

## Case Report

# Enlarging phytobezoar: a rare cause of small bowel obstruction seen in an elderly patient

Hannah N. Tang<sup>1,2\*</sup>, Ryan Green<sup>1</sup>

<sup>1</sup>Department of General Surgery, Cairns Base Hospital, Cairns, QLD, Australia

<sup>2</sup>James Cook University, University of Queensland, Townsville, Australia

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**\*Correspondence:**

Dr. Hannah N. Tang,

E-mail: [hannah.tang@health.qld.gov.au](mailto:hannah.tang@health.qld.gov.au)

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### ABSTRACT

Phytobezoars are a rare cause of small bowel obstruction (SBO) but must be a consideration especially in patients with previous gastric surgeries and the elderly population. Preoperative computed tomography (CT) should be done to differentiate between bezoars and other causes of SBO. If non operative management fails, surgical removal is the recommended treatment.

**Keywords:** Bezoar, Small bowel obstruction, Phytobezoar, Enterostomy, Surgery

### INTRODUCTION

The reported incidence of bezoars causing a small bowel obstruction (SBO) is about 0.4-4% and surgical management is usually needed.<sup>1,2</sup> They can be classified into 4 types including phytobezoars (plant materials, vegetables and fruit), trichobezoars (ingested hair), pharmacobezoars (medications), and lactobezoars (milk protein).<sup>2,3</sup> When found in the stomach, they typically cause bleeding from ulcer formation whilst in the small intestines, lead to SBO.<sup>4</sup> Perhaps logically, bezoar related SBOs are also seen more often during the colder seasons where seasonal fruits such as persimmons are more prevalent.<sup>5</sup>

### CASE REPORT

An 87-year-old female presents with a 24–48-hour history of colicky abdominal pain, constipation and vomiting. She undergoes the usual work up in the emergency department with biochemistry and a computed tomography (CT) scan which revealed a mechanical small bowel obstruction with a transition point at the mid to distal small bowel

associated with a 4 cm intraluminal mass. Her diet particularly included a lot of nuts and pitted olives.

Her surgical background was significant for a previous open lower anterior resection and adjuvant chemoradiation in 2008 for a rectal cancer and an abdominal hysterectomy. Medically, she was fairly robust with main comorbidities including atrial fibrillation (AF) for which she was anticoagulated on apixaban and hypertension. Despite her age, she still lived independently on her own farm property. Interestingly, she had presented twice prior in 2017 and 2018 for small bowel obstructions, both times managed conservatively. This intraluminal mass was retrospectively identified on a CT done during the 2018 presentation, but was not reported on at the time.

Initial management and resuscitation included an insertion of nasogastric tube for decompression, indwelling catheter, intravenous fluids and she was kept fasted. Given her clinical stability with a non-peritonitic abdomen, the decision for delayed surgical management was made whilst her apixaban was being withheld. An ultrasound was also done which excluded the differential of gallstone ileus.



**Figure 1: Coronal slice CT from 2022 demonstrating the 4 cm mass that has a central laminated dense and centrally gas filled structure.**



**Figure 2: Axial slice CT from 2022 demonstrating the same 4 cm intraluminal mass.**



**Figure 3: Axial slice CT from 2018 showing likely the same mass, smaller and missed at the time.**

She subsequently underwent a laparotomy with adhesiolysis 48 hours into her admission and the mass was removed by longitudinal enterostomy rather than resection. This enterostomy was then anastomosed to the

distal ileum, past an area of dense adhesions from her previous operations.

Her recovery was prolonged due to postoperative ileus for which she required TPN and episodes of rapid AF and was discharged well on day 15 postoperatively.



**Figure 4: Intraoperative weighing and size of specimen post removal.**

## DISCUSSION

Since the introduction of surgery for peptic ulcer disease such as truncal vagotomy and gastric resection, the incidence of bezoar formation has risen and along with a high fiber diet, this is thought to be one of the main predisposing factors for bezoar development.<sup>6</sup> In the elderly population, we should take into consideration the higher prevalence of previous abdominal operations, malignancy and defective dentition as further contributory causes to SBO where a bezoar is also associated.<sup>7</sup>

Diagnosis of a bezoar preoperatively using CT scans are helpful and can be used to differentiate between a true bezoar, where operative management is usually required, and mere small bowel feces, which can be managed conservatively.<sup>8</sup> An encapsulating wall and floating debris are signs to look for radiologically in diagnosing a bezoar and a shorter debris length of <9.5 cm is more diagnostic of a phytobezoar as opposed to small bowel faeces.<sup>8,9</sup> CT scans are also important in excluding synchronous bezoars.<sup>9</sup>

Some studies have shown that Coca-Cola and sodium bicarbonate administration have been effective in

dissolving bezoars not causing an obstruction.<sup>10,11</sup> Endoscopic fragmentation has also shown some success in cases where the location of the bezoar is amenable.<sup>11</sup> However, surgery is still recommended in non-resolving SBO. A laparoscopic approach has been shown to be safe and associated with superior postoperative outcomes compared to the conventional open approach.<sup>4</sup>

## CONCLUSION

One should consider bezoars as a differential when diagnosing a patient with SBO, as it could be missed. There should be a low threshold for surgical intervention in event of non-resolution or failure of non-surgical management. Laparoscopic approach to bezoar induced SBO is shown to be safe and associated with better postoperative outcomes.

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