

**Medplex Clinic Small Talk**  
Chronic Diarrhea  
April 2004

1. Define chronic diarrhea.
2. A 22-year-old woman present to your office with a complaint of several years of bloating, 3 or more loose or watery bowel movements per day and cramping abdominal pain. Defecation relieves the bloating and pain. Fasting relieves the symptoms altogether. She has experienced no weight loss, fevers or hematochezia. Physical exam is completely unremarkable. A CBC and CMP are all normal.
  - a. What initial studies would you order?
  - b. Stool studies reveal an osmotic gap of 150 mOsm/kg. What is your differential diagnosis?
  - c. What is the next step to confirm a diagnosis?
3. A 57-year-old man presents with a 3-month history of malaise and voluminous diarrhea. He has had loose bowel movements for 3 years but symptoms have recently become more severe. He passes > 10 watery brown stools per day. The volume and frequency is unaffected by fasting. His exam is only remarkable for signs of dehydration. A CBC and CMP are normal.
  - a. What initial studies would you order?
  - b. Stool studies reveal an osmotic gap of 40 mOsm/kg. What is your differential diagnosis?
  - c. Upon placement of a nasogastric tube that was hooked to low intermittent suction, the patient's stool output dramatically decreased. What is the most likely diagnosis?
4. A 74-year-old man presents with an 8-month history of crampy lower abdominal pain and 3-5 loose, bloody stools per day. He reports no weight loss or fever and his ROS is unrevealing. He has a history of HTN and CAD with a 4-vessel CABG 10 years ago. His only meds are ASA, furosemide and atenolol, both of which he has been on for several years. His exam is unremarkable except for soft heme-positive brown stool in the rectal vault.
  - a. What is the differential diagnosis?
  - b. What further testing should be performed?
5. A 42-year-old man presents with complaints of foul-smelling, oily, tan-colored stools daily for the past 18 months. He has lost about 20 pound since the onset of symptoms. He has occasional abdominal pain unrelated to passing stool but otherwise has no constitutional symptoms. He is a recovering alcoholic and has had no EtOH for 3 years. On exam, he is thin with temporal muscle wasting. Otherwise, exam is unremarkable. The only abnormality seen on his CBC and CMP is an albumin of 3.2 g/dL.
  - a. What is your differential diagnosis?
  - b. A random stool specimen is sent for fecal fat measurement and it is found to be elevated. Given his history of alcoholism, an abdominal CT is performed which shows an atrophic pancreas with numerous calcifications. What therapy would most likely improve the patient's symptoms?

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- 1) Define chronic diarrhea.  
**AGA defines as production of loose stools with or without increased stool frequency for more than 4 weeks.**
  
- 2) A 22-year-old woman present to your office with a complaint of several years of bloating, 3 or more loose or watery bowel movements per day and cramping abdominal pain. Defecation relieves the bloating and pain. Fasting relieves the symptoms altogether. She has experienced no weight loss, fevers or hematochezia. Physical exam is completely unremarkable. A CBC and CMP are all normal.
  - a) What initial studies would you order?  
**Stool sodium and potassium (stool osmotic gap =  $290 - 2\{Na\} + [K]$ ); osmotic diarrheas have gaps  $> 125$  mOsm/kg, secretory diarrheas have gaps  $< 50$  mOsm/kg), stool pH ( $< 5.6$  is consistent with carbohydrate malabsorption), stool fat concentration, laxative screen**
  - b) Stool studies reveal an osmotic gap of 150 mOsm/kg. What is your differential diagnosis?  
**Carbohydrate malabsorption (lactose or sorbitol), magnesium-containing antacids, laxative abuse**
  - c) What is the next step to confirm a diagnosis?  
**Lactose breath hydrogen test, stool magnesium levels, laxative screen**
  
- 3) A 57-year-old man presents with a 3-month history of malaise and voluminous diarrhea. He has had loose bowel movements for 3 years but symptoms have recently become more severe. He passes  $> 10$  watery brown stools per day. The volume and frequency is unaffected by fasting. His exam is only remarkable for signs of dehydration. A CBC and CMP are normal.
  - a) What initial studies would you order?  
**Stool sodium and potassium, stool pH, stool fat concentration, laxative screen**
  - b) Stool studies reveal an osmotic gap of 40 mOsm/kg. What is your differential diagnosis?  
**Bacterial infection (Aeromonas and Pleisiomonas), nonbacterial infections (Cryptosporidium, Microsporidium, Giardia), small bowel bacterial overgrowth, structural bowel disease, hypersecretion of various peptides (gastrin, calcitonin, VIP, somatostatin, 5-hydroxyindole acetic acid, metanephrine, histamine), hyperthyroidism, adrenal insufficiency**
  - c) Upon placement of a nasogastric tube that was hooked to low intermittent suction, the patient's stool output dramatically decreased. What is the most likely diagnosis?  
**Hypersecretion of gastrin likely secondary to a gastrinoma (Zollinger-Ellison Syndrome)**

4) A 74-year-old man presents with an 8-month history of crampy lower abdominal pain and 3-5 loose, bloody stools per day. He reports no weight loss or fever and his ROS is unrevealing. He has a history of HTN and CAD with a 4-vessel CABG 10 years ago. His only meds are ASA, furosemide and atenolol, both of which he has been on for several years. His exam is unremarkable except for soft heme-positive brown stool in the rectal vault.

a) What is the differential diagnosis?

**Ischemic colitis, infectious colitis (Salmonella, Shigella, Campylobacter, Yersinia, E. coli O157:H7), inflammatory bowel disease, diverticulitis, radiation enteritis, rectal ulcer, colon carcinoma**

b) What further testing should be performed?

**CBC, BMP, stool cultures, stool ova and parasite examination; if these unrevealing, small bowel series with barium +/- barium enema and/or flexible sigmoidoscopy or colonoscopy with biopsies of colonic mucosa**

5) A 42-year-old man presents with complaints of foul-smelling, oily, tan-colored stools daily for the past 18 months. He has lost about 20 pound since the onset of symptoms. He has occasional abdominal pain unrelated to passing stool but otherwise has no constitutional symptoms. He is a recovering alcoholic and has had no EtOH for 3 years. On exam, he is thin with temporal muscle wasting. Otherwise, exam is unremarkable. The only abnormality seen on his CBC and CMP is an albumin of 3.2 g/dL.

a) What is your differential diagnosis?

**Pancreatic insufficiency, bile salt deficiency, mucosal small bowel disease (abetalipoproteinemia, radiation enteropathy, amyloidosis, bacterial overgrowth, celiac sprue, common variable immunodeficiency, Crohn's disease, eosinophilic enteritis, lymphangiectasia, lymphoma, parasites, systemic mastocytosis, tropical sprue, Whipple's disease), Z-E syndrome, Carcinoid syndrome, DM, hypoparathyroidism, hyperthyroidism, adrenal insufficiency**

b) A random stool specimen is sent for fecal fat measurement and it is found to be elevated. Given his history of alcoholism, an abdominal CT is performed which shows an atrophic pancreas with numerous calcifications. What therapy would most likely improve the patient's symptoms.

**Oral replacement of pancreatic enzymes**

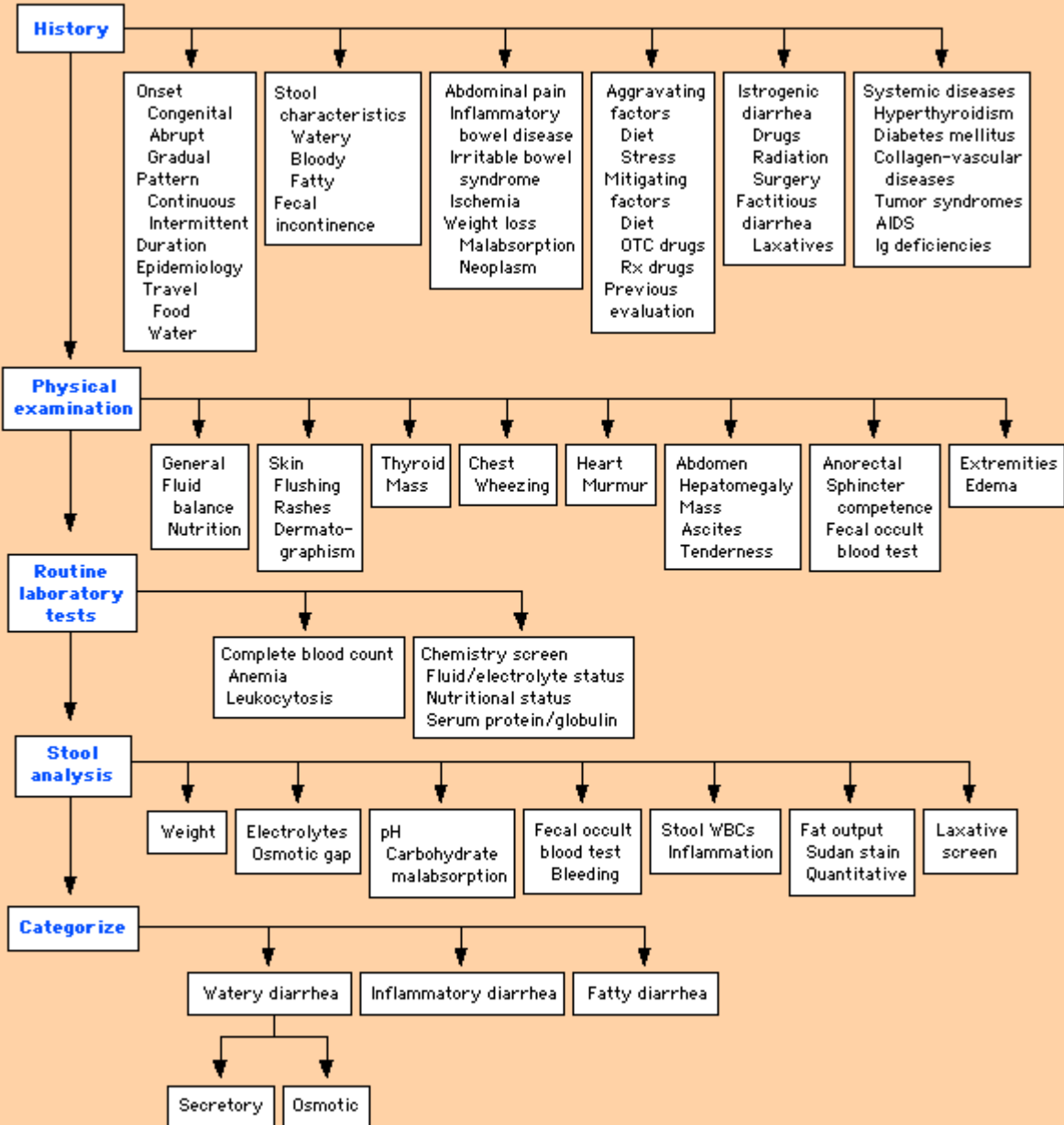
## **References**

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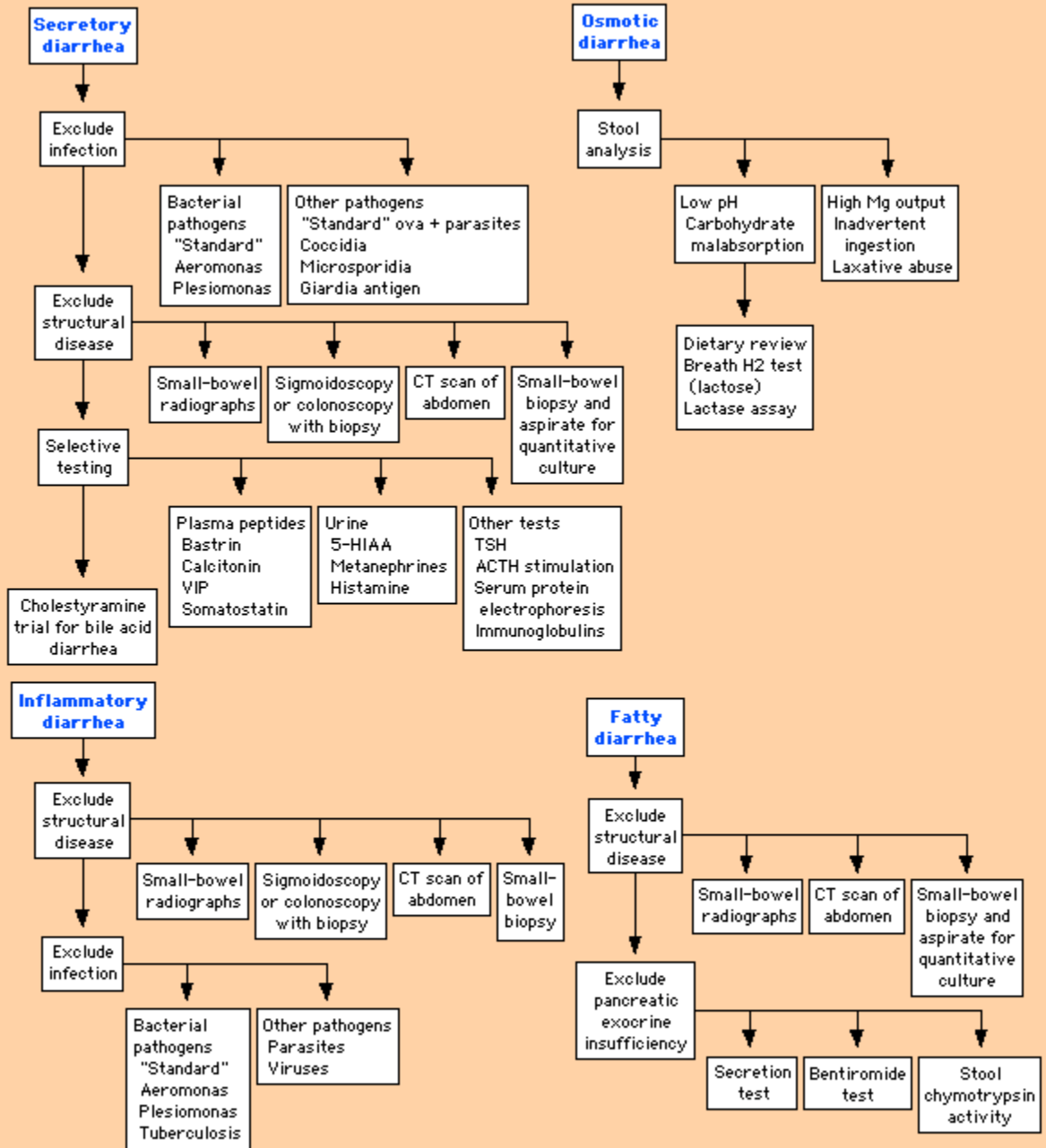
Up To Date. Approach to the patient with chronic diarrhea. 2004.

## Diagnostic Approach to Chronic Diarrhea – Part I\*



\*Reprinted with permission from: Fine, KD, Schiller, LR, AGA technical review on the evaluation and management of chronic diarrhea, Gastroenterology 1999; 116:1464.

## Diagnostic Approach to Chronic Diarrhea – Part II\*



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