Brigham and Women's Hospital
Founding Member, Mass General Brigham

GI BOARD REVIEW

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1. A 67-year-old man with Parkinson's disease reports recent difficulty swallowing. Ingesting liquids makes him cough and feel like he is about to choke, whereas solids are much better tolerated. He has not experienced heartburn or regurgitation. What would you order to evaluate his symptoms?

A. Esophagogastroduodenoscopy (EGD)

B. Esophageal manometry test

C. Video swallow study

D. Barium esophagram

2. A 61-year-old man is evaluated for recent onset of heartburn symptoms resulting in intermittent disruption of sleep. He has tried over-the-counter antacids as needed with partial relief of symptoms. He reports no dysphagia or odynophagia. He has gained 20 pounds over the past year and his current BMI is 34.

What would you recommend next for the evaluation of this patient?

A. Barium esophagram

B. Esophagogastroduodenoscopy (EGD)

C. Esophageal pH test

D. Esophageal motility test

3. A 30-year-old man with primary sclerosing cholangitis undergoes a colonoscopy to evaluate loose bloody stools and is confirmed to have mild ulcerative pancolitis. Treatment with oral mesalamine is initiated. At an office follow-up eight weeks later, he is asymptomatic and a fecal calprotectin test is within normal limits. There is no family colorectal cancer or polyps. His medical history is otherwise unremarkable.

When should he have his next colonoscopy exam?

A. 15 years

B. 8 years

C. 5 years

D. 1 year

4. A 64-year-old woman with coronary artery disease and prior PTCA with drug eluting stent placement five months ago presents to the emergency department for evaluation of melena and epigastric pain. She takes aspirin 81mg/day and clopidogrel 75mg/day. Intravenous proton pump inhibitor therapy is initiated and the aspirin and clopidogrel are held. After evaluation and resuscitation an urgent upper esophagogastroduodenoscopy (EGD) is performed which reveals a duodenal ulcer with a visible vessel and mild oozing of blood. The bleeding ceases after endoscopic submucosal epinephrine injection and hemostatic clip placement.

How should her dual antiplatelet therapy be managed now?

A. Resume aspirin and clopidogrel now

B. Resume aspirin and clopidogrel in 72 hours

C. Resume clopidogrel now, but hold aspirin for 72 hours

D. Resume aspirin now, but hold clopidogrel for 72 hours

5. A 41-year-old woman with well controlled type II diabetes mellitus is noted to have hepatic steatosis and normal liver contour on ultrasound imaging obtained to evaluate vague upper abdominal discomfort. She is concerned about metabolic dysfunction-associated steatotic liver disease (MASLD) and potential complications after learning that her older brother was diagnosed with advanced liver disease associated with metabolic dysfunction associated steatohepatitis (MASH). She has a BMI of 24, consumes no more than 2-3 alcoholic beverages per week and exercises regularly. Laboratory tests including fasting blood glucose, lipid profile and liver biochemical tests are normal. Her hemoglobin A1C (HBAIC) is 5.8.

Which of the following poses the greatest risk for MAFLD/MASH-related advanced hepatic fibrosis for this patient ?

A. Age >40

B. Type II diabetes mellitus

C. Family history of MASLD/MASH

D. Female gender

6. A 23-year-old man is seen in Urgent Care for acute onset of nausea, vomiting and diarrhea. He reports no sick contacts and has not experienced abdominal pain. Symptoms began several hours after eating food from a street vendor. He felt much better after receiving intravenous fluids and an antiemetic. Labs were notable for an elevated total bilirubin level of 1.7mg/dL. The direct bilirubin level was 0.3mg/dL, and other liver biochemical tests, albumin, haptoglobin, LDH, INR, platelet count, and hematocrit were within normal limits. He rarely consumes alcohol and does not take supplements.

What is the likely cause of his elevated total bilirubin level?

A. Advanced chronic liver disease
B. Gilbert's syndrome
C. Hemolysis
D. Choledocholithiasis

7. A 34-year-old man with a long history of alcoholism is brought to the emergency department by a concerned family member who noticed that he is jaundiced. He reports decreased appetite for several days prior and mild upper abdominal discomfort. He doesn't take any prescribed or supplemental medication. After extensive evaluation including lab tests and liver imaging, a diagnosis of alcoholic hepatitis is suspected.

Which of the following statements regarding acute alcoholic hepatitis is true?

A. Corticosteroids improve long term survival in patients with severe alcoholic hepatitis

B. Alcohol rehabilitation following hospitalization decreases long term mortality

C. Alcoholic hepatitis is associated with a low in-hospital mortality

D. Alcoholic hepatitis is associated with a low risk of alcohol relapse

8. A 67-year-old homeless man is brought to the emergency department for evaluation of confusion. He was found wandering around on a hot summer night and was disoriented. He is not able to provide a reliable history and is cachectic appearing. No focal neurologic findings are noted on exam; a head CT and lumbar puncture are unrevealing and serum and urine toxic screens are negative. His skin exam is notable for hyperpigmentation and scaling eruptions on a red base on sun exposed surfaces of his arms. He has frequent watery diarrhea during the hospitalization and stool testing does not reveal an infectious cause. Labs are notable for low albumin, mild elevation of the white blood count but are otherwise normal. A nutrient deficiency is suspected.

What is his most likely diagnosis?

A. Scurvy

B. Beriberi

C. Pellagra

D. Rickets

9. A 35-year-old woman is evaluated for fatigue. She has not experienced menorrhagia, insomnia or excessive daytime somnolence or menorrhagia and her body mass index (BMI) is normal. She does not consume alcohol. A depression screening questionnaire is negative. Her physical exam is normal. Lab test results are as follows:

- TSH: 1.50 mU/L (normal: 0.4-4.0 mU/L)
- Hct 42% (normal: 36-46%)
- ALT, AST, ALK, total bilirubin- all normal
- Serum iron: 180 μg/dL (normal: 60-170μg/dL)
- Total iron binding capacity: 230 μg/dL (normal: 240-450 μg/dL)
- Serum ferritin: 195 ng/mL (normal: 25-240 ng/mL)
- Transferrin saturation: 78%

What test would you order next to establish her diagnosis?

A. Percutaneous liver biopsy

B. Sleep study

C. Glycosylated hemoglobin (HbA1c)

D. HFE gene test

E. Echocardiogram

10. A 42-year-old man who underwent a Roux-Y gastric bypass 4 years ago for morbid obesity is referred for evaluation of symptoms of excessive intestinal gas, bloating and loose stools. The symptoms have been ongoing for several months. He doesn't consume dairy products, carbonated beverages or artificial sweeteners. He hasn't taken any antibiotics recently and is not taking any new medications. He has no history of pancreatic disease, and his weight has been stable. Labs for celiac disease as well as CBC with differential, albumin, TSH, CRP, fecal calprotectin and stool tests for C. difficile, bacterial pathogens and parasites are all normal.

What would you recommend next to establish his diagnosis?

A. Colonoscopy with biopsies
B. Magnetic resonance enterography (MRE)
C. Fecal elastase test
D. Breath test for to evaluate for small intestinal bacterial overgrowth
E. Gastric emptying test

11. A 24-year-old woman whose medical history is only notable for moderate to severe acne, presents for evaluation of worsening and persistent moderate to severe retrosternal pain for the past two days. She has had no similar symptoms in the past and does not use illicit drugs. She has no personal or family history of cardiovascular disease.

What is her likely diagnosis?

A. Dissecting aortic aneurysm

B. Esophageal spasms

C. Pill esophagitis

D. Reflux esophagitis

12. A 62-year-old man with recently diagnosed compensated cirrhosis due to metabolic dysfunction-associated steatohepatitis (MASH) is advised to discontinue statin therapy by his primary care provider due to concerns about possible hepatoxicity. He is obese, has hypertension and dyslipidemia, but does not have diabetes mellitus or coronary heart disease.

Which of the following is believed to be true concerning the effects of statin therapy in patient with chronic liver disease?

A. Statins may decrease overall survival

B. Statins may increase the risk of hepatic decompensation

C. Statins may decrease the risk of developing hepatocellular carcinoma

D. Statins may retard the progression and/or development of cirrhosis

13. A 24-year-old African woman with chronic hepatitis B is concerned about her long-term risk of developing hepatocellular cancer. She does not smoke or consume alcohol. Her mother and several siblings have chronic hepatitis B. There is no family history of hepatocellular cancer. An abdominal ultrasound reveals normal liver contour and no suspicious lesions, and the AFP level is normal. A fibroscan suggests no fibrosis.

Which of the following is most strongly associated with an increased risk of hepatocellular cancer in patients with chronic hepatitis B?

A. Tobacco use

B. Family history of hepatocellular cancer

C. Female gender

D. Elevated viral load with normal ALT

14. A 38-year-old woman is seen in your office for a comprehensive physical examination. She has been hearing about early onset colon cancer from some friends in the medical field. She has no family history of colon cancer and no lower gastrointestinal symptoms.

Which of the following statements regarding early onset colorectal cancer is true?

A. Most cases are associated with hereditary causes
B. Cancer tends to be in the distal colon and rectum
C. A sedentary lifestyle is not a likely risk factor
D. It is largely explained by increased colorectal cancer screening

15. A 50-year-old man whose mother died from pancreatic cancer at age 63 requests to be screened for pancreatic cancer with MRI imaging. He is concerned about the impact of family history on his risk of developing pancreatic cancer. He does not smoke or consume alcohol. There is no other history of malignancies in his family.

Which of the following inherited cancer syndromes is associated with the highest lifetime risk of developing pancreatic cancer?

A. Lynch syndrome

B. Li-Fraumeni syndrome

C. Familial atypical multiple mole/melanoma (FAMMM) syndrome

D. Peutz-Jeghers syndrome

16. A 28-year-old man is found to have occult blood in the stool on routine digital rectal exam during a physical exam. He has no upper or lower gastrointestinal symptoms and does not take aspirin or NSAIDs. An abdominal CT scan obtained several years ago when he was diagnosed with appendicitis was also notable for a large hiatal hernia and colonic diverticulosis. There is no family history of gastrointestinal malignancy, and his hematocrit is normal.

Which of the following could potentially cause occult gastrointestinal blood loss?

A. Meckel's diverticulum

B. Barrett's esophagus

C. Colonic diverticula

D. Cameron lesions

17. A 42-year-old woman with hypertension, type II diabetes mellitus, dyslipidemia and obesity is noted to have multiple small gallstones and hepatic steatosis on ultrasound imaging performed to evaluate mild transaminase elevation. She reports no history of episodic, severe upper abdominal pain. She is very anxious about the possibility of developing symptoms or complications from the gallstones especially since she has diabetes mellitus. Laboratory tests to rule out other causes of transaminase elevation are normal.

What would you recommend for management of gallstones in this patient?

A. Elective cholecystectomy

B. Ursodeoxycholic acid

C. Lithotripsy

D. No intervention

18. A 29-year-old woman is incidentally noted to have a 4mm polyp in her gallbladder while undergoing ultrasound imaging to confirm a hepatic cyst previously noted several years ago when she was living in another state. A small, benign appearing hepatic cyst is confirmed. No gallstones are seen, and she has not experienced symptoms suggestive of biliary colic. Her medical history is otherwise unremarkable.

What would you recommend for management of the gallbladder polyp?

A. Refer for elective cholecystectomy

B. Repeat ultrasound in 6 months

C. Repeat ultrasound in 1 year

D. No need for repeat imaging

19. A 23-year-old returning from travel outside of the United States is seen in urgent care with complaints of unilateral knee pain and swelling. She reports no trauma and is not sexually active. She had a self-limited diarrheal illness during her trip. She is well appearing, and lab tests including a urinary test for gonorrhea and chlamydia are unremarkable.

Which one of the statements regarding reactive arthritis following an enteric infection is true?

A. Intestinal infection with ameba has been associated with this syndrome

B. Many affected people are HLA-DQ2 and -DQ8 antigen-positive

C. There is a high female to male ratio

D. It may be associated with a triad of arthritis, conjunctivitis and urethritis

20. A 82-year-old man with hypertension, type II diabetes mellitus, and dyslipidemia presents to the emergency department for evaluation of acute, severe right lower quadrant pain. Symptoms have been ongoing for two hours without relief. He reports no fever, chills, recent diarrhea, constipation, melena or hematochezia. In the emergency department he is uncomfortable appearing, afebrile normotensive and not tachycardic. His abdominal exam is notable for mild distention, hypoactive bowel sounds, moderate right lower quadrant tenderness without guarding or rebound. Labs are only notable for mild leukocytosis and mild lactate elevation which normalizes with hydration. Abdominal/pelvic CT scan imaging is notable for thickening ascending colon and cecum, a normal appendix and atherosclerosis of abdominal vasculature.

What would you recommend next for evaluation of this patient?

A. Stool cultures and C. difficile testing

B. Bowel preparation for diagnostic colonoscopy

C. CT angiography

D. Bowel rest and empiric antibiotics

21. A 39-year-old woman presents with acute severe epigastric pain radiating to her back and ongoing for a couple of hours. Her medical history is unremarkable, and she reports several family members have had gallstones. In retrospect she has had some symptoms suggestive of biliary colic over the past year. She is afebrile, normotensive and is not tachycardic or tachypneic. She has moderate epigastric tenderness and hypoactive bowel sounds. Ultrasound imaging is notable for multiple small gallstones, no gallbladder wall thickening, common bile duct and intrahepatic bile ducts are within normal limits. Labs are notable for lipase 5400 U/L, ALT 361 U/L, AST 201 U/L, ALK 210 U/L, but normal bilirubin. Her hematocrit, BUN and serum creatinine are normal. She receives IV fluid resuscitation, intravenous analgesics and by the next day reports marked reduction in pain. Repeat liver biochemical tests normalize within 3 days.

Which statement is true regarding management of acute pancreatitis?

A. Normal saline is preferred over lactated Ringer's solution for fluid resuscitation

B. Moderate fluid resuscitation is preferred over aggressive fluid resuscitation to reduce complications of acute pancreatitis

C. ERCP is required for management for most people with gallstone pancreatitis

D. Ultrasound imaging is not recommended for most patients