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Case Study

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NUTS IN THE GUT - A BIZARRE CASE OF SMALL BOWEL OBSTRUCTION

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ABSTRACT

Small bowel obstruction is a common cause of general surgical admission that often requires surgical intervention. A phytobezoar is a mass of partially digested or undigested food within the lumen of the gastrointestinal tract. Bezoars are rare causes of small bowel obstruction, however, serious complications of bezoars in the small intestine include ischaemia, haemorrhage, perforation and fistula formation. Abdominal CT scans are used in the diagnosis of bezoars, and treatment of small bowel bezoars includes endoscopic or surgical extraction of the bezoar with possible small bowel resection.

KEYWORDS: Bezoar; Phytobezoar; Small bowel obstruction.

INTRODUCTION

Small bowel obstruction is a common cause of acute surgical admission which is often managed non-operatively, however when conservative management fails, surgical intervention is required.[1]

The most common causes of small bowel obstruction are adhesions and hernias, however less common causes include neoplasia, inflammation, mesenteric vascular occlusion, intussusception, rarely bezoars[2] and foreign body ingestion.[3] We report a case of acute small bowel obstruction due to a phytobezoar in a 60year old lady that required prompt surgical management.

CASE REPORT

A 60year old lady was admitted to the acute surgical ward with a 5day history of sharp, worsening colicky generalised abdominal pain with marked abdominal distension. Associated symptoms included bilious vomiting, reduced appetite, constipation and unintentional, weight loss over the 6 months prior to presentation. Opioid analgesia, anti-spasmodics and anti-emetics were commenced by the patient's GP with no improvement in symptoms. This patient had also underwent OGD and colonoscopy in the community to further investigate her unintentional weight loss but no causative pathology was demonstrated.

This patient's past medical history included fibromyalgia, benzodiazepine dependency and chronic pain. She denied prior abdominal surgery and had no history of inflammatory bowel disease. Admission observations were stable however initial bloods results revealed a hyponatremia, an elevated CRP, an iron deficiency anaemia and and an albumin of 28. Abdominal X-ray demonstrated dilated loops of small bowel, with no air in the rectum (Figure 1). A suspected diagnosis of small bowel obstruction was made and the patient was initially managed conservatively with IV antibiotics and fluids. However due to persistent abdominal pain and rising inflammatory markers, a CT abdomen and pelvis was requested.

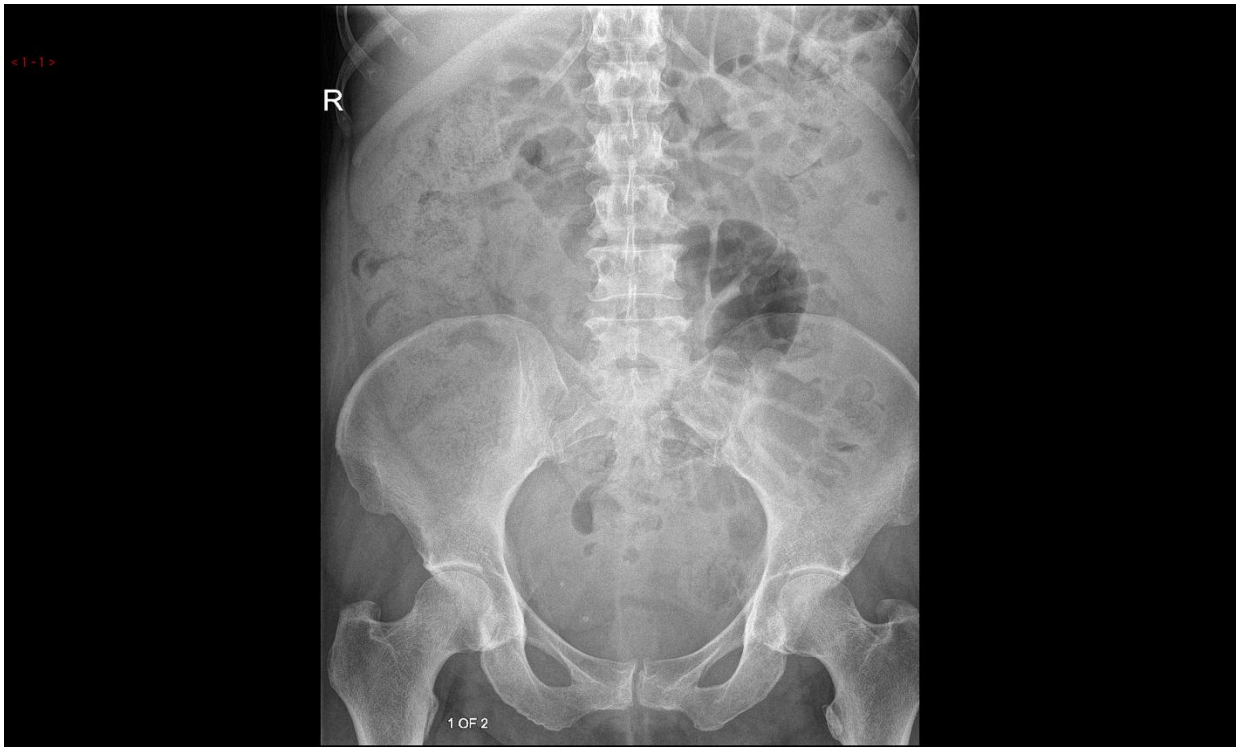

Figure 1: Plain film abdominal X-ray showing dilated loops of small bowel, faecal loading and no air in the rectum.

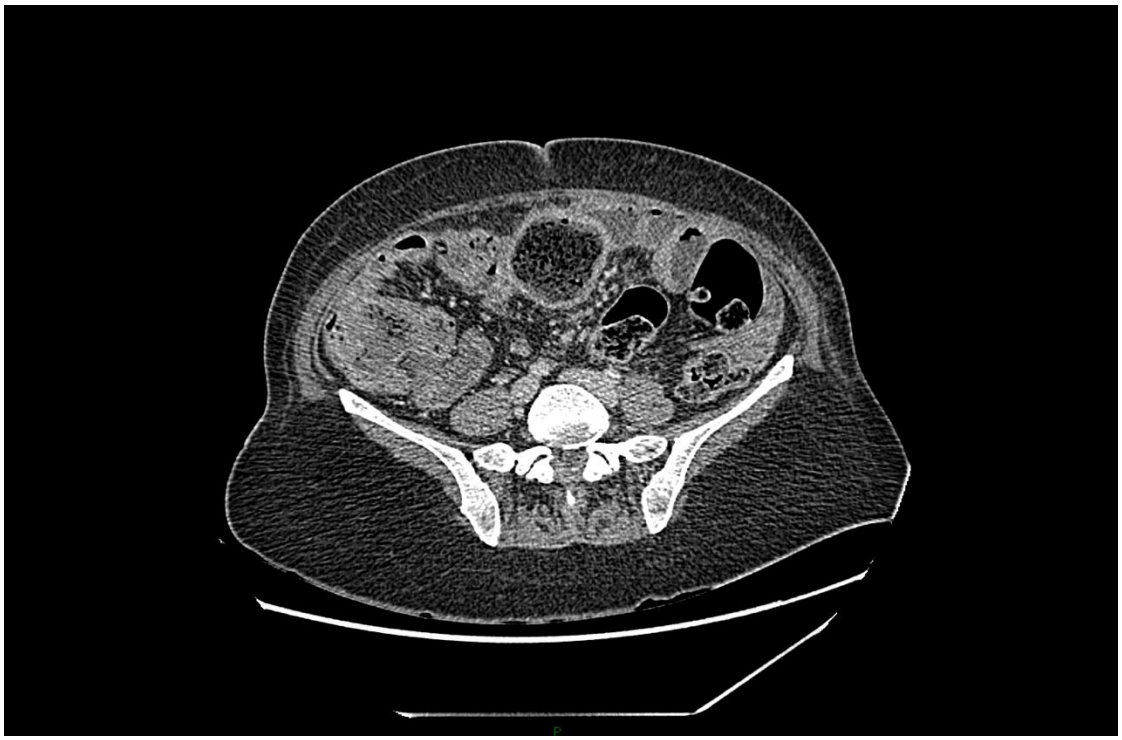

Figure 2: CT abdomen and pelvis revealed a 46mm, well circumscribed bezoar within the ileum, causing complete luminal obstruction with surrounding bowel oedema.

The CT report revealed a 46mm, well circumscribed bezoar within the terminal ileum, causing complete luminal obstruction with surrounding bowel oedema (Figure 2). Following the CT an NG tube was inserted, the patient was kept nil by mouth with IV fluids and an accurate fluid balance was maintained. An urgent anaesthetic review was undertaken; and the patient underwent an emergency laparotomy. Intra-operatively marked lymphadenopathy in the small bowel mesentery, a small bowel-to-small bowel fistula and a very constipated colon were demonstrated. A small bowel bezoar that consisted of undigested peanuts was found in

the distal ileum and in addition a profoundly dilated and friable small bowel tissue was demonstrated. A small bowel resection was undertaken and given the patient's hypoalbuminaemia, intra-operative hypotension and inotropic requirement an ileostomy rather that a primary anastomosis was felt to be prudent.

The patient was admitted to the surgical high dependency unit post-operatively for 48hours after which she was transferred to the surgical ward where she made an uncomplicated recovery and was discharged home one week post-operatively.

DISCUSSION

Small bowel obstruction is an acute surgical condition in which the contents of the gastrointestinal tract are unable to advance beyond the point of obstruction. This is a common surgical emergency and often requires prompt surgical intervention.[1] The most common causes of small bowel obstruction are adhesions and hernias, accounting for 75% of all cases.[1] Less common causes of small bowel obstruction include neoplasia, inflammatory causes, mesenteric vascular occlusion, intussusception and unusual aetiology causing obstruction.[2]

A phytobezoar is a mass of partially digested or undigested food within the lumen of the gastrointestinal tract. Phytobezoar are more common, although still relatively rare, in patients with a high dietary fibre intake, inadequate mastication and delayed gastric emptying.[2] Bezoars are classified depending on the type of undigested material that they are composed of: phytobezoars (particles from fruit and vegetables), trichobezoars (hairballs), lactobezoars (solidified milk), pharmacobezoars (pills and medication) and food bolus bezoars.[2, 5] Whilst bezoars are most commonly seen in the stomach, they are more likely to cause obstruction when found in the small intestine.[1,4]

Patients will typically experience symptoms associated with small bowel obstruction of any aetiology: colicky abdominal pain, vomiting, abdominal distention and constipation.[4] Serious complications of bezoars in the small intestine include ischaemia, haemorrhage, perforation and fistula formation.[5, 6] Whilst abdominal x-ray and barium studies can assist in the diagnosis of bowel obstruction, CT scanning is often required to make a definitive diagnosis. For bezoars in the oesophagus, stomach or duodenum, endoscopy alone can facilitate a diagnosis and provide a therapeutic option to remove the bezoar.[6]

Management of bezoars will often depend on their volume, composition, location and any associated pathology. Chemical dissolution using various agents may be used on most bezoars but are less effective against trichobezoars and persimmon phytobezoars due to their consistency.[6] As previously mentioned, endoscopy can be a valuable treatment option for bezoars located in the proximal GI tract, however for bezoars distal to the duodenum and those with associated complications, surgical intervention is often required. Whilst most operations involve enterotomy and removal of the bezoar with clsoure of the enterotomy, when the small bowel has perforated or when a fistula is present, small bowel resecttion may be necessary.[5, 6]

CONCLUSION

Bezoars are uncommon causes of small bowel obstruction. Accurate diagnosis and timely surgical intervention are crucial in the management of these surgical patients in order to prevent complications such as perforation, fistulation, ischaemia or haemorrhage.

Grant

None.

CONFLICTS OF INTEREST

We the authors of this case report have no conflicts of interest to declare.

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