Indian J. Surg. (May–June 2008) 70:144–146

CASE REPORT

Pica – a case of acuphagia or hyalophagia?

P. L. Kariholu · R. Jakareddy · M. HemanthKumar · K. N. Paramesh · N. P. Pavankumar

Received: 23 April 2008 / Accepted: 15 May 2008

Abstract Pica is an eating disorder typically defined as the persistent eating of nonnutritive substances for a period of at least 1 month at an age in which this behavior is developmentally inappropriate. Acuphagia being consumption of sharp objects and Hyalophagia consumption of glass materials. Majority of the foreign bodies ingested into the gastrointestinal tract pass through the rectum asymptomatically, where as objects which are sharp, long, jagged may not be able to pass through. These types of objects may cause complications like impaction, leading to intestinal obstruction, ulceration, perforation and bleeding, thus need surgical exploration. In this case of young female with impacted bunch of bangles in the stomach and few in the small and large bowel, who was completely asymptomatic, needed gastrotomy with enterotomy for complete and successful retrieval of glass bangles.

Keywords Pica · Acuphagia · Hyalophagia

Introduction

Pica is an eating disorder typically defined as the persistent eating of non-nutritive substances for a period of at least 1 month at an age where this behavior is developmentally inappropriate. The definition occasionally is broadened to include the mouthing of non-nutritive substances. Pica may be benign, or it may have life-threatening consequences [2].

Foreign body ingestion in children or in adults is a known entity. Swallowing is either spontaneous or deliberate, children being more prone to swallow unknowingly whereas in adults it is common among mentally retarded persons, psychiatric patients and prisoners. These objects may be bones, pins, thermometers, toys, knives, forks, spoons, screws, nails and dentures. Majority of these foreign bodies may pass through rectum without any symptoms, whereas sharp objects or those which are more than 6 cm in length and 2 cm in width are unlikely to pass spontaneously [1].

When glass bangles are broken into pieces they form curved pieces with sharp edges. These pieces on contact with mucosa of gastrointestinal tract, may be asymptomatic or have laceration, bleeding, perforation and very rarely intestinal obstruction. We report this case of a young female who had consumed 55 pieces of glass bangles, which were successfully retrieved from her gastrointestinal tract.

Case report

A 20-year-old woman was referred to our hospital, when a recent oesophagogastroduodenoscopy revealed a bunch of glass bangles which were ranging from 2–6 cm with sharp ends occupying almost 50% of the stomach volume in the antral and body of stomach (Fig. 1), without causing any symptoms. This procedure was carried when the patient's parents brought her stating that she had been consuming bangle pieces for a period of more than one month. Patient as such had no symptoms. During the procedure six bangle pieces were removed, rest could not be removed in view of sharpness of the pieces, larger number of pieces and

P. L. Kariholu[1] · R. Jakareddy[2] · M. HemanthKumar[3] · K. N. Paramesh[4] · N. P. Pavankumar[4]
[1]Professor & Head
[2]Consultant Medical Gastroenterologist,
[3]Assistant Professor
[4]Postgraduate Resident, Department of General Surgery

P. L. Kariholu (✉)
Ph: +91 / 8352 / 276962
e-mail: pkariholu@yahoo.com

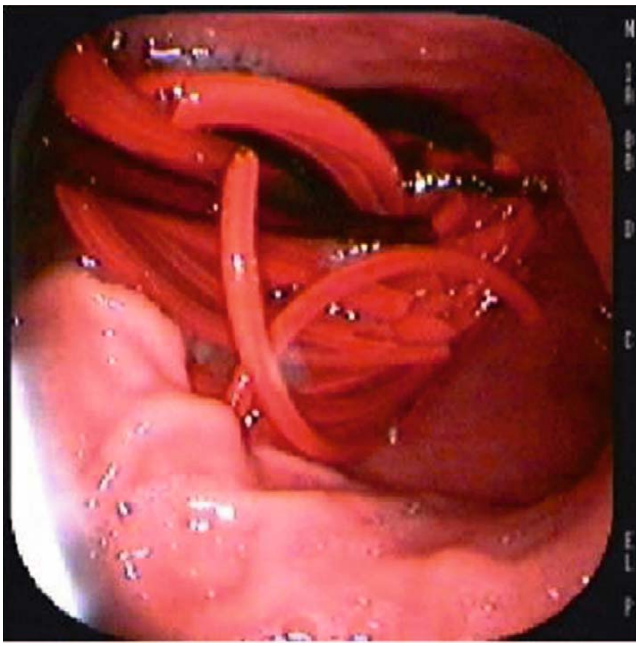

Fig. 1 UGI endoscopy showing bangle pieces in stomach

likely chances of esophageal perforation. The procedure was abandoned and exploratory laparotomy planned, as, if left insitu there were all possibilities of complications like ulceration, bleeding, perforation and peritonitis.

Patient was admitted to our hospital in good general condition. Ryle's tube was inserted. Routine blood tests were normal. Plain x-ray of erect abdomen was done to know the position and migration of sharp bangle pieces. X-ray revealed bunch of glass bangles in stomach, 1 piece in the left iliac fossa and 2 pieces in the pelvis (Fig. 2), with no gas under the diaphragm.

Under general anesthesia with endotracheal tube in situ an upper midline incision extending just below the umbilicus was taken and abdomen opened in layers. Stomach was delivered to the incision site, anterior gastrotomy of around 4 cm was done between two stay sutures. All bangles were removed [44 pieces] from stomach (Fig. 3), there were two bangle pieces found two feet apart approximately two feet away from ileoceacal junction (Fig. 4). An attempt was made to bring them to one site, but was not possible because of mucosal injury; hence they were removed separately by doing enterotomy. One was present in caecum which was removed through appendicular stump. Rest of the bowel was normal. Gastrotomy and ileal enterotomy was closed in two layers and lastly appendicular stump was transfixed. Abdomen was closed by mass closure. Patient recovered well. Ryle's tube was removed on second post operative day and patient was allowed liquids orally on day 3. Sutures were removed on tenth day. Psychiatric opinion was taken, patient was diagnosed to have depressive disorder and a possibility of pica was considered and was started on antidepressive drugs.

Fig. 2 X-ray showing bangle pieces in stomach and pelvis

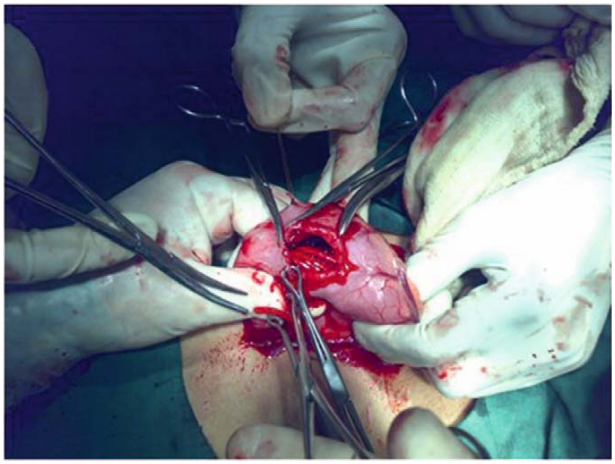

Fig. 3 Gastrotomy and bangle pieces retrieval

Post operative follow up of the patient was uneventful, check x-ray revealed no more pieces of bangles. Patient is on regular follow-up with the psychiatrist.

Discussion

A variety of foreign bodies in the gastrointestinal tract may come to the attention of general surgeon or a gastroenterologist. Majority of them up to 80–90% will pass spontaneously through the rectum, whereas 10–20% need

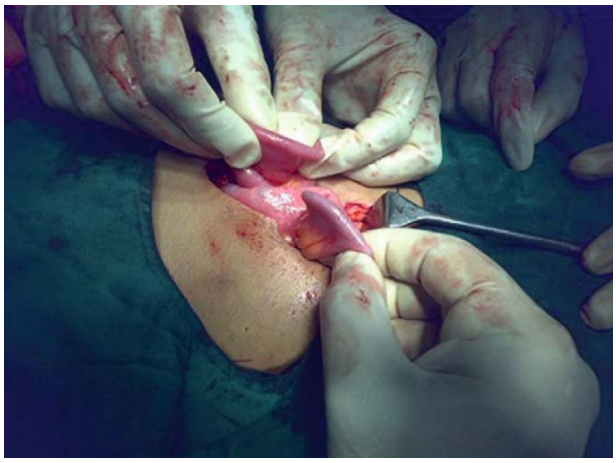

Fig. 4 Bangle pieces in terminal Ileum

non-surgical intervention and <1% need surgical intervention [4]. This surgical intervention is required in case of 1) Failure of the object to pass through the GI tract or evidence of impaction 2) Signs of penetration or actual perforation 3) Long, large, pointed and jagged objects which are unlikely to move 4) Large number of foreign bodies and lastly 5) Evidence of GIT hemorrhage [1].

Usually if the foreign body passes through the cardio-esophageal junction, then it has to pass though the entire GI tract. But pyloric region may impede the passage, also the presence of concomitant duodenal ulcers, second and third portion of the duodenum will be the next impeding point. Lastly ileoceacal region is known for impaction. Patients with previous surgery may cause abnormalities of peristalsis, increasing the likelihood of foreign body impaction [4]. Acuphagia being consumption of sharp objects, like hair pins, long needles, bangle pieces are likely to be impacted. Hyalophagia is consumption of glass materials [5]. In cases of Pica careful analysis of the function of pica behavior in individuals is critical to effective treatment. Currently, behavioral strategies have been most effective in treating pica.

In this case, there were around 53 pieces of bangles which were ranging from 3–7 cm with sharp edges. These accounted for total of around 18 complete bangles (Fig. 5). Majority of them were in the stomach. Only 6 of them could be retrieved by endoscopy. As they were more than 6cm, almost impacted in the pyloric region and the possibility of them causing perforation, made us plan for exploratory laparotomy.

There have been case reports of patients with Pica consuming sharp objects and successful surgical removal, but

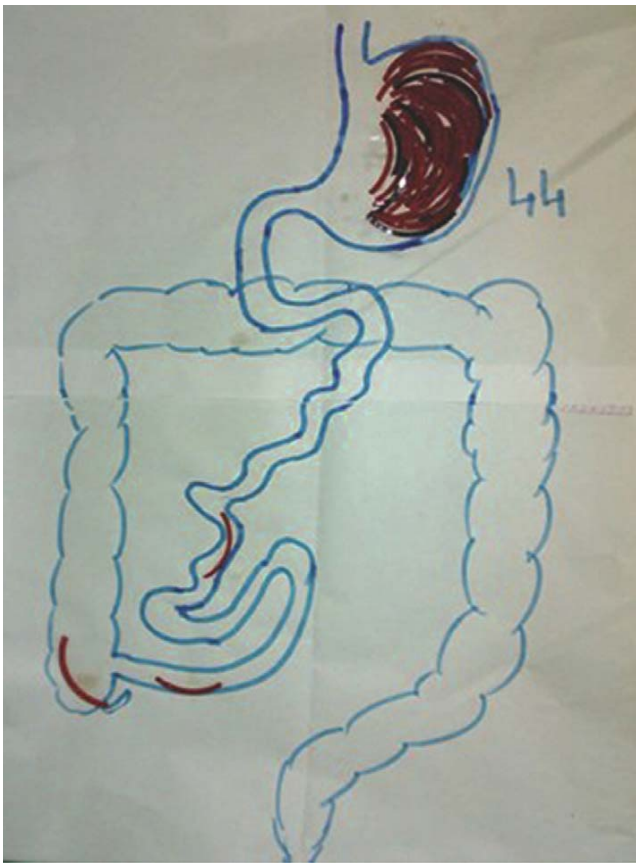

Fig. 5 Schematic representation of bangle pieces in GIT

consumption of bangles, a type of ornament used in India has never been reported. Bangle pieces ingestion being a rare case of foreign body in GIT, we report this case of successful removal of unusual type of foreign body (bangle pieces).

References

1. Cheshire NJ, Glazer G (1997) Diverticular, volvulus, superior mesenteric artery syndrome and foreign bodies. In: Zinner MJ, editor. Maingot's Abdominal Operations. Volume 1, 10th edition .Connecticut: Appleton & Lange; p. 933–937
2. Cynthia RE Eating Disorder: Pica. Available from: URL: http://www.emedicine.com/ped/topic1798.htm
3. Riyadh H (2003) Stone ingestion by a child. Saudi Medi J 24: 683–683
4. Gregory PC Pediatrics, Foreign Body Ingestion. Available from: URL: http://www.emedicine.com/emerg/topic379.htm
5. Hyalophagia from Wikipedia, the free encyclopedia Available from: URL: http://en.wikipedia.org/wiki/Hyalophagia