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PICTURES IN DIGESTIVE PATHOLOGY

Image of pneumoperitoneum in patient with phytobezoar

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CASE REPORT

A 61 year-old-man was referred to the emergency room with intense and acute epigastric pain after a large meal, without experiencing symptoms of nausea or vomiting. His medical history included obsessive neurosis and a Billroth I gastric resection due to a duodenal ulcer. The patient was hemodynamically stable and had a distended abdomen that was painful to the touch, with maintained peristalsis and possible peritoneal tenderness. Bowel sounds were present. The PA chest radiograph (Fig. 1) showed a crescent-shaped air image at the left infradiaphragmatic level which suggested pneumoperitoneum. A CT examination was performed using intravenous and oral contrast. The results showed no evidence of pneumoperitoneum but it confirmed that the pseudopeumoperitoneum image was the result of a marked dilatation of the gastric remnant (Fig. 2). This dilatation was due to an obstruction of the jejunum, secondary to a well-defined "pseudomass" resembling feces, consistent with a bezoar. A MPR reconstruction was performed showing dilatation proximal to the bezoar (Fig. 3). Esophagogastroduodenoscopy (EGD) confirmed the existence of a bezoar. A Coca-Cola® lavage treatment was performed via a nasogastric tube. Four days later the ECG demonstrated the complete disappearance of the bezoar.

DISCUSSION

Bezoars are uncommon causes of intestinal obstruction and are responsible for only 0.4-4% of all intestinal obstructions (1). They consist of ingested but not digested materials which accumulate within any segment of the gastrointestinal tract, although they are normally found in the stomach (2). A predisposing factor is needed in order to form a bezoar, including previous gastric surgery, mental illness or disturbed gastric motility (3). CT scan is considered the imaging method of choice, as it allows for the identification of the pathognomonic image of a bezoar which is described as a well-defined, oval, intralumial mass which is composed of soft-tissue and mottled with gas (1). Some diseases may produce images typical of pneumoperitoneum in its absence, a condition which is known as pseudoneumoperitoneum. The presence of abnormal thoracic gas (pneumothorax or empyema) or intraperitoneal subdiaphragmatic fat, together with the abnormal arrangement of intraluminal air (distended overlapping bowel-loops, Chilaiditi´s syndrome, or diaphragmatic hernia, etc) have been reported as causes of pseudoneumoperitoneum (4). And although bezoar has not been reported as a cause of pseudoneumoperitoneum in documented case studies, our case must be understood in the context of small-bowel obstruction caused by bezoar which produced dilatation of

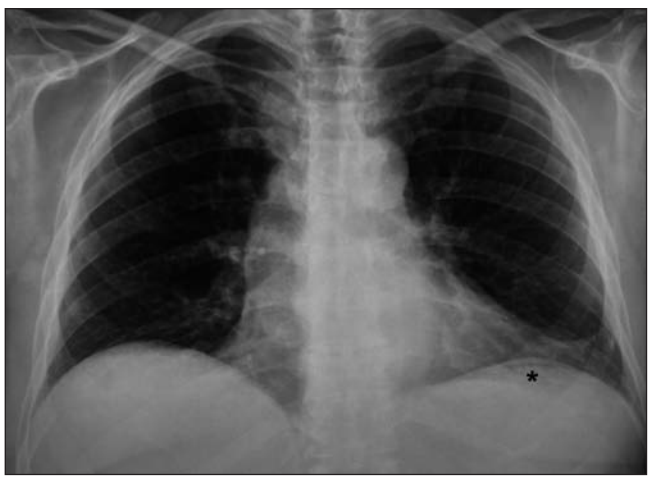

Fig. 1. Posteroanterior chest radiograph. Crescent-shaped airy image at the left Infradiaphragmatic level that suggests pneumoperitoneum (*).

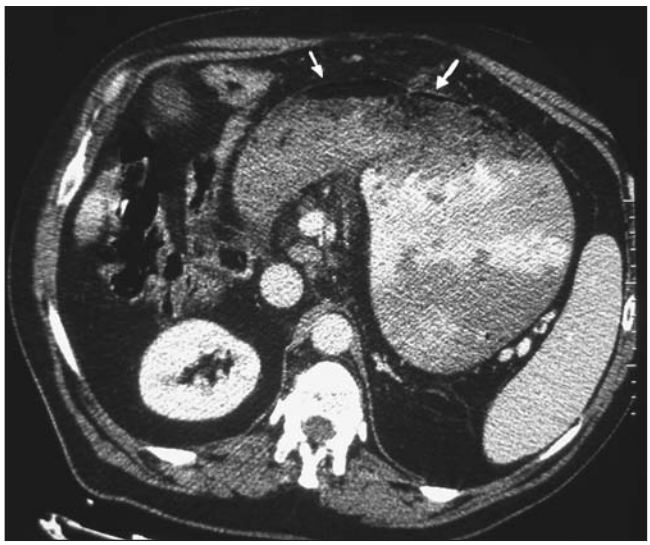

Fig. 2. CT scan after the administration of intravenous and oral contrast. Notable distension of the gastric chamber occupied by food content and oral contrast, with a small air-fluid level in the upper-most area, which produces the image of pneumoperitoneum (white arrows) in the PA chest radiograph.

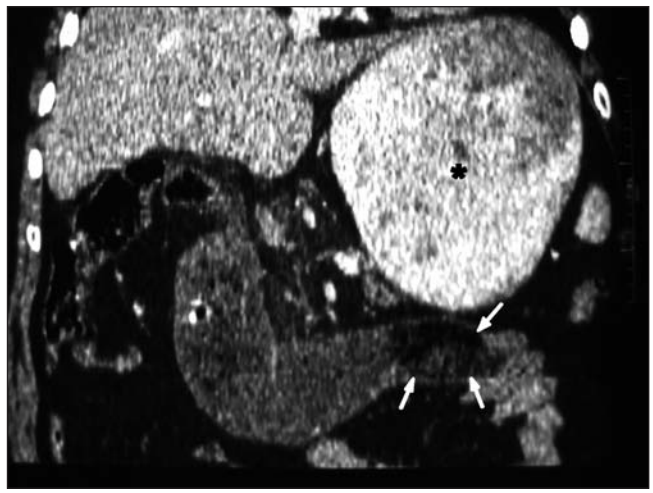

Fig. 3. MPR coronal reconstruction of CT scan with oral and intravenous contrast: Distension of the gastric remnant (*) and dilatation near the bezoar. This appears as a mass with well-defined contours in the intraluminal mass in jejunum, and has the appearance of "bubbles of mottled-air" or of "feces" (white arrows).

the stomach as a result of large amount of food. The stomach had only a small amount of air that formed at the air-fluid level, which resulted in the appearance of pneumoperitoneum in the PA chest radiograph.

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