Case Report

Impaction of a Rupees 2 coin in the duodenal bulb

Rimjhim Shrivastava1, Sanwar Agrawal2

ABSTRACT

Foreign bodies in the gastrointestinal tract are common in the pediatric age group and coins account for the majority. Most coins after passing through the esophagus will eventually leave the stomach and pass through the gastrointestinal tract without obstruction. We report a case of impacted Rs 2 coin in the duodenal bulb in a 9 years old boy which was in that position for 5 months and was retrieved endoscopically.

Key words: Foreign body, Coin, Impaction, Duodenum, Endoscopy

INTRODUCTION

Foreign bodies in the gastrointestinal tract are common in the pediatric age group and coins account for the majority. The peak incidence of ingestion is seen between the ages of 6 months and 6 years, though it can occur at any age.1,2 Pre-endoscopic series have shown that 90% or more of foreign objects will possibly pass without the need for any intervention.3 Most coins after passing through the esophagus will eventually leave the stomach and pass through the gastrointestinal tract without obstruction. We report a case of impacted Rs 2 coin in the duodenal bulb in a 9 years old boy which was in that position for 5 months.

CASE

A 9 -year-old boy presented to us with history of accidental ingestion of Rs 2 coin 5 months back. The child was having vague symptoms of mild pain in the abdomen on and off along with decrease appetite. On physical examination no significant finding was found and the child was neurologically normal. There were several radiographs which were taken over 5 months, showing almost same positions of the coin in all of them (Fig 1). The hemogram and the coagulogram of the child was within normal range.

TECHNIQUE

Upper gastrointestinal endoscopy of the child was performed under propofol and ketamine anesthesia. The coin was located in the first part of the duodenum, stuck to the posterior wall between 12 o’clock and 3 o’clock positions. More than 90% of the base of the coin was impacted within the mucosa barring a thin rim. We could grasp the coin using a shark tooth forceps but it was difficult to bring it out due to its attachment to the underlying mucosa. It was difficult to hold the coin with the Dormia basket also.

After several failed attempts of removal, we tried to dislodge the coin from its position. Using the Dormia basket we tried holding it and with a slow to and fro motion of the Dormia wires we tried to separate the coin from the underlying mucosa. After almost 2 hours the coin got dis-impacted. There was mild mucosal bleed which got controlled. It was difficult to bring it through the pylorus as it got slipping at the pylorus. Due to lack of sufficient space net retrieval basket was of no help. With continuous insufflations right at the pylorus to keep it opened up, the coin was brought in the stomach using Dormia basket and then was removed using the net retrieval basket. The coin had got corroded at places and the imprints on it were hazy. This 11 sided heptagonal Rs 2 coin was made up of Copper-Nickel metal, weighing 6.06 grams with a diameter of 26mm and thickness of 1.71 mm. A recheck endoscopy was done which showed no bleeding, and second part of the duodenum being normal. The child was stable and recovered completely from the anesthesia after an hour.

DISCUSSION

Guidelines state that small, blunt objects lodged distal to the esophagus should be observed. Most objects will pass within four to six days of ingestion, but some may take up to four weeks. Parents should be instructed to watch for the passage of the object in stool. Any foreign body that has not passed the stomach in three to four weeks should be removed...
endoscopically. Blunt objects beyond the stomach that remain in the same location for more than one week should be considered for surgical removal. It has been observed that once the object has passed into the stomach, the chance of lodgment and impaction is very small. Rarely, sharp or large objects get lodged in the pylorus, duodenum, cecum, appendix, rectum, or a location of congenital or acquired narrowing within the gastrointestinal tract. The mortality associated with foreign bodies that do not pass spontaneously is as high as 50%. It may lead to bowel perforation and obstruction. Other complications include bleeding, fistula formation, and abscess formation.

Some experts recommend endoscopic removal of items larger than 2 cm in diameter or longer than 3 cm in infants as it may not cross the pylorus. In children one year of age and older, objects longer than 3 to 5 cm may not pass and endoscopic removal should be considered. Our coin was having a diameter of 2.6 cm and had crossed the pylorus in a 9 year old child.

Fig 1: X Ray taken over 5 months showing almost same positions of the coin
CONCLUSION

Foreign body even though blunt and small which have crossed the pylorus should be observed for the documentation of its passage from the gastrointestinal intestinal tract. Endoscopic retrieval of impacted foreign bodies within the reach of the endoscope should be tried first before considering surgery. It is effective, safe and has got early recovery.

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REFERENCES