Acute pancreatitis: A herald of a hidden eating disorder

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Introduction

- 80% of acute pancreatitis cases in the US result from biliary stones or alcohol use.
- 15-25% of cases are idiopathic.
- One potential cause that is often overlooked is the presence of an underlying eating disorder.
- Pancreatitis has been reported as a sequela of anorexia and bulimia nervosa.1-3
- Recognizing pancreatitis in patients with bulimia may be difficult because of an overlap in presenting symptoms.

Symptoms of pancreatitis and bulimia

<table>
<thead>
<tr>
<th>Pancreatitis</th>
<th>Bulimia</th>
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<tr>
<td>Vomiting</td>
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<td>Electrolyte abnormalities</td>
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<td>Elevated amylase levels</td>
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<td>Mallory-Weiss tears</td>
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- Here we describe a case of acute pancreatitis which led to the diagnosis of bulimia nervosa in a young female.

Laboratory Values

- WBC: 16.71 x 10^3/μL
- Glucose: 154 mg/dL
- Amylase: 250 units/L
- Lipase: 914 units/L
- ALT: 9 units/L
- AST: 24 units/L

Case Presentation

History

- A thirty-two-year-old female presented to the ED with a chief complaint of:

  “I’ve been vomiting for two days and my stomach is killing me.”

- Pertinent positives:
  - Epigastric pain, sharp, radiating to the back, and increased with eating.
  - Emesis that recently contained scant blood.
  - A similar episode four years ago that resolved spontaneously.

- Pertinent negatives:
  - A history of heavy alcohol use or recent consumption.
  - A history suggestive of biliary tract disease.

- Other history includes:
  - A history suggestive of biliary tract disease.
  - A history suggestive of biliary tract disease.

Physical Examination

- VS: T: 98.4 P: 72 RR:16 BP: 145/88 SaO2 99%
  - Mildly overweight, distressed woman
  - Poor dentition
  - Enlarged submandibular salivary glands
  - Diffuse abdominal tenderness

- Ultrasound of the gallbladder revealed an absence of stones and a wall thickness of 2 mm (normal).
- CT scan of the abdomen revealed diffuse pancreatic thickening and edema.

Hospital Course

- The patient was admitted with a diagnosis of acute pancreatitis.
- In an effort to determine the origin of the pancreatitis, additional history was obtained:
  - “This was the first time she had revealed this behavior to a medical professional.”

- The patient was discharged on hospital day six on citalopram. Outpatient eating disorder treatment was arranged.

Discussion

- Bulimia nervosa has a lifetime prevalence of about 1% in the general population.12
- It has been associated with potentially fatal complications including electrolyte abnormalities, esophageal rupture, and pancreatitis.
- Though pancreatitis commonly appears on lists of the potential medical complications of bulimia, the exact relationship between these two conditions remains unknown.
- Several mechanisms detailing how eating disorders induce pancreatitis have been proposed, including:
  - Thickened secretions with ductal obstruction.
  - Dehydration and fasting result in thickened pancreatic secretions which clog the ducts.
  - Binge eating exacerbates the problem by increasing enzymatic production.13
- Anatomic obstruction:
  - Loss of body mass results in visceral scarring (downward displacement of abdominal organs), causing gastric dilation and ileus due to obstruction of the duodenum by the superior mesenteric artery. This obstruction results in backpressure in the duodenum and the pancreatic duct.14
- Cellular changes:
  - Acinar cell atrophy, islet cell hyperplasia, mucoid metaplasia, elevated trypsinogen, and increased zymogen granule release have been demonstrated in malnourished animals.1

References