**Case Report:** We report a case of a one-year girl who presented after accidental ingestion of foreign body with signs and symptoms of acute intestinal obstruction. Initially we were unable to diagnose the cause, but later the radiological investigation suspected a mesenteric cyst. After failure to respond to conservative measures she underwent exploratory laparotomy, and a jelly ball was removed from the gut. The patient had uneventful post-operative recovery and was kept on follow-up for three months without any complication.

**Conclusion:** These patients do not respond to conservative measures and need surgery on an emergency basis. It is likely that if left untreated may have caused Intestinal perforation and irreversible shock. Radiolucent foreign bodies are difficult to diagnose and need high level of suspicion. Need of the hour is to educate the parents to be extra vigilant as "prevention is better than cure".

**Keywords:** *Foreign body ingestion, Intestinal Obstruction, Mesenteric Cyst, Crystal jelly ball.*

## INTRODUCTION

Foreign body ingestion is a common problem in children less than three years and can lead to severe consequences if not diagnosed and managed timely.<sup>[1,2]</sup> Un-witnessed foreign body ingestion poses a diagnostic challenge as parents do not report to the hospital till children are critically ill. Unlike adults, the children may not be able to articulate proper history and physical findings may also be unremarkable.<sup>[3,4]</sup> Children may present with signs and symptoms of acute intestinal obstruction. Un-Witnessed foreign body ingestion may lead to delay in reporting and treatment until children are critical. Conventional investigations may not be able to pick their real cause. Hence they may require CT scans. Since all hospitals do not have access to CT scans; thus, it all comes down to plain abdominal radiographs and ultrasound to diagnose these children, especially in periphery hospitals. The most common presentation of foreign body

ingestion is the signs and symptoms of acute intestinal obstruction. Most cases can be diagnosed by X-Ray erect abdomen as the majority of foreign bodies are radiopaque, consisting of objects like magnets, buttons, batteries, plastic toys, pencils and coins. On the contrary, radiolucent objects may be challenging to diagnose on traditional X rays hence require an additional ultrasound and/or CT scans. Despite advancements in technology and imaging, detecting foreign bodies is still a diagnostic challenge in the emergency departments. The ultrasound is quite sensitive but is operator dependent while CT Scan may be unavailable in some clinical settings.<sup>[5,6]</sup> Herein, we report a case of a one year girl who presented to the emergency department of our hospital with signs and symptoms of acute intestinal obstruction due to ingestion of crystal jelly ball mimicking as a mesenteric cyst on



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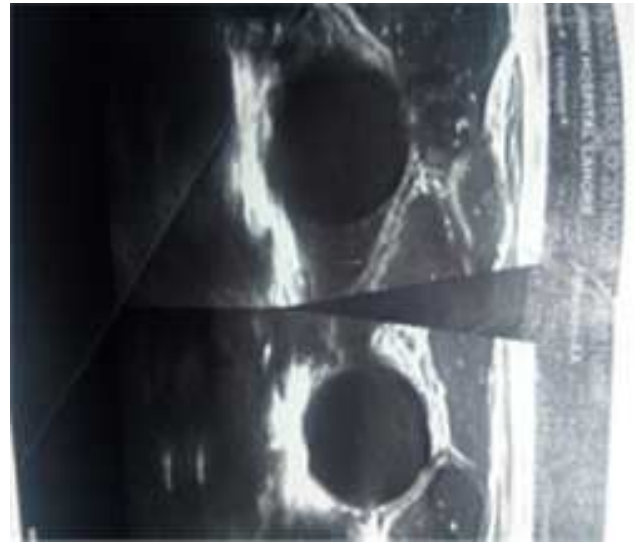
ultrasound.

## CASE REPORT

A one-year female child presented to the emergency department of Children's Hospital and the Institute of Child Health, Lahore, with complaints of abdominal distension, vomiting, and constipation for last eight days. On admission, her vitals were within the normal range at her age while the physical exam divulged a distended, tender abdomen with absent bowel sounds. Digital rectal examination revealed a rectum full of feculent material.

Her routine lab workup was unremarkable. On plain X-ray abdomen erect, there were dilated gut loops with multiple air-fluid levels. Ultrasonography of abdomen showed dilated, content filled gut loops and a near-total absence of peristaltic movements in Hemi abdomen and pelvis. A provisional diagnosis of subacute intestinal obstruction was made, and it was decided to manage the patient conservatively. Nasogastric tube aspiration was initiated, which yielded almost 200 ml bile stained aspirate. The patient had saline enema at night, which was repeated in the morning with no faecal movement. Despite these conservative measures, the patient's symptoms did not improve. Repeat ultrasound on first post-admission day by a senior consultant, showed a well-defined cystic area along with large bowel measuring 2.7 cm x 2.5 cm x 2.6 cm with thin walls. Clinicians believed that it was a case of intestinal mesenteric cyst responsible for her obstructive symptoms. Even after twenty-four hours of conservative management, the patient showed no signs of recovery, and rather her condition worsened, hence it was decided to perform an exploratory laparotomy.

The abdomen was opened by a standard midline laparotomy incision. An intraluminal foreign body was noted at approximately ten centimetres from the ileocecal junction, which was soft in consistency and approximately the same dimensions as described on ultrasound [Figures 2,3]. Since it was not adherent to the gut, a firm green round jelly ball was delivered by enterotomy quiet easily and gut primarily repaired by vicryl 3/0 sutures. No other finding was identified on detail abdominal survey and abdomen was closed with Vicryl 1 continuous running sutures. The patient was kept nil per orally and received antibiotics for forty-eight hours along with analgesics. Postoperatively she did very well and had an uneventful recovery with the return of bowel movements the next day. The patient had no complications in the three-month follow-up period in the outpatient clinic.



**Figure 1:** Ultrasound showing Cystic Area in Large Bowel with Thin walls, mimicking Mesenteric Cyst



**Figure 2:** Intra Luminal Foreign Body 10 cm from ileocecal Junction



**Figure 3:** Crystal Jelly Ball, per operative picture of Foreign Body

## DISCUSSION

Due to their natural curiosity, children have a tendency to place things in their oral cavities. This is all a part of normal developmental behaviour.<sup>[6]</sup> They tend to ingest these foreign bodies, but luckily most of them pass spontaneously. In rare instances, when they fail to pass, they can lead to serious life-threatening complications like obstruction, stricture, or even perforation of the bowel.<sup>[7]</sup> This is a major concern, and it has been reported that pediatric population accounts for up to eighty per cent cases of such foreign body ingestions.<sup>[8]</sup> Since ingested foreign bodies can cause severe and life-threatening complications hence such ingestions in the pediatric population to require early diagnostic workup and prompt management. The main signs and symptoms occur due to partial or complete obstruction of the gut, which causes dilatation of a proximal portion of the bowel loops. The patient is usually constipated, has electrolyte imbalance due to continuous vomiting and is often dehydrated. Aggressive resuscitation is needed to correct electrolyte imbalance and prevent other complications like shock and multiple organ failure.

X-ray is the primary diagnostic tool that might help in the identification and localization of the ingested foreign body.<sup>[9]</sup> Foreign bodies may be visible on plain X-rays but with a limitation that it can pick only radio-opaque materials like sharp objects, cell batteries, currency coins, magnets, bone particles and metallic objects. Whereas radiolucent objects like organic materials are challenging to visualize [Figure 4]. Moreover, during radiography, patients are exposed to ionizing radiations which have documented side effects over time. Multiple air-fluid levels in the obstructed gut is a piece of secondary evidence for obstruction and/or foreign body. The ultrasonography is less invasive and a better diagnostic tool to diagnose such abdominal pathologies as it uses sound waves instead of ionizing radiation. In the expert hand, it has high sensitivity, reliability and specificity and that too without radiation hazards.<sup>[5]</sup> These bodies cast a dense hyper-echoic image, but the image becomes hypo-echoic if haemorrhage<sup>[8]</sup> or hematoma formation in surrounding tissue is present. A mesenteric cyst is a rare entity of proliferated lymphatic cells in mesentery that has no communications with other lymphatic systems. The cyst may or may not involve retro-peritoneum. The most common location is ileal mesentery, but it can be found anywhere from the duodenum to the rectum. It is a benign pathology in the majority of cases, and the bulk of the mesenteric cysts are found incidentally. There are multiple classification



**Figure 4:** X Ray Abdomen Erect Showing Intestinal Obstruction

systems, but widely accepted is by Beahrs and colleagues.<sup>[10]</sup> According to this etiologic based classification, mesenteric cysts can be divided into embryonic, developmental, traumatic, neoplastic and infective cysts. The mesenteric cysts are found in 40% of patients en-passant with or without symptoms. Classically mesenteric cyst presents with recurrent episodes of partial intestinal obstruction with or without vomiting. Examination reveals a painless, palpable, fluctuant and freely moving abdominal swelling. In children, the most common presentation of mesenteric cyst is as an acute small intestinal obstruction which may or may not be associated with volvulus.<sup>[11,12]</sup> On physical examination, a mass may or may not be palpable. The X-ray can be helpful, but ultrasonography is an investigation of choice. Both conditions have quiet similar signs and symptoms, and both require laparotomy. The foreign body is removed after enterotomy while the cyst is enucleated with or without resection anastomosis.

## CONCLUSION

The final diagnosis of foreign body ingestion is made on the basis of history, examination and radiology. Radiolucent foreign bodies are highly perplexing to diagnose but may be led on the basis of an ultrasound of the abdomen if radiographic tests are negative. Perilous effects of misdiagnosis or delay may otherwise lead to life-threatening complications. Neglected children are critical, usually dehydrated and ought to be optimized for surgery. Overall, intestinal perforation and shock are the gravest complications of such ingestions. Thus the need of the hour is to educate the parents that they should be extremely vigilant with children as "prevention is better than cure".

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## CONFLICT OF INTEREST

The Authors declared no conflicts of interest.

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