

CASE REPORT

Case report—An unusual diagnosis of a gastric phytobezoar in a middle-aged woman

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Email: rpchineka@gmail.com**Abstract**

A gastric phytobezoar is an uncommon finding. The most frequent symptoms are dyspepsia, abdominal pain, nausea, and vomiting (Gastroenterology Report, 7, 2019, 74). It is an important differential to remember in patients with risk factors for developing phytobezoars because phytobezoars can be managed conservatively in most cases.

KEYWORDS

conservative management, gastric phytobezoar

1 | INTRODUCTION

A phytobezoar is a bezoar or trapped mass in the gastrointestinal system that consists of indigestible plant material such as fibers, skins, and seeds.¹ Most phytobezoars occur in patients who have impaired gastric motility or digestion, usually following gastric surgery (such as Billroth 1 or 2 gastrectomy) or as a consequence of impaired motility in patients with diabetic gastroparesis, mixed connective tissue disease, or hypothyroidism. Impaired gastric peristalsis, low gastric acidity, peptic ulcer disease, chronic gastritis, and loss of normal pyloric function can all contribute to phytobezoar formation.^{2,3} Gastric bezoars are usually asymptomatic; however, when symptoms are present, the most common include postprandial fullness, abdominal pain, nausea, vomiting, anorexia, and weight loss.⁴ We are presenting the case of a gastric phytobezoar in a diabetic middle-aged female patient.

2 | CASE

We are presenting the case of a 44-year-old female patient who presented with a 6-week history of a productive cough

of white sputum, she denied having any night sweats or fever, and she did not have hemoptysis. She had loss of weight, poor appetite as she was vomiting intermittently and had persistent epigastric pain that was not responding to analgesics and which had worsened a few days prior to admission. The pain was aggravated by eating and lasting for a few minutes to hours. In her past medical history, the patient had been diabetic for 19 years and was being managed with Actraphane 25 units subcutaneously twice daily. On admission, she had no record of how well controlled her diabetes had been over the years. She had also been treated for sputum-positive pulmonary tuberculosis 9 years prior to admission. The patient had a history of being managed for chronic gastritis with triple ulcer therapy after she had an oesophagus gastro duodenoscopy (OGD), and subsequent histology was positive for *Helicobacter Pylori*.

On examination, she was cachectic, had mild pallor, she was afebrile with a temperature of 36.6, her blood pressure was slightly elevated at 140/90 mm Hg, and she had a regular full volume pulse of 80 bpm. Her blood sugar level was elevated at 11.7 mmol/L. She was not in respiratory distress, but she did have dull percussion note in the lower zone of the left lung. On examination of the abdomen, she had epigastric

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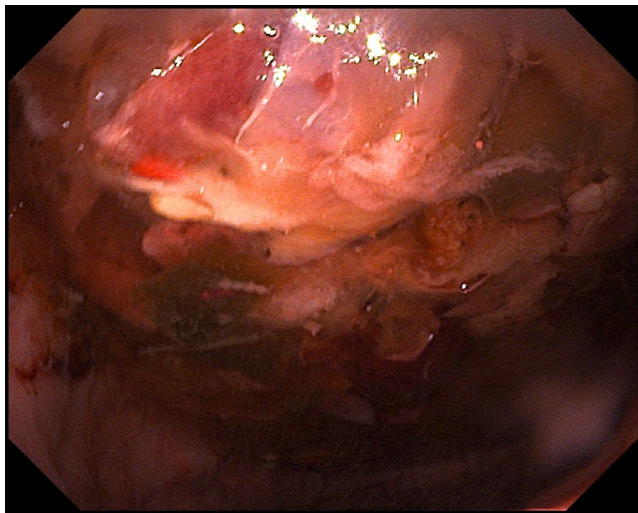


FIGURE 1 An OGD picture which showed a mass in the body of the stomach along the greater curvature. There was lots of food debris and vegetable matter seen



FIGURE 2 An OGD image soon after gastric lavage revealed smooth stomach mucosa and the absence of any mass

tenderness; however, there were no palpable abdominal masses. Her laboratory investigations were as follows: full blood count WCC 11.6 Hb 11.6 MCV 80 and platelets 322, urea and electrolytes were normal with an EGFR of 85, creatinine of 84, potassium of 3.8, sodium of 131, urea of 6.1, and bicarbonate of 28. Her HbA1c was 9.6% indicating poor glycemic control. Serum IgG for *Helicobacter pylori* was negative. Her CXRAY showed tracheal deviation to the left, with reduced lung volume of the left lung and compensatory emphysema of the right lung suggestive of fibrotic changes secondary to old tuberculosis. There were also cavities in the left apex and upper lobe suggestive of current tuberculosis infection and this was confirmed by a positive Ziehl-Neelsen (ZN) stain in her sputum.

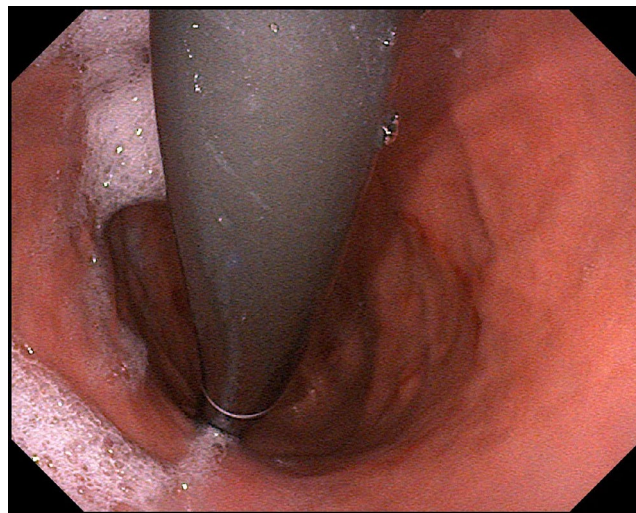


FIGURE 3 This is an OGD image showing the retroflexed scope or J maneuver to be sure that the mass is no longer present

The patient was admitted into hospital and commenced on TB treatment, and her diabetic management was optimized. She was also given Omeprazole 20 mg orally twice daily for her symptoms of gastritis and some Paracetamol 1 g orally four times daily as analgesia. The patient however continued to vomit and was still complaining of abdominal pain. Our differentials at this time were peptic ulcer disease, pancreatitis, pancreatic cancer, and gastric malignancy as her symptoms were consistent with gastric outlet obstruction. Serum amylase and lipase levels were ordered both of which were normal. Her abdominal ultrasound scan was also unremarkable. A barium meal and follow through showed a normal stomach outline with slow gastric emptying. There were no strictures or tumors neither were there any filling defects. She then had an esophageal gastro duodenoscopy (OGD) which showed a mass in the body of the stomach along the greater curvature. There was lots of food debris and vegetable matter seen. The histology for biopsies taken during the OGD reported severe chronic active gastritis and heavy growth of *Helicobacter Pylori* organisms in the surface mucus. There was no intestinal metaplasia or epithelial dysplasia. An abdominal CT scan was unremarkable, and there were no gastric or extra gastric masses demonstrated. At this point, we added the possibility of phytobezoar in the stomach to our list of differentials. The patient underwent gastric lavage with normal saline. A repeat OGD soon after gastric lavage revealed smooth stomach mucosa and the absence of any mass. The patient's abdominal symptoms improved significantly, and there were no residual symptoms of mechanical obstruction in the lower gastrointestinal system. She was discharged home on TB medication, *Helicobacter Pylori* eradication medication, and her usual insulin regimen. She has since been followed up regularly and is doing very well (Figures 1, 2 and 3).

3 | DISCUSSION

A bezoar is an indigestible mass of material such as hair, food, seeds or another ingested substance found in the gastrointestinal tract.¹ Bezoars are classified into four types according to their material make-up: phytobezoars, made of vegetables and fibers, trichobezoars, resulting from ingestion of hair and frequently an expression of psychiatric disorders, pharmacobezoars, caused by drugs and medication and lactobezoars which are formed of milk curd.⁵ Their incidence has been reported to be about 0.4%.⁶ Phytobezoars are the most common type of bezoars, and the most common risk factors for phytobezoar formation are previous gastric surgery, poor mastication, over-indulgence of food with high fiber content, diabetes mellitus complicated by gastroparesis and coexisting diseases with delayed gastric emptying such as mixed connective tissue diseases, and hypothyroidism.⁷ Impaired gastric peristalsis, low gastric acidity, and loss of normal pyloric function can all contribute to phytobezoar formation.¹ Patients with phytobezoars may experience epigastric pain or discomfort, nausea, vomiting, early satiety, weight loss, diarrhea, dysphagia, or upper gastrointestinal ulcerations and hemorrhage.^{1,7}

Endoscopic examinations play the most important role in the detection of gastric bezoars as well as in the treatment of this disease. A phytobezoar is typically observed in the gastric fundus as a single mass but it can be multiple. The color is diverse depending on the materials constituting the phytobezoar, ranging from beige, tan, ochre, yellow green, to black. CT scanning is useful to detect both gastric and small intestinal bezoars. Phytobezoars are visualized by CT scans as an ovoid or round occupational mass in the gastrointestinal tract with air bubbles retained inside and a mottled appearance.^{3,5,8}

Prior to the 1960s, phytobezoars were often treated with surgery; however, presently most treatment is conservative.^{1,5} A wide variety of therapeutic options have since been reported, including medical treatment with cellulase, papain, metoclopramide, or N-acetylcysteine.¹ Chemical dissolution is another treatment option using either Coca-Cola lavages or hydrolytic solutions.⁵ In cases that are urgent such as those manifesting with gastrointestinal bleeding and/or ileus and patients with refractory bezoars, endoscopic fragmentation or surgical removal should be applied. Spontaneous disappearance of a bezoar without any specific treatment has also been observed in some patients; however, careful follow-up is required in these patients and should only be applied if they are in a stable condition.⁸

4 | CONCLUSION

The case presented in this article is interesting because the diagnosis of a phytobezoar was unexpected even though our

patient was diabetic and had a history of chronic gastritis both of which are known risk factors. Early and accurate diagnosis of phytobezoars is important as conservative management is a safe and effective method of treatment. Furthermore, endoscopic saline irrigation was used successfully in the management of this case which is a method not widely described in literature. The multidisciplinary team of physicians and surgeons averted unnecessary exploratory laparotomy.

CONFLICT OF INTEREST

None declared.

AUTHOR CONTRIBUTIONS

RC: served as Senior registrar in General Internal Medicine United Bulawayo Hospitals and author of the case report and part of the team that managed the patient. TM: served as Consultant General Surgeon United Bulawayo Hospitals and author of the case report, performed the diagnostic esophageal duodenoscopy, and managed the patient. ND: served as Consultant Physician, Physician in charge of patient, review of case report, and guidance in writing the case. BG: served as Consultant General Surgeon and part of the surgical team that managed the patient.

ETHICAL APPROVAL

Consent was gained from the patient on whom this case is based.

DATA AVAILABILITY STATEMENT

Data sharing not applicable to this article as no datasets were generated or analyzed in this case report.

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REFERENCES

1. Tan F, Mo H, He X, Pei H. An unusual case of gastric outlet obstruction caused by giant persimmon phytobezoars. *Gastroenterol Rep*. 2019;7(1):74-76.
2. Kramer SJ, Prochapin MB. Gastric phytobezoar dissolution with ingestion of diet coke and cellulose. *Gastroenterol Hepatol*. 2012;8(11):770-772.
3. Iwamuro M, Okada H, Yamamoto K. Review of the diagnosis and management of gastrointestinal bezoars. *World J Gastrointest Endosc*. 2015;7(4):336-345.
4. Balogun OS, Osinowo AO, Afolayan MO, Adesanya AA. An obstructing small bowel phytobezoar in an elderly female Nigerian: a case report and literature review. *Case Rep Surg*. 2017;2017:1-3.
5. Occhionorelli S, Zese M, Vasquez GA. A rare case of a double phytobezoar causing gastric and jejunum obstruction in an adult man: a case report. *J Med Case Rep*. 2016;10:350.
6. Ladas SD, Kamberoglou D, Karamanolis G, Vlachogiannakos J, Zouboulis-Vafiadis I. Systemic review: Coca-Cola can effectively

dissolve gastric phytobezoars as a first line treatment. *Aliment Pharmacol Ther.* 2013;37(2):169-173.

7. Eisenberg RL, Levin MS. *Miscellaneous abnormalities of the stomach and duodenum, textbook of gastrointestinal radiology*, 3rd edn., Philadelphia: Elsevier Health Sciences; 2008.
8. Kuhn BR, Mezoff AG. *Mezoff, bezoars, pediatric gastrointestinal and liver disease*, 4th edn. Philadelphia: Saunders; 2011.

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