Gastric phytobezoar: unusual association and resolution

J.P. Wyatt, G. Haddock and R.J. Aitken

The Royal Infirmary, Edinburgh, EH3 9YW, UK

Summary: A 58 year old man underwent a laparotomy for intestinal obstruction, which proved to be due to intestinal pseudo-obstruction. Following a slow postoperative course, he was discovered to have a gastric phytobezoar. The association between bezoars and pseudo-obstruction has not been previously described, but might be expected. The gastric phytobezoar could not be fragmented mechanically, but it completely disappeared when enteral feeding was commenced. The possibility of a future role of enteral feeding in this situation is suggested.

Introduction

Gastric phytobezoars, traditional surgical curiosities,¹ are thought to be largely related to underlying defective gastric motility, such as that seen following gastrectomy.² They have been successfully treated by removal at gastrotomy, endoscopic mechanical disruption and fragmentation, and dissolution with various agents including papain, cellulase, N-acetyl cysteine and pineapple juice.^{2,3} This report describes the resolution of a phytobezoar when enteral feeding was commenced and the association between this bezoar and intestinal pseudo-obstruction.

Case report

A 58 year old male smoker on medical therapy for ischaemic heart disease and end-stage chronic obstructive airways disease presented with a 4 day history of abdominal pain, distension, vomiting and constipation. His abdomen was soft and non-tender but with increased bowel sounds. Radiology was consistent with adhesive intestinal obstruction following the simple closure of perforated duodenal ulcer seven years before. He was therefore managed conservatively. He improved initially, but 5 days later his abdomen subsequently became increasingly distended and tender. Abdominal X-rays confirmed small bowel and proximal large bowel dilatation. Although a diagnosis of pseudo-obstruction was entertained, in-

creasing tenderness prompted laparotomy. At laparotomy the diagnosis of pseudo-obstruction was confirmed. The gastric antrum was felt to be 'considerably thickened', although the area was not directly visualized.

His early postoperative course was uneventful, but on the tenth day he complained of nausea, anorexia and epigastric fullness. An upper gastrointestinal endoscopy revealed a large gastric phytobezoar. Attempted mechanical fragmentation was unsuccessful. Repeat endoscopy and Gastrografin meal demonstrated no change in the bezoar over the subsequent 2 weeks. His symptoms improved sufficiently, however, to allow his discharge.

He was readmitted one month later with an exacerbation of chronic obstructive airways disease. He complained also of early satiety and abdominal bloating – investigations revealed that his bezoar remained. In an attempt to maintain adequate nutrition, enteral feeding with 'Ensure' (Abbott Laboratories Limited) via a fine bore nasogastric tube was commenced. After 4 days the bezoar was shown radiologically to be considerably smaller and to have fragmented. However, the patient's underlying respiratory problems were refractory to treatment and he died 4 days later. At postmortem the phytobezoar had disappeared.

Discussion

This man presented with two gastrointestinal problems: gastric phytobezoar and pseudo-obstruction. Whilst both conditions are believed to be related to underlying gastrointestinal motility disturbance,^{2,4} they have never previously been reported occurring

Correspondence: J.P. Wyatt, B.Med.Sci., M.B.Ch.B., F.R.C.S. (Ed.), Department of Accident and Emergency, Western Infirmary, Dumbarton Road, Glasgow G11 6NT, UK.

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together, although such as association might be expected.

The resolution of the bezoar when enteral feeding with 'Ensure' was commenced is potentially valuable. 'Ensure' contains a variety of amino acids, carbohydrates, fatty acids and vitamins, but none of the standard agents used to treat

phytobezoars.² Its possible mechanism of action is speculative, but it may disrupt gastric mucus covering the bezoar, in a similar way to that suggested for N-acetyl cysteine.⁵ 'Ensure' is readily available in many hospitals. It may have a useful role in the management of gastric phytobezoar.

References

1. Williams, R.S. The fascinating history of bezoars. *Med J Aust* 1986, **145**: 613–614.
2. Andrus, C.H. & Ponsky, J.L. Bezoars: classification, pathophysiology and treatment. *Am J Gastroenterol* 1988, **83**: 476–478.
3. Zarling, E.J. & Moeller, D.D. Complication using Adolph's Meat Tenderizer and alternatives from literature review. *Arch Intern Med* 1981, **141**: 1669–1670.
4. Isaacs, P. & Keshavarzian, A. Intestinal pseudo-obstruction – a review. *Postgrad Med J* 1985, **61**: 1033–1038.
5. Schlang, H.A. Acetylcysteine in removal of bezoar. *JAMA* 1970, **214**: 1329.