Unusual presentation of more common disease/injury

An interesting cause of faecal occult blood

Nicolas Rabb,¹ Panagiota Kitsanta,² Lesley Hunt,³ Stuart Riley⁴¹Department of Cardiology, Northern General Hospital, Sheffield, South Yorkshire, UK²Department of Pathology, Northern General Hospital, Sheffield, South Yorkshire, UK³Department of Surgical Directorate, Northern General Hospital, Sheffield, South Yorkshire, UK⁴Department of Gastroenterology, Northern General Hospital, Sheffield, South Yorkshire, UK

Correspondence to Dr Nicolas Rabb, n.rabb@nhs.net

Summary

A 69-year-old man presented to bowel cancer screening after testing for faecal occult blood. Initial colonoscopy had been limited by a sigmoid stricture and a barium enema had revealed a suspicious mass in the corresponding area. He was referred for repeat colonoscopy, which showed a hard structure crossing the mid sigmoid colon, with both ends impacted into the bowel wall. A CT scan revealed what appeared to be a small bone impacted in a diverticulum with evidence of recent inflammation and a sealed perforation. The patient had recently been managed conservatively for an episode of diverticulitis at his local hospital but was currently asymptomatic. Owing to the possibility of future complications he underwent a laparoscopic sigmoid colectomy to remove the offending foreign body.

BACKGROUND

Ingestion of a foreign body is not uncommon and the majority that get through the pylorus pass through the remainder of the digestive tract unimpeded. There are, however, more than 300 cases of bowel perforation caused by foreign body consumption reported in the literature. The object is more likely to become lodged in the presence of bowel abnormalities such as diverticular disease. The majority of the patients who suffer complications from a foreign body cannot recollect ingesting the offending morsel and it is most likely to be discovered perioperatively or via preoperative imaging.^{1 2} Failure to manage an impacted foreign body appropriately can result in serious complications, such as the development of fistulae.³ We felt that this case was of interest due to the unique circumstances by which the foreign body was discovered and the management dilemma which it posed. Given that the management of gastrointestinal foreign bodies is largely based on experience and anecdotal evidence, this is a potentially useful addition to the literature.

CASE PRESENTATION

A 69-year-old man presented to the bowel cancer screening service with a positive faecal occult blood test. He had moderate chronic obstructive pulmonary disease and ischaemic heart disease but no significant functional impairment.

INVESTIGATIONS

Initial colonoscopy reported a stricture in the sigmoid colon. A same-day barium enema showed an irregular narrowing in the proximal sigmoid with a lobulated intraluminal polypoid area distally raising the possibility of an annular cancer. Repeat colonoscopy at the bowel-screening hub found a linear, hard structure crossing the mid sigmoid colon with both ends lodged within the bowel wall. The endoscopist was unable to dislodge or biopsy the object (figure 1). The patient's history was revisited.

He was currently asymptomatic but reported an emergency admission to his local hospital 2 months prior with left iliac fossa pain. This had been diagnosed as diverticulitis on Computerised Axial Tomography (CT) scan. The management had been conservative and the patient had made a full recovery. Repeat CT scan showed a bone traversing the sigmoid colon and protruding for several millimetres beyond the bowel wall either end. There were signs of recent inflammation and a sealed perforation (figure 2).

TREATMENT

Given the patient's comorbidities and the potential for further complications resulting from the impacted bone it

Figure 1 Endoscopic image of object traversing the colon, both ends impacted in the bowel wall.

Figure 2 CT image confirming the presence of a calcified object traversing the sigmoid colon, with evidence of local inflammation and a sealed perforation around the impacted ends.

was felt that, despite him being asymptomatic, the foreign body should be removed. The option of breaking the bone down the middle and removing it endoscopically was discounted due to its size (diameter on CT scan estimated at 5 mm) and the high likelihood of a clinically significant perforation and risk of faecal peritonitis. After local discussion and a relevant literature search it was decided that surgical resection was the best management option. The risks and benefits were discussed with the patient and a laparoscopic sigmoid colectomy was performed without complication.

OUTCOME AND FOLLOW-UP

Histological examination confirmed the presence of a 40 mm bone with both ends impacted into the bowel wall and a sealed perforation within a diverticulum. There was evidence of local peritonitis (figure 3). The patient made a full recovery.

DISCUSSION

There are two aspects to this case that need further exploration. First, did the bone need to be removed? Less than 1% of foreign bodies within the digestive tract require surgical removal and there are case reports of people having, unbeknown to them, lived for 30 years with a foreign body in their gastrointestinal tract before it was discovered on routine investigation. The salient aspect in this case was the fact that the patient had been symptomatic in the recent past and that there was evidence of recent inflammation on the CT scan around an impacted foreign body. The consequences of leaving an impacted foreign body in situ could be anything from ongoing discomfort to chronic inflammation and the formation of a colo-vesical fistula.³ The general consensus, which we would agree with, is that a symptomatic foreign body, or one that has caused local inflammation, peritonitis or an abscess should be removed.⁴

Figure 3 Histology revealed evidence of local peritonitis and an incomplete perforation of the bowel wall.

The second issue is one of methodology. While most upper tract foreign bodies are dealt with endoscopically,⁴ the fact that many lower tract foreign bodies will only present with symptoms of local inflammation or bowel perforation means that the management is often, inevitably, surgical.⁵ With therapeutic endoscopy becoming ever more advanced, however, there are reports of large and even sharp objects being removed via colonoscopy.^{6 7} Generally, if the object is non-impacted, small and not sharp there appears to be a reasonable basis for attempting endoscopic removal. There are no figures for the risk involved in these procedures, but the possibility of causing a perforation requiring surgical intervention is something that must be considered. In the case described above it was decided that due to the fact that the bone was impacted upon, probably sharp and lying within fragile bowel wall, an attempt at endoscopic retrieval would be unsafe. The surgical procedure in this case was a laparoscopic sigmoid colectomy. There is a report of a needle being retrieved through the bowel wall via laparoscopy,⁵ thus negating the need for resection; this was clearly not possible in our patient's case but in different circumstances should be considered.

There are two possible conclusions for this case; the first is that the patient was unlucky to have got an animal bone impacted in his bowel, which required a significant operation. The second is that he was lucky to have been tested for faecal occult blood when he was, thus allowing the diagnosis and treatment of something that could have led to unpleasant consequences in the future.

Learning points

- ▶ Foreign bodies within the digestive tract causing symptoms, local inflammation, peritonitis or that are impacted, should be removed.
- ▶ Upper gastrointestinal foreign bodies can readily be removed via endoscopy.
- ▶ Lower gastrointestinal foreign bodies can potentially be removed endoscopically if they are small, blunt and non-impacted.
- ▶ We would not advise attempting endoscopic retrieval if the foreign body is within fragile bowel wall (eg, within a diverticulum).

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Patient consent Obtained.

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