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Colonic obstruction secondary to phytobezoar

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ABSTRACT

Large bowel obstruction is common in clinical practice and colorectal malignancy is a common cause. Bezoars are a rare and uncommon cause of large bowel obstruction. It can mimic tumour resulting in unnecessary surgery. Imaging studies can help in diagnosis. Endoscopy can be both diagnostic and therapeutic. We report a case of a 59-year-old Malay lady who presented with three days history of constant lower abdominal pain and bowel obstruction secondary to colonic phytobezoar. She also had ischaemic colitis. The bowel obstruction was successfully managed without any surgical interventions. Our case highlights a rare but interesting cause of large bowel obstruction that was diagnosed with colonoscopy and successfully managed with bowel lavage and enema.

Keywords: Bezoars, intestinal obstruction, ischaemic colitis

INTRODUCTION

Large bowel obstruction is not uncommon and can be challenging for clinicians as the causes can be myriad. Common causes include malignancies and adhesions. The most likely cause can usually be suspected by careful history and examination. However, establishing a definitive diagnosis requires investigations such as radiological imaging, endoscopy and even surgery. Bezoars are an uncommon cause of bowel obstruction and are generally seen in people with underlying psychiatric illness. We report a case of 59-year-old Malay lady who presented with three days history of large bowel obstruction secondary to a phytobezoar. She also had ischaemic colitis. These were successfully managed with conservative therapy.

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CASE REPORT

A 59-year-old Malay lady presented with constant pain in left lower abdomen of three days duration. This was associated with intermittent colic, nausea but no vomiting. She also had complained of loss of appetite and intermittent constipation over the last one month, but denied passage of blood in stools or melaena. She has been treated for hypertension for the past nine years and was taking amlodipine, atenolol, perindopril and enteric coated aspirin. She was also taking lactulose syrup and biscodyl tablets as and when re-

quired. The only other significant past medical history was two previous caesarian sections.

On admission she was in distress and had abdominal pain. Examination revealed mild dehydration. Her heart rate was 88/min, blood pressure 140/90 mmHg. She had one spike of fever (38^0 C), but no signs of toxemia or metabolic derangements. Abdomen examination showed marked tenderness in left iliac fossa region. However there was no guarding or any mass detected. Bowel sounds were present and per rectal examination was normal.

An erect abdominal radiography showed few air fluid levels indicating bowel obstruction (Figure 1). Blood investigations showed neutrophilic leucocytosis (white cell count of 20.7 x 10^9 ml, with 83% neutrophilia). Biochemical investigations showed hyponatremia (124 mmol/L, range 136-145) and hypokalemia (3.0 mmol/L, range 3.5-5.1). Biochemistry parameters for renal, liver and pancreas were normal. Serum carbohydrate embryonic antigen (CEA) level was normal. Feacal occult blood was negative. Colonoscopy unexpectedly showed a mass of vegetable matter (phytobezoar) consisting of entangled large threads (Figure 2) that was seen at the descending colon and fragmentation of the phytobezoar was attempted. However this was only partially successful. It was not possible to advance the scope beyond. There was no stricture seen. However few linear ulcers and an area of bluish mucosa were noted at the site of phytobezoar. Biopsies were taken and these showed ulcerated mucosa containing irregular tubules and the lamina propria showed fibrous exudates and focal fibrosis. Some of the vessels walls were

Fig 1: Plain abdominal radiography showing air fluid levels indicative of bowel obstruction.

smudged and some contained eosinophilic thrombi. The appearances were suggestive of ischaemic colitis secondary to embolic phenomenon.

A computed tomography (CT) scan of the abdomen with rectal contrast showed intra-luminal masses in the descending and transverse colon partially occluding the lumen with dilatation of proximal colon (Figure 3). Intravenous ciprofloxacin 200mg (12 hrly) and metronidazole 500mg (8 hrly) were administered during her hospital stay. The patient was kept nil orally and was given intravenous fluids until her recovery. We decided to use fleet soda (phosphate soda) as well as rectal enema to mobilise the impacted vegetable matter. The patient cleared her bowel 24 hours later and was completely relieved of her symptoms. Subsequent barium enema did not show any mass lesion or stricture. The patient was discharged 72 hours later. Unfortunately, a mesenteric angiography was not

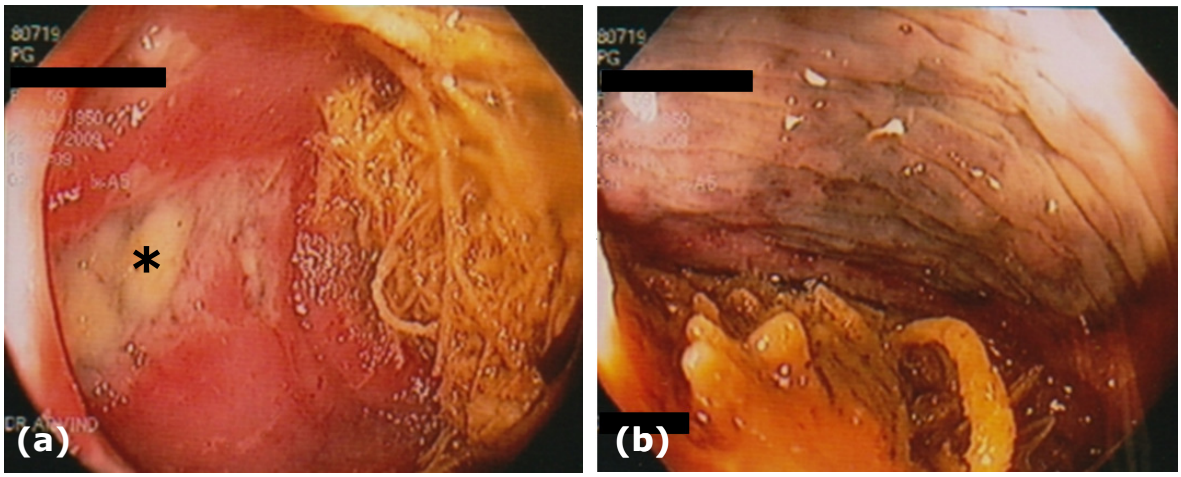

Fig 2: a) Endoscopic image showing tangled stands of vegetable matters (phytobezoar) obstructing the lumen and distally areas of ulcerations (asterisk) and b) showing necrotic slough of ischaemic colitis.

undertaken during her hospital stay and we were not able to do any further investigations as the patient failed to come back for her follow-up. Details of components of her meals consumed prior to hospitalisation were not also not available.

DISCUSSION

We report an interesting and rare case of a colonic phytobezoar presenting with large bowel obstruction. Our patient also had ischaemic colitis, likely thromboembolic in origin based on the histology findings. Both of these entities can present as acute abdominal pain, although uncommon with ischaemic colitis. Bowel obstruction is common with bezoars, especially in the small bowel.

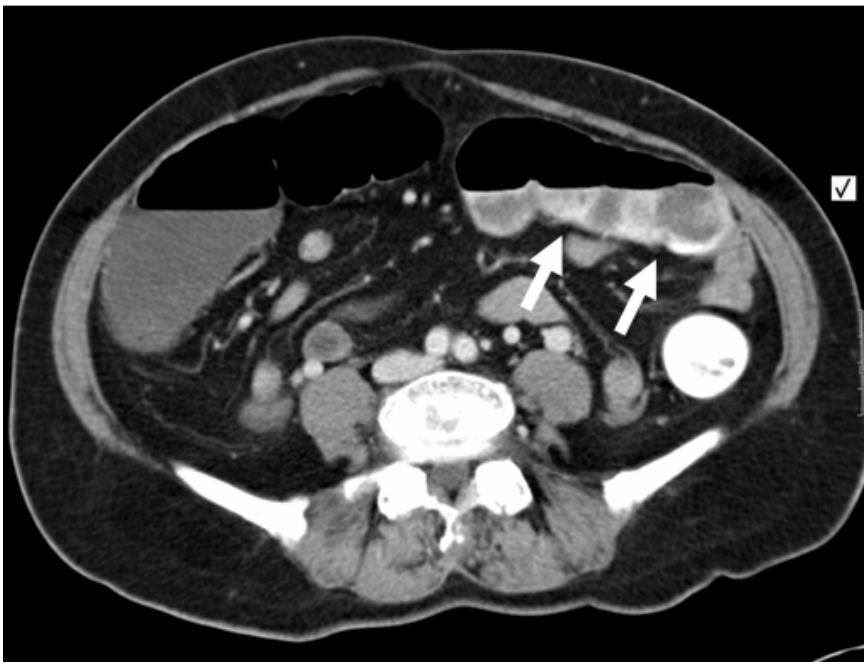

Fig 3: Axial computed tomography imaging showing dilated colon and bezoars (arrows).

Generally, bezoars are uncommon. Bezoars are the uncommon result of ingestion of poorly digestible or indigestible substances.[1] Phytobezoar (vegetable matter), diospyrobezoar (persimmon fiber), harapanahalli bezoar (vegetable matter), trichobezoar (hair), pharmacobezoar (tablets/semi-liquid masses of drugs) and concretions (furniture polish, paint, stones, pebbles and sand) are the various types of bezoars described in medical literature.

The most common type of bezoars are phytobezoars, which are composed of plant material.[1, 3] DeBakey and Ochsner, in a comprehensive review of published reports up to 1938, collected 303 recorded cases. Tondrean and Kirkiln found another 100 additional cases during the ensuing 12 years.[6] The latest reported series of 20 cases during 1990 to 2006 was from Taiwan.[4] The demographic data from these reports suggested that females seem to have more occurrence of bezoars.[4-6]

Small bowel obstruction is the most frequent clinical presentation of phytobezoars, although they are reported to be responsible for only 0.4 to 4% of all intestinal obstructions.[3] Phytobezoars in the large bowel are uncommon and are usually located in the recto-sigmoid region.

The clinical presentations of colonic bezoars include abdominal pain, sometimes associated with a palpable mass, abdominal distension, vomiting, constipation or diarrhoea. Complications of bezoars include obstruction, ulceration, haemorrhage, perforation, and peritonitis. The most frequent complication is obstruction, occurring in about ten percent of patients with trichobezoars and about 25% of those with phytobezoars. The higher incidence of obstruction with phytobezoars is probably due to the fact that they are more likely to be multiple and of harder consistency.[8]

The diagnosis of colonic bezoar can be suspected on plain abdominal radiograph and contrast enema or on CT scan. The typical bezoar image, a mottled air pattern, was visible in only 18% of patients with small bowel obstruction on plain radiography.[7] Barium studies characteristically show an intraluminal filling defect of variable size that is not fixed to the bowel wall. Barium filling the interstices gives a mottled appearance similar to that of a villous tumour. CT scan is much more sensitive and specific, and published series have shown focal well-circumscribed air-mottled intraluminal mass in all the patients to be characteristic.[7]

The methods of removal depend on the site of impaction, size, nature and complications of the bezoars. Conservative management includes enemas and manual disimpaction. Colonoscopic removal can be considered if enemas fail. Surgery is usually reserved following failure of conservative management, and for those presenting with life threatening complications such as sigmoid volvulus, haematochezia or peritonitis.[7] Most colonic bezoars can be removed by rectal enema, digital disimpaction or endoscopic extraction.[5]

In our case, whether the ischaemic colitis had contributed to the obstruction is uncertain. The finding of eosinophilic thrombi suggest thromboembolic cause of ischaemic

colitis. Even though our patient was young, she had underlying hypertensive vascular disease predisposing to atherosclerosis, an important cause for ischeamic colitis. Acute paralytic ileus from acute ischaemia or recurrent ischaemic episodes can lead to stricture formations and this can present as intestinal obstruction. It is possible the ischaemic colitis had contributed to the bowel obstruction even though there was no stricture. Bowel ischaemia can result in hypomotility and the site of phytobezoar impaction corresponded to the site most commonly affected in vascular insufficiency. However, our patient did not have any stricture or ileus. Unfortunately, we did not do any vascular study to look for possible source of emboli. Alternatively, the ischaemic colitis could have been due to pressure effects of phytobezoar.

In conclusion, our case highlights a rare but interesting cause of large bowel obstruction that was diagnosed with colonoscopy and successfully managed with bowel lavage and enema.

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