Case Report

Nummus in the stomach, endoscopic management of one rupee coin in 4 yrs old boy's stomach

Manuneethimaran Thiyagarajan[1*], Pragnya Chigurupati[2], Rubhina Singh[3]

[1]Assistant Professor, [2,3] P.G. Students, Department of General Surgery, Sri ramachandrta Medical University, Porur, Chennai, INDIA.
Email: maadimaran@yahoo.co.in

Abstract

Introduction: Foreign body ingestion is a common problem encountered in children. A Coin remains one of the most common and easy foreign body often in the reach of children that they ingest. **Presentation of Case:** A 4 years old boy presented to the emergency department with history of accidental ingestion of one rupee coin. It crossed the esophagus but failed to progress from stomach. X-ray of the abdomen, showed a coin in the abdomen. Patient was asymptomatic and therefore coin was followed up by ultrasonogram for one week. Flexible endoscopy was used to retrieve the coin. **Discussion:** Up to 90% of the gastrointestinal foreign bodies pass spontaneously through the digestive tract. However, there are narrow points in the passageway such as the cricopharynx, pylorus and ileocaecal valve at which complications such as obstruction, perforation can occur. X-rays most often reveal the type of foreign body. Ultrasounds generally help in monitoring the progression of the foreign body in the GI tract. **Conclusion:** USG can be used as a best method for follow up for foreign body instead of x-rays in pediatric age group. Coin in the upper gastrointestinal tract can be easily removed by flexible endoscopy rather than using rigid endoscopy or surgery.

Keywords: coin in the stomach, endoscopy coin removal, foreign body stomach, and ultrasonogram in foreign body stomach

[*]**Address for Correspondence:**
Dr. Manuneethimaran Thiyagarajan, Assistant Professor, Department of General Surgery, Sri ramachandrta Medical University, Porur, Chennai, INDIA.
Email: maadimaran@yahoo.co.in

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INTRODUCTION

Foreign body ingestion and food bolus impaction occur commonly in children. The majority of them pass by spontaneously; few of them might need intervention in view of impending complications like obstruction and perforation. We had a case of a 4-year-old child who ingested a coin accidentally and presented to the ER. It had crossed the oesophagus but not progessed to the stomach. It was confirmed initially by an X ray and followed by a USG for one week. We used a flexible endoscope to retireve the coin. Patient was comfortable thereafter and discharge the next days.

CASE PRESENTATION

A 4 years old boy presented to the emergency department with history of accidental ingestion of one rupee coin. On arrival there was normal airway and no breathing difficulties. Xray of the abdomen, showed acoin in the abdome

Figure 1: Initial xray shows a one-rupee coin in the fundus of the stomach

It crossed the esophagus but failed to progress from stomach. Initially patient was observed with high fiber diet. Patient was asymptomatic and therefore he was observed without any intervention for 7 days. Periodic monitoring of the stools was done for the coin and an Ultrasound was done every two days.

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Figure 2: (a and b): USG of the abdomen shows a coin in the stomach

On 8th day usg was done which showed the coin, which was still in the stomach. So patient was planned for flexible endoscopy under general anesthesia. Endoscopy showed coin in the body of the stomach. Foreign body forceps was used to grasp the edge of the coin and retrieved slowly.

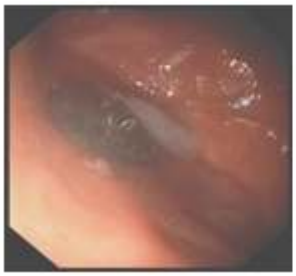

Figure 3: Coin in the body of the stomach Operative table in reverse trendelenburg position

Figure 4: Coin was grasped in the stomach by foreignbody forceps

Figure 5: Retrieval of the coin with the forceps at level of oesophagus

The surface of the coin was eroded by gastric acid. The patient was managed conservatively there after and discharge the next day.

Figure 6: The surface of the one rupee coin eroded by gastric acid

DISCUSSION

The ingestion of foreign bodies is most commonly a problem of young children aged 6 months to 5 years, but can affect children of all ages. It occurs less commonly in older children and adults. Patients with mental illness, intellectual impairment, prisoners or drug mules are prone to problems caused by purposeful ingestion of foreign bodies.[2,3,4] Up to 90% of the gastrointestinal foreign

bodies pass spontaneously through the digestive tract without inflicting harm on the patient.[5] However, there are narrow points in the passageway such as the cricopharynx, pylorus and ileocaecal valve at which complications such as obstruction, perforation can occur. These can in turn lead to other complications such as bleeding, fistula formation, respiratory compromise and abscess formation Objects that become entrapped in the ileocecal valve tend to be smaller, because they have first to pass through the pylorus, duodenal sweep, and ligament of Treitz. Most objects are passed within 4 to 6 days, although some may take as long as 4 weeks. The convention that we follow is that once the coin passes the stomach, and is lodged in a given location for more than 1 week, surgical removal must be considered.[7] Careful examination should be carried out for acute clinical and medicolegal reasons. It includes assessing the airway, vital signs to exclude impending catastrophic presentation due to airway obstruction or acute GI perforation, tracheal position, abdomen and cvs examination. Investigations include blood tests, plain x-ray, ultrasounds, CT scans, endoscopy. Other tests include barium swallows or gastro graffin studies. X-rays most often reveal the type of foreign body. Ultrasounds generally help in monitoring the progression of the foreign body in the GI tract and also, the lead to a diagnosis f the kind of foreign body. Being a non-invasive investigation, it has an added advantage. In cases of complications such as perforation or where x-rays do not help, CT scans or contrast studies might help. Endoscopy is mandatory in cases where there is an airway obstruction or evidence of severe complications. When there is a clear history of swallowing objects such as toothpicks/ aluminium bottle caps or rings, endoscopy is the investigation of choice. Definite indications for endoscopy are objects that are sharp, non-radio opaque, elongated or where there are multiple swallowed objects. They are also indicated for gastric or proximal duodenal foreign bodies that have a diameter or >2cms, a length of >5-7cms or are eccentrically shaped or are prone to enlodgement or perforation[6]. It is both a diagnostic and therapeutic mode of choice.

Timing of endoscopy for ingested foreignbodies can be divided in to three:[1]

1) **Emergency endoscopy**
    a) Esophageal obstruction
    b) Disck batteries in the esophagus
    c) Sharp pointed objects in the esophagus
1) **Urgent endoscopy**
    a) Esophagus non-sharp foreign bodies
    b) Food impaction in esophgus without complete obstruction
    c) Sharp pointed object in the stomach and duodenum
    d) Object more than 6mc in length at or above the proximal duodenum Magnetes within endoscopic reach
2) **Nonurgent endoscopy**
    a) Coin in the esophagus may be observed for 12- 24 hours before endoscopic removal in an asymtomatic patient
    b) Object in the stomach with diameter more than 2.5cm
    c) Disk batteries cylindrical batteries that are in the stomach of patient without sign of injury may be observed for as long as 48 hours

There are a number of equipments that can be used to retrieve foreign bodies. Endoscopes, retrieval devices such as rat tooth and alligator forceps, polypectomy snares, dormier baskets, magnetic probes, friction fir adaptors, banding caps, overtubes etc are a few of them. Patients with foreign bodies in the stomach of width <2cms or length <6cms can be discharged home with instructions on symptoms that should prompt their re attendance, patients with larger or sharp objects in these areas should be monitored and prompt intervention will be required. On the whole, with appropriate investigation, management and follow up, prognosis is generally good. Most patients with ingested foreign bodies will suffer no further sequelae, though there can be exceptions. Basic home safety measures, child proofing would be helpful in preventing such incidents. Discussion with parents the details of the methods of prevention, the signs of repeated events would help them monitor with vigilance.

CONCLUSION

USG can be used as a method for follow up for foreign body instead of x-rays in paediatric age group. Coin in the upper gastrointestinal tract can be easily removed by flexible endoscopy rather than using rigid endoscopy or surgery.

CONSENT

Written informed consent was obtained from the patient for publication of this Case report and any accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal.

Competing interests:

'The author(s) declare that they have no competing interests'. 1st and second author declare that We don't have Financial competing interests

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- We don't have any other financial competing interests. Non-financial competing interests

There areno non-financial competing interests (political, personal, religious, ideological, academic, intellectual, commercial or any other) to declare in relation to this

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