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Spectacles in Stomach: A Case of Successful Endoscopic Removal

Khan K,[1] Siddique K,[1] Anwar S,[1] Shiwani MH[1]

[1]Barnsley District General Hospital, Barnsley, South Yorkshire, United Kingdom.

ABSTRACT

Ingestion of foreign bodies is a common reason for emergency visit. The ingested objects include batteries, needles, dentures, coins, sharps etc. Radiolucency and the length of the objects are important factors that affect their management. Long objects over 10 cm are less likely to pass through the duodenal curve. Sharp object that is not retrieved at the earliest may penetrate the wall and cause complications. We present here a challenging case of a middle aged psychiatric patient who swallowed long and sharp arms of her spectacles that were successfully retrieved endoscopically.

Keywords: foreign body; spectacles; stomach.

INTRODUCTION

Ingestion of foreign bodies has been frequently reported amongst both the children and the adults and is one of the common reasons for attending the emergency department.[1] The varieties of objects that are ingested include batteries, needles, dentures, coins, sharps etc.[1-3] Literature review shows that radiolucency and the length of the objects are important factors that affect the management. Long objects in the range of 6-10 cm in length are less likely to pass through the duodenal curve and hence often require removal from the stomach.[3] Foreign bodies with smooth edges usually do not pose significant problems, but a sharp object that is not retrieved at the earliest may penetrate the wall and cause complications.[2] We present here a challenging case of a middle aged psychiatric patient who swallowed long and sharp arms of her spectacles that were retrieved.

CASE REPORT

A 51 year old lady from a local psychiatric hospital was admitted under the care of the surgical team with history of swallowing some batteries and the arms of her spectacles. The patient actually broke the side arms of the specs and swallowed them. She did not complain of abdominal pain, vomiting, distension, haemetemesis, cough or shortness of breath. She was haemodynamically stable, with a normal chest and abdominal examination without any signs of localized peritonitis. Urgent abdominal and chest X-rays were performed which showed the presence of the batteries and the spectacle arms without evidence of pneumoperitoenum. (Figure 1)

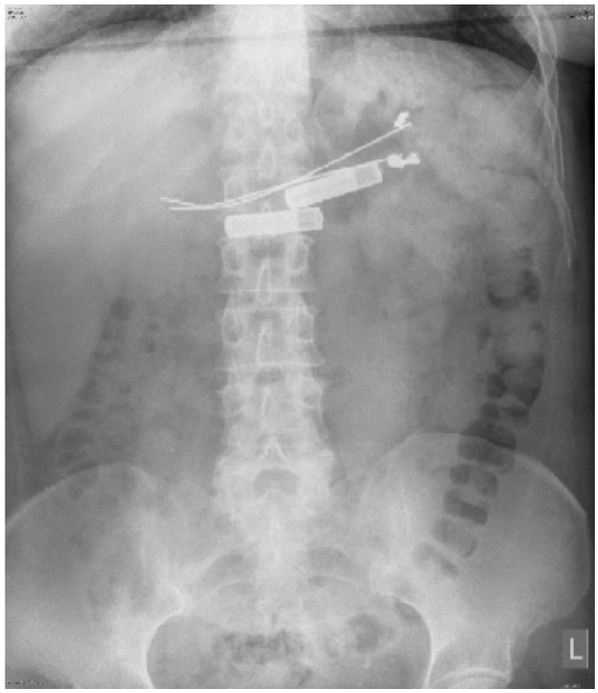

Figure 1. Plain abdominal x-ray demonstrating the presence of batteries and the spectacle arms in the stomach.

Correspondence: Khilid Khan, Barnsley General Hospital, Barnsley, S75 2EP, South Yorkshire, United Kingdom. Email: khalidoonkhan@hotmail.com, Phone: +447747772850.

Management options of wait and see versus intervention were discussed with the patient. The patient had full capacity and opted for conservative management. She was able to eat and drink normally & managed to pass both batteries. However, five days later she was brought back again to accident & emergency department with abdominal discomfort and one episode of vomiting. She was haemodynamically stable. Her abdomen examination was unremarkable with no evidence of distention, tenderness or gaurding. X-rays confirmed spectacle arms present in her upper abdomen. There was no evidence of pneumoperitoenum.

The case was discussed in a multi-disciplinary team meeting comprising of surgeons, gastroenterologist, radiologist, psychiatrist, paramedical staff and the patient' family. Considering the length of the specs arms and their sharp ends decision was made to attempt endoscopic retrieval. Because of the unstable nature of her psychiatric disorder, procedure was planned under general anaesthetic. Patient was consented for a laparotomy as well, if endoscopic retrieval fails. Endoscopy was performed by an experienced senior surgeon endoscopist in the operation theatre. Both the arms of the spectacles were found firmly stuck in pylorus with their smooth edges as the lead points, while the sharp edges were fortunately at the back (Fig 2).

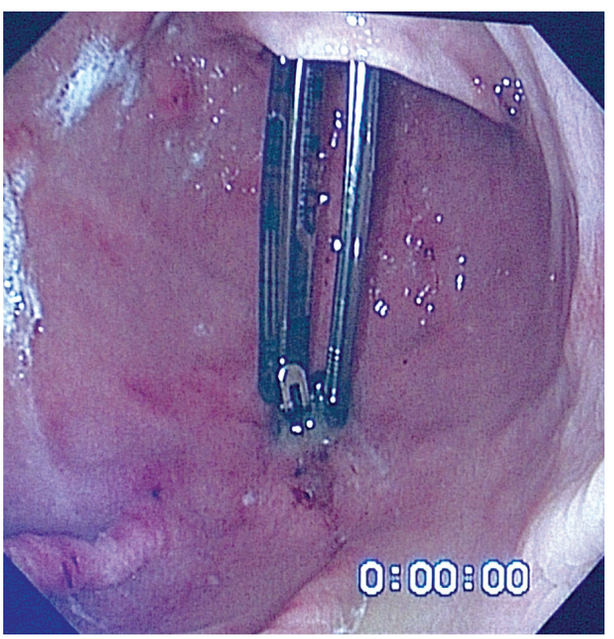

Figure 2. The sharp edges are seen penetrated underneath the mucosa.

Initial attempts to grasp the specs arms with the help of polypectomy snare failed as the edges had deeply penetrated underneath the mucosa. After multiple attempts the sharp edge of the specs arms was grasped and moved into the gastric body by a combination of 2 & 3 jaws graspers (Fig 4).

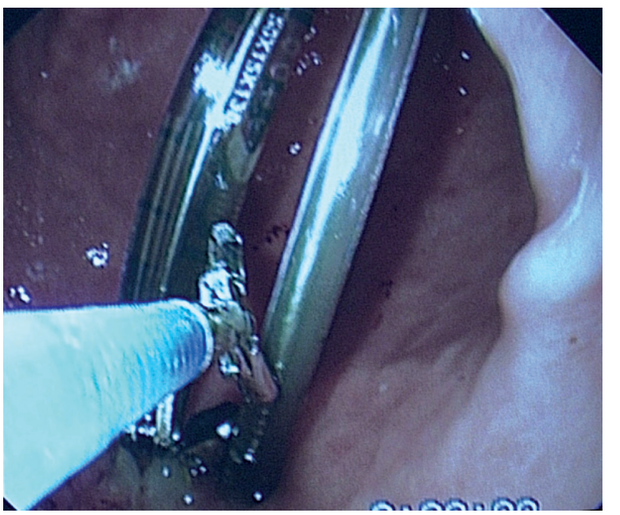

Figure 3. Grasper jaws being used to free up the specs arm.

Subsequently, they were retrieved with the help of polypectomy snare taking extreme caution regarding the sharp edges of the arms and various acute angles at gastroesophageal junction & in the pharynx (Fig 6, 7 & 8).

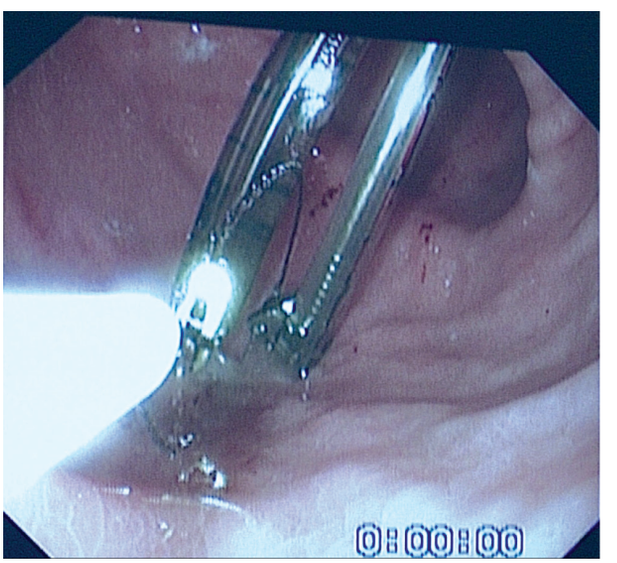

Figure 4. Polypectomy snare being applied carefully to lift up the specs arms through the stomach.

The specs arms were finally retrieved with help of Magill forceps from the pharynx. The size of specs arms was approximately 15 cm each.

The patient was allowed to drink an hour after the procedure. Subsequently, she had light diet & was build up for full diet over the next few hours. She made an uneventful recovery and was discharged back to the psychiatric hospital after two days.

DISCUSSION

Foreign-body ingestion is fairly common amongst children, alcoholics, psychiatric and senile patients leading to attendance at the emergency department. Majority of these are managed conservatively.[3, 4]

We managed our case conservatively, which was challenging because of the psychiatric history, the length of foreign body (approximately 15 cm) and a sharp end of both arms. We approached our case with a multidisciplinary approach. The management was thoroughly discussed with all the team members from various specialities including surgical, gastroenterology & anaesthesiology as well as theatre & endoscopy staff. Preparation for surgical intervention was also in place in case the retrieval lead to perforation. Whole of the process was mapped carefully. Risk of perforation at various angles including gastroesophageal junction, the curve along the hypopharynx and the epiglottis were discussed. We planned the use of various advanced endoscopic instruments and techniques.

Its been reported that large objects (> 10 cm) usually do not pass spontaneously through the gastrointestinal tract, and often require urgent surgery due to the risk of perforation.[8,9] Similarly, ingestion of a sharp object poses significant risks hence requiring regular imaging till the object has been passed, as the risk of perforation is as high as 35%.[4]

Literature review has shown that the surgical intervention is needed in around 12% to 16% of cases [6, 7]. When objects longer than 6 cm are swallowed, such as tooth brush and eating utensils, they are likely to have difficulty passing through the duodenum and hence should be removed either by endoscopic or surgical methods.[3,6,7] If endoscopic removal fails then a laparoscopic approach may be a useful alternative rather than a laparotomy.[8,9]

About ¤10-20% of cases may require some form of non-surgical endoscopic intervention[4] to prevent any complications like perforation, fistula, mucosal edema or abscess formation causing difficulty or even prevent the endoscopic removal of foreign bodies[5] thus leading to significant morbidity.[6]

Regarding the management of such a complex case we recommend the multi-disciplinary team approach which enables preparation for various situations rather than working individually. Our case is unique with regards to the object's size & shape and its retrieval without any complications.

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