Case 3056

Small intestine phytobezoar
Published on 21.11.2005

DOI: 10.1594/EURORAD/CASE.3056
ISSN: 1563-4086
Section: Abdominal imaging
Imaging Technique: Ultrasound
Imaging Technique: CT
Case Type: Clinical Cases
Authors: Kouleridou A, Pilavas P, Spanidou S, Kirimlidis I, Vougiouklis N
Patient: 72 years, female

Clinical History:

A woman presented at the emergency ward with abdominal pain, vomiting and constipation. On physical examination, the abdomen was found to be tender.

Imaging Findings:

The patient presented at the emergency ward with abdominal pain, vomiting and constipation. On physical examination, the abdomen was found to be tender. Her medical history showed that she had had a surgery for duodenal ulcer performed 25 years ago. All laboratory tests were normal, except for an elevated glucose serum level due to long standing diabetes. A series of exams was performed, including plain radiographs of the chest and the abdomen, an ultrasonography of the abdomen, a CT scan and a barium study of the small bowel. On the plain radiograph, multiple air fluid levels were found. An echo investigation revealed dilated small bowel loops proximal to an echogenic mass with shadowing. The liver, pancreas, kidneys, and spleen were all within normal limits. On computerized tomography, a soft tissue mass in the jejunum, mottled with gas, causing an obstruction, was found. A barium study of the small intestine was performed, which showed a dilatation of the proximal jejunal loops, and a small bowel obstruction due to an intraluminal filling defect, measuring approximately 6 cm x 7 cm, with barium filling the interstices.

Discussion:

A bezoar is a conglomeration of foreign matter found in the GI tract of humans and animals. Based upon their composition, bezoars are subdivided as follows: 1. Phytobezoars, consisting of indigestible vegetable fibers (i.e. cellulose), found in pulpy fruits such as persimmons and oranges. Edentulous patients, as well as patients with an impaired gastric motility due to a prior gastric surgery (vagotomy) or administration of drugs (H2 blockers) are more prone to the formation of phytobezoars. 2. Trichobezoars, mostly seen in female patients with a psychiatric background. 3. Pharmacobezoars or medication bezoars, which are composed of enteric coated aspirin tablets, various antacids, sucralfate, nifepidine, verapamil, etc. The risk factors in the formation of bezoars include the presence of diabetes mellitus, hypothyroidism, Crohn's disease, diverticulae and abdominal surgery. Bezoars may present with various symptoms, ranging from abdominal pain, nausea, and vomiting, and may be complicated by small bowel obstruction, ulceration and GIT bleeding. Plain abdominal X-rays show: (a) a mass projecting into the gastric air-bubble (gastric bezoars), (b) the pattern of air-fluid levels in the small bowel loops in the case of obstruction. Contrast medium (barium) studies show an intra-luminal filling defect with no attachment to the intestinal wall, with barium filling the interstices, giving a mottled appearance. CT findings include a mass containing gas at the site of the obstruction; some small bowel phytobezoars have an encapsulating wall. Computer tomography can also show underlying bowel disease if present. The treatment includes endoscopy and enzymatic dissolution,
whereas in small bowel bezoars, the treatment of choice is surgical removal.

**Differential Diagnosis List:** Phytobezoar.

**Final Diagnosis:** Phytobezoar.

**References:**


Description: An abdominal ultrasound scan showing a hyperechoic rim corresponding to a mass with distal shadowing, next to a dilated fluid filled small bowel loop. The picture did not change on doing consequent examinations. Origin:
Description: A CT revealing a soft tissue mass mottled with gas, next to the dilated, contrast-filled small bowel loop. Origin:
Description: The mass seems to be intraluminal, with the gastrointestinal contrast lining the right border of the mass. Origin:
Description: A barium study image of the small intestine showing a marked dilation of the small bowel loops, proximal to a filling defect measuring 6 cm x 7 cm approximately. Origin:
**Description:** A close up X-ray film under compression showing the contrast lining the mass and the mottled appearance of the mass consistent with barium filling the interspaces. **Origin:**