CASE REPORT

Vomiting gallstones as a presenting feature of small bowel obstruction secondary to inflammatory stricture

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SUMMARY

Patients presenting with symptoms caused by gallstones are common on a surgical take. Understanding the different ways in which this common condition can present is important to enable the correct diagnosis and thus management plan. The immediate management of gallstones depends on the presenting features and can range from analgesia to surgical intervention. Obstructive cases require intervention, either by ERCP or surgery; the non-obstructive cases are usually left to settle before an elective operation at a later date. In surgery, the presence of a clinical sign where it 'should not be' can be a sign of another underlying pathology and this is the embodiment of surgery—to assimilate seemingly disparate pieces of information and act in a way to treat the cause. This case study highlights a rare presentation of one disease state, in vomiting of gallstones, that raised the diagnosis of another pathology, a small bowel obstruction.

BACKGROUND

Nausea and vomiting are some of the most common complaints to emergency departments across the world. Obvious causes are well known, but some rarer or most abstract causes can also cause vomiting and the treatment of the presenting complaint is to treat the underlying cause. In this case, a patient presented with vomiting which contained solid material, which was discovered to be gallstones. This patient was diagnosed with small bowel obstruction and the patient received a resection of the section of the small bowel responsible for the symptoms.

The presence of gallstones within the vomitus gave the diagnosis of small bowel obstruction as other causes of vomiting would not have caused retrograde flow of the gallstones into the stomach to enable their expulsion by vomiting (figures 1 and 2).

This case shows that it is important to consider all aspects of common conditions and the presence of unusual signs, such as gallstones being present in the vomitus, should raise the suspicion that something significant is underlying the presenting complaint.

CASE PRESENTATION

An 83-year-old Caucasian woman with a medical history of cholecystitis, hypertension, hypothyroidism and hypercholesterolaemia was brought to the emergency department by ambulance with a 1-day history of severe sharp right upper quadrant

Figure 1 An example of the gallstones within the vomitus.

abdominal pain, nausea and vomiting fluid with solid lumps within it.

The patient reported vomiting 10 times in the previous 12 h. The vomitus was bilious, there was no blood and was not 'coffee grounds' in appearance. There was also a 1-day history of anorexia.

The patient presented 2 years previously with acute cholecystitis and gallbladder empyema, treated with a pigtail drain and intravenous antibiotics. The patient was scheduled for an elective cholecystectomy after an ultrasound scan revealed

Figure 2 The abdominal radiograph on presentation.

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reduced inflammation of the gallbladder and the presence of multiple gallstones.

INVESTIGATIONS

- ▶ Blood tests—liver function tests—alkaline phosphatase 248 IU/L, alanine transaminase 47 IU/L, bilirubin 41 µmol/L.
- ▶ Full blood count—haemoglobin 112 g/L, white blood cell 6.9×10^9 /L, neutrophils 6.1×10^9 /L.
- ▶ Chest x-ray—nil focal, no signs of pneumoperitoneum.
- ▶ Abdominal x-ray—no dilated loops of small bowel, no focal pathology.

DIFFERENTIAL DIAGNOSIS

The differential diagnosis of vomiting is legion in number, with gallstones very low down the risk of probability for the cause of vomiting without pain or jaundice. However, in the clinical context of right upper quadrant pain and vomiting 'solid lumps', the differential diagnosis of vomiting secondary to gallstones is more likely.

Other diagnoses to consider include cholecystitis, small bowel obstruction, recurrence of the gallbladder empyema and vomiting of blood clots or consumed food.

TREATMENT

The patient was treated conservatively in the initial phase with paracetamol and cyclizine as well as intravenous co-amoxiclav. The patient declined a nasogastric tube but accepted a urinary catheter, which drained approximately 35 ml/h.

The patient continued to vomit and underwent an emergency laparotomy for small bowel obstruction and it was discovered that there was a stricture owing to inflamed small bowel which was adhered to the transverse colon. There was a chronic abscess cavity but no free pus, and the strictured bowel was resected with an anastomosis created.

OUTCOME AND FOLLOW-UP

The postoperative period was uneventful, and at 3-month follow-up there were no signs of any complications.

DISCUSSION

A search of PubMed for descriptions of vomiting gallstones was performed and this revealed multiple case reports of vomiting gallstones due to a cholecystoduodenal fistula, the most recent

of which was from November 2012.¹ There have been innumerable reports of gallstone ileus causing obstruction and the resulting symptoms including the presence of gallstones in the vomitus; however, there has only been one case report, in 1970, whereby the cause of vomiting gallstones was due to obstruction not related to gallstone ileus or cholecystoduodenal fistula,² but in this case the patient had not undergone any intra-abdominal procedure prior to the presenting complaint.

This case report therefore describes the first case of vomiting of gallstones secondary to an inflammatory stricture causing obstruction in a patient who had received treatment for gallbladder pathology. The main differences in this case are that the presenting complaint and the obvious cause for the condition—vomiting gallstones and the gallbladder empyema—were not directly related to the causative pathology, highlighting the need to be aware of other pathology in all clinical cases.

Learning points

- ▶ Gallstones commonly cause vomiting, usually due to the pain.
- ▶ The presence of obvious 'stones' within the vomitus should alert the clinician to the differential diagnosis of obstruction causing retrograde flow of the gallstones into the stomach.
- ▶ Identification of gallstones as the cause of vomiting in a patient is a means of curing the symptom in the long term.

Contributors KZ was the chief operating surgeon on the patient. JMN performed the search of the patient history and DRM performed the background search and prepared the initial draft of the article. All authors contributed to the article and all have signed off the final copy as suitable for submission.

Competing interests None.

Patient consent Obtained.

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