Margareth Pierre-Louis
Internal Medicine Rotation August 27-October 19, 2007

Chief Complaint: abdominal pain

History of Present Illness:

Ms. [redacted] is a 47 year old African American female with Crohn's Disease, DM, and HTN who presented to the ED after two days of severe abdominal pain, nausea, vomiting, and diarrhea. She stated that on Wednesday evening after being in her usual state of health she began to experience sharp lower abdominal pain that radiated throughout all four quadrants. The pain waxed and waned and was about a 4/10 and more intense than the chronic abdominal pain episodes she experiences periodically from her Crohn's disease. The pain was sudden and she did not take any medications to alleviate the discomfort. The abdominal pain was quickly followed by two episodes of partial diarrhea and soft stool that was tan in color with no signs of blood. Her abdominal pain continued and she developed nausea and then vomited six times that evening before going to sleep. Overnight her abdominal pain worsened and she stayed in bed for most of the day on Thursday. She had nausea again all day but had no other episodes of diarrhea or vomiting that day and did not eat anything for fear of vomiting. She was able to drink water and keep it down. By late Thursday night, her pain had intensified to a 10/10 and she called 911 and was brought to the ER by ambulance from her home in Burlington.

Ms. [redacted] also stated that she had just ended a three week course of prednisone four days ago, which she had started about a month ago at 60 mg and tapered herself down over a few days by 10 mg. She began the course of prednisone last month because she felt as if she was about to have a Crohn's flare at the time. Ms. [redacted] was last hospitalized at UNC for Crohn's disease exacerbation in March 2007. She denies any recent hemoptysis, constipation, hematochezia, melena, and changes in her bowel habits since Wednesday. She has been compliant with taking her medications for Crohn's and has been stable on her mesalamine, mercaptopurine, and omega -3-acid supplement.

Upon arrival to the ED, Ms. [redacted] was put on IV fluids, given fentanyl 50 mcg IVP, phenegran 12.5 mg diluted with 10 mL NS IVP, and Mg sulfate IVP. Radiological images were obtained through an abdominal CT scan, ultrasound, and 2V XR. Ms. [redacted] was not given any other narcotics for her pain because of a past violation of a pain contract after a positive toxicology screen for cocaine resulted in her discharge from her family medicine provider and due to suspicions that she was narcotic-seeking.

Past Medical History

Crohn's disease, diagnosed 1998
Adenocarcinoma of terminal ileum 1998 - s/p resection of terminal ileum, rad and chemo, no mets.
hx of small bowel obstruction secondary to Crohn’s Disease
DM
HTN
DVT and PE 2001
PUD
GERD
COPD
Posttraumatic stress disorder
Bipolar disorder
hx of multiple suicide attempts
osteoarthritis of knee joints
left knee arthroscopy, 1995
partial hysterectomy, 1990
nicotine dependence, 30 years

Medications

Cymbalta 60 mg po qday
Fluticasone furoate nasal spray 27.5 mcg prn
albuterol inhalation aerosol 17 g prn
omacor 900 mg QID
mesalamine(pentasa) 500 mg QID
Ambien CR 12.5 mg qhs prn
fluticasone/salmeterol (Advair diskus) 250/50 prn
Protononix 40 mg qday
palidperidone (invega) 3 mg qday
sitalgliptin/metformin (Junamet) 50/500 mg qday
gabapentin 400 mg TID
conjugated g-estrogens (premarin) .625 mg qday
lisinopril 5 mg qday
mecaptopurine 50 mg BID
nexium 40 mg qday
clonazepam 1.5 mg BID

Allergies

Penicillin, causes rash and anaphylaxis
morphine, causes itching
IV Contrast, causes tachycardia

Social History

Ms. [redacted] lives in [redacted] with her husband. She has 6 children who are in good health but do not live with her. Ms. [redacted] is on disability for her bipolar diagnosis and usually spends her days at home and caring for a sick older relative. She smokes half a ppd and has done so for the past 30 years. She states that she does not use any other drugs and that she does not consume alcohol. She has been involved in the distribution of crack cocaine for years in the past but stopped two years ago. While her husband is a crack user, she states that she has never been a user of any illicit drugs or narcotics. She is not physically active and her diet consists of small food portions but is generally unhealthy. She suffers from chronic abdominal pain secondary to her Crohn's, and also chronic right knee and lower back pain from a fall injury and osteoarthritis. She uses a cane when her knee and back pain become debilitating. She has a history of narcotic-seeking behavior and has left during past hospital visits when narcotic medications would not be prescribed for her pain. She no longer receives narcotics from UNC after breaking her pain contract with her family medicine provider but it is unclear if she receives pain medications from an outside hospital. She has been incarcerated in the past for arson and attempted murder.

Family History

Mother - bipolar and Schizophrenia, "drank herself to death"
Father - living with diabetes, s/p CABG.
2 sisters with HTN
Maternal grandfather, leukemia

Review of Systems

Constitutional: denies anorexia and weight loss

HEENT: denies decreased hearing blurring, diplopia, irritation, discharge, vision loss, eye pain, photophobia, ear pain or discharge, tinnitus, nasal obstruction or discharge, nosebleeds, sore throat, hoarseness, dysphagia

Cardiovascular: dyspnea on exertion; denies chest pains, palpitations, syncope, orthopnea, PND, edema

Respiratory: denies cough and wheezing

Gastrointestinal: denies jaundice

Genitourinary: denies incontinence, dysuria, hematuria, urinary frequency

Musculoskeletal: arthritis in left knee and pain in lower back pain from past injury; denies other

joint pain, joint swelling, muscle cramps, muscle weakness, stiffness,

Skin: denies rash, dryness, suspicious lesions

Neurologic: chronic weakness in her left knee; denies transient paralysis, paresthesias, seizures, syncope, tremors, vertigo

Psychiatric: denies depression, anxiety, memory loss, mental disturbance, suicidal ideation, hallucinations, paranoia

Endocrine: denies cold intolerance, heat intolerance, polydipsia, polyphagia, polyuria

Heme/lymphatic: denies bruising, bleeding, enlarged lymph nodes

Allergic/Immunologic: denies urticaria, hay fever, persistent infections, HIV exposure

Physical Examination

Vitals from ED admission
Temperature : 36.3
Pulse : 79
Respiratory Rate : 16
Blood Pressure : 116/82
Oxygen Saturation%: 97% on RA
Pain Score : 10/10

General
Obese, sleepy but oriented woman lying in bed

Eyes
Conjunctivae and lids normal, pupils equal, round, reactive to light and, accommodation, discs sharp and flat, no a/v nicking, hemorrhages, or exudates, normal visual acuity, EOM intact.

ENNT
External ears normal, no lesions or deformities; external nose normal, no lesions or deformities; canals clear bilaterally, tympanic membranes intact with good movement, no fluid; hearing grossly intact bilaterally; nasal mucosa, septum, and turbinates normal; poor dentition and missing a few teeth on both sides of top and bottom but does not wear dentures, tongue normal, posterior pharynx without erythema or exudates. Neck is supple, no masses, trachea midline; no thyroid nodules, masses, tenderness, or enlargement

Respiratory

Clear to auscultation bilaterally, normal tactile fremitus, no egophony, normal respiratory effort with no use of accessory muscles.

Cardiovascular
S1, S2, normal rhythm, no murmur, rub, or gallop; no thrill or palpable murmurs on palpation, no JVD, no displacement of PMI; no carotid or abdominal bruits; no enlargement of abdominal aorta. Carotid, radial, posterior tibialis, and pedal pulses 2+ symmetric, no edema

Gastrointestinal
suprapubic surgical scar, obese, soft, non-tender, and non-distended abdomen with no masses; bowel sounds hyperactive, liver size appears within normal limits but not measured in midclavicular and midsternal line because of RUQ pain and tenderness to palpation; no liver nodularity or masses, no splenomegaly

Rectal Exam
No rashes, lesions or sores, guaiac positive stool

Lymph Nodes
No cervical, clavicular, or posterior auricular lymphadenopathy

Skin
no rash, lesions, ulcerations, subcutaneous nodules or induration

Musculoskeletal
normal alignment, mobility and no deformity of head and neck, spine, ribs, pelvis; normal ROM and 5/5 strength in all extremities except compared to 4/5 strength in LLE, no joint enlargement or tenderness; no clubbing, cyanosis, petechiae, or nodes of digits and nails; gait and station deferred because patient supine

Neurologic
Cranial nerves: II - XII grossly intact; 2+, symmetric, reflexes; intact to touch, pin, vibration, and position in lower extremities; normal finger-to-nose, Rhomberg and Pronator drift deferred because patient was supine and would not stand

Mental Status Exam
Judgment and insight intact; oriented to time, place, and person; intact memory for recent and remote events; no depression, anxiety, or agitation

Pertinent Diagnostic Tests

Notes:
LABS
Chem 10: Na 137, K 3, Cl 104, C02 27, BUN 9, Cr 0.7, gluc 91, Ca 9.8, Mg 1.4, PO4 2.3

CBC: WBC 4.3, Hb 10.7, Hct 32.9, plts 312
Total Bili 0.2, AST 14, ALT 23, Alk Phos 88, GGT 53, Lipase 12

U/A - not completed

Abdominal Acute 2V XR
1. No focal airspace consolidation or effusion.
2. Multiple dilated small bowel loops with scattered air-fluid levels and posse of distal gas, concerning for small bowel obstruction. There is also suggestion of colonic wall thickening likely representing active colitis in a patient with Crohn's disease.

Abdominal CT
1. Findings consistent with active Crohn's disease in the terminal ileum with mucosal thickening. No bowel obstruction, abscess or fistula identified.

Abdominal U/S
1. Limited abdominal ultrasound showing mild sludge in the gallbladder, without evidence for cholelithiasis or acute cholecystitis.
2. Mild prominence of the common bile duct. Stable since 7/27/07.

Problem List

Crohn's disease flare (abdominal pain, nausea, vomiting, diarrhea)
Adenocarcinoma of terminal ileum, s/p resection 1998
hx of small bowel obstruction secondary to Crohn’s Disease
DM
HTN
hx of DVT and PE, 2001
PUD
GERD
COPD
Posttraumatic stress disorder
Bipolar disorder
hx of multiple suicide attempts
insomnia
chronic abdominal, back, and left knee pain
osteoarthritis of knee joints
use of cane for walking
nicotine dependence and abuse
hx of narcotic seeking behavior
poor dentition without denture use
exposure to crack cocaine and possible abuse or hx of abuse
responsibility for care of dying relative
obesity

Assessment and Recommendation

Ms. [redacted] is a 47 year old African American woman with Crohn's disease, HTN, and DM who presented to the ER after two days of acute abdominal pain, nausea, vomiting, and diarrhea most likely due to Crohn's disease exacerbation.

#1 Crohn's exacerbation (abdominal pain with nausea, vomiting, and diarrhea)

Ms. [redacted] presented with acute diffuse abdominal pain that was followed by nausea, vomiting, and diarrhea. The pain was much more intense than the chronic pain she usually experiences with her Crohn's disease. The differential diagnosis for her cluster of symptoms includes inflammatory bowel disease, specifically a Crohn's disease exacerbation, intestinal obstruction, and mesenteric insufficiency or infarction. Ms. [redacted]'s abdominal pain is most likely from a Crohn's disease flare because of her presenting symptoms, radiological imaging findings, and history of these exacerbations that have resolved with the use of prednisone. Crohn's disease is an inflammatory bowel disease condition of unknown etiology that can affect any part of the GI tract. Its primary characteristic is transmural inflammation that can affect the GI tract from mouth to anus and can result in severe abdominal pain, bleeding, ileitis, colitis, bowel perforation and fistula formation, and perianal abscesses. 80% of patients have small bowel involvement, including the distal ileum with possible sparing of the rectum. Patients with Crohn's disease can be asymptomatic at times but when the disease is exacerbated, patients can present with weight loss, fever, nausea, abdominal pain, diarrhea, and anal bleeding. Crohn's disease is diagnosed by colonoscopy and intestinal biopsy. Pathologically, Crohn's disease is noted for its cobblestone appearance from polypoidy mucosal changes and focal areas of ulceration next to normal mucosa. Crohn's differs from another inflammatory bowel disease ulcerative colitis (UC) in that UC has a continuous area of inflammation to the level of the submucosa that begins at the rectum and works up backwards up the GI tract, rarely forms fistulas or perforations, and has a higher association with colon cancer. There are also extraintestinal manifestations of Crohn's disease, including eye involvement (uveitis, iritis, and episcleritis), skin disorders (erythema nodosum and pyoderma gangrenosum), arthritis of large joints or sacroilitis, primary sclerosing cholangitis, secondary amyloidosis, and venous or arterial thromboembolism. Ms. [redacted]'s medical history indicates that she has debilitating knee arthritis and back pain and developed a DVT in 2001 that resulted in a PE. These other disease manifestations may be associated to her Crohn's disease. As in Ms. [redacted]'s case, abdominal imaging can detect active Crohn's disease and its inflammatory process. Crohn's disease can be treated with numerous medications that play primarily a role in immunosuppression. These medications in order of importance include 5-ASA drugs (sulfasalazine and mesalamine), steroids (prednisone or budesonide), immunosuppressive agents (azathioprine, 6-mercaptopurine, methotrexate), immune modulators (infliximab, adalimumab) omega 3- acid supplements, and antibiotics when warranted. A combination of these medications can be used to control the disease and prevent Crohn's exacerbation but corticosteroids have been found to give the most immediate relief from inflammation.

For her Crohn's flare, Ms. [redacted] will start prednisone 60 mg and take the medication for two

weeks and then slowly taper herself every two weeks decreasing the dosage by 10 mg. The vomiting and diarrhea had resolved by admission and her nausea will be treated with phenegran if it persists. An erythrocyte sedimentation rate will also be obtained to see if there is an increase in inflammation and possible infection process. Ms. [redacted] will also continue taking her other medications for Crohn's: mercaptopurine, mesalamine, and omega 3-acid supplement.

A small bowel obstruction is also on the differential and occurs when the passage of normal GI contents is blocked. This usually occurs as a result of post-operative complications or hernias but can be due to masses, strictures, gastroparesis, or simply constipation. This ileus would present with abdominal pain and bloating, nausea, vomiting, and constipation, a reduced appetite due to a feeling of fullness, and abdominal distention. However, Ms. [redacted] was able to pass stool with the onset of her symptoms and was not constipated or abnormally distended, which would be expected in an intestinal obstruction. It is also unlikely that a small bowel obstruction would present with guaiac positive stool. Furthermore, while the abdominal XR did show dilated small bowel loops that are seen in a small bowel obstruction, the CT image better identified this as thickening of the terminal mucosal ileum, which is more suggestive of Crohn's disease than a small bowel obstruction. Also, the acute nausea and vomiting resolved spontaneously by the time of admission. A small bowel obstruction can be a medical emergency and should be diagnosed quickly to prevent complications, such as ischemia and strangulation of intestines. Medical management for small bowel includes mobilizing the patient, discontinuing medications that may have reduced gut motility, enemas, decompression with NGT, rectal tubes, or colonoscopy, or operative procedure if the condition merits it.

Acute mesenteric ischemia of the small intestine is on the differential for Ms. [redacted]'s abdominal pain. Mesenteric ischemia occurs when there is a reduction in arterial or venous intestinal blood flow due to an occlusion, vasospasm, and/or hypoperfusion of the mesenteric vasculature. Mesenteric ischemia can result in bowel infarction, sepsis, and is a medical emergency. The four major causes of acute mesenteric ischemia are superior mesenteric artery embolism or thrombosis, mesenteric venous thrombosis, and nonocclusive ischemia. Most mesenteric ischemia is of arterial origin. The patient usually presents with rapid onset of severe periumbilical abdominal pain that is out of proportion to physical exam findings in addition to nausea and vomiting. Sudden pain associated with minimal abdominal signs and forceful bowel evacuation increase the likelihood of mesenteric ischemia. Also, a state of metabolic acidosis and acute abdominal pain also suggest mesenteric ischemia. Ms. [redacted]'s risk factors for mesenteric ischemia include hypercoagulability, specifically her DVT resulting in PE in 2001. Also, Ms. [redacted] has a history of small bowel obstruction, which can predispose an individual to hypoperfusion leading to ischemia. Mesenteric angiography is used to detect mesenteric ischemia and Doppler ultrasound can help visualize occlusions and stenoses of vessels. A CT scan can be helpful in detecting a mesenteric thrombosis. Labs to consider are lactic acid levels and CBC for leukocytosis and elevated hematocrit, even though these studies are nonspecific. While she experienced nausea and vomiting with her abdominal pain, Ms. [redacted]'s abdominal pain is unlikely to be from acute mesenteric ischemia because of the duration of her abdominal pain, normal vital signs and physical exam that was not out of proportion in regards to her appearance.

#2 DM

Ms. [redacted] is a diabetic and her glucose on admission was 91. Her glucose will be strictly monitored during her stay and her AIC will be checked. She has been on a combination of Sitalgliptin and metformin to treat her insulin resistance diabetes. Sitalgliptin is a DPP-4 inhibitor that improves glycemic control by increasing the amount of glucagon-like peptide -1 and gastric inhibitory polypeptide secretion, leading to increased secretion of insulin and inhibition of glucagon secretion. Metformin is a biguanide that reduces hepatic glucose production, therefore also lowering glucotoxicity. We do not have this combination medication and will start Ms. [redacted] on sliding scale insulin to control her glucose levels.

#3 HTN

Ms. [redacted] has hypertension that appears to be well controlled on lisinopril. Her hypertension, DM, and physical inactivity are major cardiovascular risk factors and it is important to keep her blood pressure well-controlled under 130/80 to prevent end-organ damage and future cardiovascular and cerebrovascular events. We will continue her lisinopril as prescribed.

#4 Nicotine dependence

Ms. [redacted] has smoked at least half a pack of cigarettes for the past 30 years. Smoking toxins can exacerbate Crohn's and cause more active episodes of inflammation. She will be counseled on the importance of smoking cessation and the effects it has on her cardiovascular and pulmonary health, risk of cancer development, and current Crohn's disease condition.

#5 chronic left knee and back pain

Ms. [redacted] suffers from chronic pain from past injury to her back and arthritis in her knee. Inflammatory bowel disease has also been found to be associated with arthritis and this may be playing a role in Ms. [redacted]'s arthritis in her joint and back causing inflammation and pain damaging supportive connective tissue. She has had this chronic condition for years and we will give her tramadol for pain if her discomfort increases or persists.

#6 FEN

Ms. [redacted] is diabetic and we will start her on diet that is restricted in sugars and fats while providing her with a daily balance of proteins, carbohydrates, and fats that will give her the essential nutrients she needs. We will monitor her electrolytes and hydrate with fluids if needed.

#7 Bipolar Disorder

Ms. [redacted] appears stable and does not exhibit symptoms of mania or depression. She has not

recently had racing thoughts, flight of ideas, increased energy and less need for sleep, feelings of grandiosity and episodes of increased happiness and excitability or participation in unusual risk-taking behavior. Also she has not been depressed and has not had thoughts of suicide as she has had in the past. She appears stable and we will continue her psychiatric medication paliperidone. Paliperidone is an antipsychotic that is FDA approved for the treatment of schizophrenia but has been effective in stabilizing Ms. [redacted] reducing her episodes of mania and severe depression.

#8 Prophylaxis

Ms [redacted] is an obese woman who had a DVT and PE in 2001. Since she tends to remain in bed most of the time at home and in the hospital, SC heparin will be started as DVT prophylaxis. Heparin is an anticoagulant that will reduce the formation of venous thromboembolism in extremities to prevent a PE. Her aPTT will be monitored during her hospital stay to make sure that we are not increasing her risk of bleeding by prolonging bleeding time as would be indicated by an elevated aPTT, reflective of the intrinsic coagulation pathway. Ms. [redacted] also has a history of Peptic ulcer disease and we will give Nexium, a proton pump inhibitor, as prophylaxis for gastric and duodenal ulcer formation and bleed.

#9 Disposition

Ms. [redacted] is full code. We will continue all her home medications as prescribed while she is in the hospital.

Sources

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