Grand Rounds: A 42-Year-Old Man with Chest, Abdominal Discomfort

By Ari Thomas, Danielle Levine and Laurel Edington
Case Presentation

• 42-year old male
• Chief complaint – chest and abdominal discomfort for two days
History of Present Illness

- Pain increasing in intensity
- Nausea and early satiety
- No outside meals
- No recent abdominal trauma, rectal bleeding or black stools
• Substernal chest pressure consistent with usual angina
  • Not responsive to single sublingual nitroglycerin tablet
  • Only responsive to a group of administered medicines
Patient Medical History

• Has hypertension, hyperlipidemia, coronary artery disease, and angina
• Myocardial infarction at 32 years old
  – Coronary artery angioplasty with stent placement and subsequent bypass grafting
Patient Medical History Cont.

- Family history of colon cancer
  - Recent colonoscopy was unremarkable
- Chronic diarrhea for ten years
- Past six months experienced: daily headaches, nocturia, feeling warm at night but no fevers or night sweats, occasional early satiety and 35 lb. weight loss
- Takes cholesterol-lowering medication
<table>
<thead>
<tr>
<th>Current Medications</th>
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<tbody>
<tr>
<td>Ramipril</td>
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<tr>
<td>Aspirin</td>
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<tr>
<td>n-3 Fatty Acids</td>
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<tr>
<td>Folic Acid</td>
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<tr>
<td>Isosorbide Dinitrate</td>
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<td>Atorvastatin</td>
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<td>Multivitamins</td>
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<tr>
<td>Fenofibrate</td>
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<tr>
<td>Nicotinic Acid</td>
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<td>Amlopidine</td>
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<td>Extended-release Metoprolol Succinate</td>
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Social and Family History

- Married with 2 children
- Occupation: nurse
- Remote history of blood exposure to HIV and hepatitis B and C (work-related)
- No tobacco or recreational drug use
- Additional family history of prostate cancer and coronary artery disease (both father)
Differential Diagnosis

- Acute chest syndrome
- Acute abdominal syndrome
- Inflammatory disorder
- Cancer
Physical Exam

- Chest clear—ruled out acute chest syndrome
- Normal cardiac examination
- Abdomen soft, nondistended, no hepatosplenomegaly or masses
- Normal bowel sounds, normal rectal exam
- Upper right quadrant tender
  - Upper abdominal disorder
Acute Coronary Syndrome

- **Electrocardiogram**
  - Normal sinus rhythm
  - No ST-segment or T-wave abnormalities

- **Chest radiography**
  - No acute cardiopulmonary process
Inflammatory Disorders

- Lipase, aminotransferase, and amylase levels elevated
  - Pancreatitis
  - Liver disease, injury, cancer
  - Autoimmune, inflammatory disorder
CT Scan
Exploratory Laparotomy

- Reactive follicular and interfollicular hyperplasia
- Lipogranulomas
- Lipids from GI tract
  - Inflammatory abdominal disorder
- No evidence lymphoproliferative disorders
  - No cancer
Small-Bowel Biopsy
Celiac Disease Confirmation

- IgA tissue transglutaminase antibodies
- IgA endomysial antibodies
Physicians Overlooked Celiac Disease

- Surgery was non-diagnostic and invasive
- Simple blood test succeeded, more specific
- Important for physicians to consider celiac disease when patients present with symptoms suggestive of celiac disease
Treatment

- Gluten-free diet
- Intramuscular iron supplementation
- Multivitamin
Mechanisms of Disease

- Autoimmune disorder provoked by intaking gluten
- Affects small bowel
  - Abnormal immune response to gliadin in gluten protein
  - Type 1 helper T cells cause inflammation in epithelium and lamina propria of small intestine
  - Alters structure of intestinal villi
  - Malabsorption
Symptoms

● Intestinal Symptoms
  o Abdominal pain
  o Diarrhea
  o Elevation of aminotransferase levels
  o Increased risk of pancreatitis
● Extragastrointestinal Symptoms
  o Rashes
  o Arthralgias
  o Neurologic and psychiatric effects
  o Fatigue
  o Infertility
● Other associations with type 1 diabetes, thyroiditis, and hepatitis
Prevalence

- 1-2% of general population in North America, South America, Europe, North Africa, the Middle East, and India
- Increasing diagnosis due to improved testing methods and increased prevalence
- Celiac disease still under-diagnosed in the US
Gluten-Free Fad Diet

- Placebo component to unnecessarily removing gluten from diet
- Non-celiac gluten intolerance has not presented itself to be a real medical issue
- GFD can cause gastrointestinal problems in people without celiac disease
- Research on the subject is preliminary
Works Cited


