Learning points

Nail–patella syndrome is a rare autosomal dominant disorder with characteristic skeletal and renal abnormalities, most commonly dysplastic nails, hypoplastic/absent patellae, and asymptomatic urinary abnormalities

Box 3

- 1 Bennett WM. Nail–patella syndrome. In: Jacobson HR, Striker GE, Klahr S, eds. *The principles and practice of nephrology*. St Louis: Mosby, 1995; pp 259–60.
- 2 Campeau E, Watkins D, Rouleau GA, et al. Linkage analysis of the nail–patella syndrome. *Am J Hum Genet* 1995; **56**: 243–7.
- 3 Bennett WM, Musgrave JE, Campbell RA, et al. The nephropathy of the nail–patella syndrome: clinico–pathologic analysis of 11 kindred. *Am J Med* 1973; **54**: 304–19.

Final diagnosis

Nail–patella syndrome or hereditary onycho–osteodysplasia.

Keywords: nail–patella syndrome

- 4 Sabnis SG, Antonovych TT, Argy WP, Rakowski TA, Gandy DR, Salcedo JR. Nail–patella syndrome. *Clin Nephrol* 1980; **14**: 148–53.
- 5 Cohen AH, Adler SG. Nail–patella syndrome, lipodystrophy, Fabry disease and familial lecithin acyltransferase deficiency. In: Tisher CC, Brenner BM, eds. *Renal pathology*. Philadelphia: JP Lippincott, 1994; pp 1267–90.

An unusual late complication of gastric surgery

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A 52-year-old man presented with a history of colicky epigastric pain, intermittent upper abdominal distention and diarrhoea worsening over a period of six months. Over 20 years previously a vagotomy and pyloroplasty had been performed for a chronic duodenal ulcer after which he complained of similar symptoms to the above. These were attributed to dumping syndrome, and settled with simple dietary advice at that time.

Initial investigation involved full blood count, urea and electrolytes (which were normal) and a barium meal examination (figure 1).

Figure 1

Question

What is the most probable diagnosis?

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Answer

A bezoar. The barium meal examination was reported as demonstrating significant gastric stasis with considerable food residue and outflow obstruction. This was followed by gastroscopy which revealed a large solid mass conforming to the contours of the stomach which was removed by gastrotomy (figure 2)

Discussion

Bezoar formation is an oft-forgotten condition causing symptoms of upper gastrointestinal disturbance in patients who have undergone gastric surgery. Epigastric pain, weight loss,

nausea and bloating¹ are the commonest presenting features, strikingly similar to those associated with dumping syndrome. The rapid liquid emptying and slowed solid transport seen after vagotomy and pyloroplasty² contribute significantly to the pathophysiology of both conditions. Other factors such as diet (especially persimmons and oranges), impaired gastric motility, decreased luminal acidity³ and poor chewing⁴ are also associated with bezoar formation. Endoscopy is the investigation of choice, since upper gastrointestinal barium studies often fail to demonstrate bezoars.¹

Treatment options include endoscopic fragmentation¹ intragastric enzymic dissolution,⁵ and gastrotomy.

Final diagnosis

Gastric bezoar

Keywords: gastrectomy complication, bezoar

Figure 2 Phytobezoar forming cast of the stomach

Summary/learning points

- previous gastric surgery predisposes to gastric bezoar formation
- epigastric pain, weight loss and bloating sensations are the common presenting symptoms
- endoscopy is the investigation of choice

1 Dietrich NA, Gau FC. Postgastrectomy phytobezoars - endoscopic diagnosis and treatment. *Arch Surg* 1985; **120**: 432-5.

2 Gulsrud PO, Taylor IL, Watts HD, Cohen MB, Elashoff J, Meyer JH. How gastric emptying of carbohydrate affects glucose tolerance and symptoms after truncal vagotomy with pyloroplasty. *Gastroenterology* 1980; **78**: 1463-71.

3 Sanderson I, Ibberson O, Fish EB. Gastric phytobezoar following gastrectomy. *Can Med Assoc J* 1971; **104**: 1115-9.

4 Stien DT, Ballin R, Stone BG. Endoscopic removal of gastric phytobezoars. *J Clin Gastroenterol* 1982; **4**: 329-32.

5 Zarling EJ, Moeller DD. Bezoar therapy: complication using Adolph's meat tenderizer and alternatives from literature review. *Arch Intern Med* 1981; **141**: 1669-70.