1. Concerning islet cell tumors of the pancreas, which one of the following is TRUE?

A. Gastrinoma is the most common type of functioning islet cell tumor.
B. Zollinger-Ellison Syndrome is caused by gastrinoma.
C. Functioning islet cell tumors usually present as large masses.
D. Functioning islet cell tumors are usually hypovascular.

Rationales:
A. Incorrect. Insulinomas are the most common functioning islet cell tumor with gastrinoma being the second most common.
B. Correct. Zollinger-Ellison syndrome is caused by a gastrinoma. Peptic ulcer disease is seen in 90% of patients with gastrinoma, usually with more extensive involvement of the duodenum than with typical peptic ulcer disease. Many patients have diarrhea due to gastric hypersecretion.
C. Incorrect. Most functioning islet cell tumors present as small (1 – 2 cm) hypervascular pancreatic masses.
D. Incorrect. Most functioning islet cell tumors are hypovascular.

Citations:

2. Concerning gastric lymphoma, which one is TRUE?

A. Accounts for 25% of all gastrointestinal lymphomas
B. Vast majority are Hodgkin’s lymphoma
C. Low-grade MALT lymphomas usually present as large bulky masses on upper gastrointestinal barium studies
D. Advanced gastric lymphoma is usually large and involves the body and antrum

Rationales:
A. Incorrect. Lymphoma involves the stomach more frequently than any other portion of the gastrointestinal tract and accounts for 50% of all gastrointestinal lymphomas.
B. Incorrect. Almost all gastric lymphomas are non-Hodgkin’s lymphoma of B-cell origin.
C. Incorrect. Low-grade MALT lymphomas usually present as varied sized, rounded nodules on double contrast barium studies.
D. Correct. Advanced lymphoma is a large bulky mass and most commonly involves the gastric body and antrum.
3. Concerning double-contrast upper GI examination, which one is TRUE?

A. Flow technique is useful for evaluation of the stomach but not the duodenum.
B. Compression views of the duodenum are obtained in the supine position.
C. The left posterior oblique view provides a double contrast view of the duodenum.
D. A barium suspension of 25% W/V concentration is used.

Rationales:
A. Incorrect. Flow technique is useful for evaluating superficial lesions on the dependent surface of the stomach and duodenum.
B. Incorrect. Compression views of the duodenum are typically obtained in the prone position.
C. Correct.
D. Incorrect. A barium suspension of 250% W/V concentration is used.

Reference:

4. Concerning duodenal inflammatory disease, which one is TRUE?

A. Duodenocolic fistulas are likely to occur in primary duodenal Crohn’s disease.
B. Radiation doses of 500 rad to the duodenum may cause radiation duodenitis.
C. Mucosal fold thickening is often more severe in dialysis patients.
D. Duodenal caustic injury is more likely to occur with alkali ingestion than acid ingestion.

Rationales:
A. Incorrect. Duodenocolic fistulas rarely occur in primary duodenal Crohn’s disease, but will occasionally occur in primary colonic Crohn’s disease.
B. Incorrect. The dose threshold for injury is 5000 rad.
C. Correct.
D. Incorrect. The opposite is true.

Reference:
5. Concerning selective immunoglobulin A deficiency, which one is TRUE?

A. It is an uncommon immunodeficiency in adults.
B. The majority of persons with IgA deficiency will present with malabsorption.
C. It is not associated with celiac disease.
D. It carries an increased risk of malignancy.

Rationales:
A. Incorrect. It is the most common immunodeficiency in adults, occurring in 1 in 700 persons.
B. Incorrect. Most are asymptomatic because of a compensatory rise in IgM production. The remainder will be symptomatic and may respond favorably to a gluten-free diet.
C. Incorrect. It has been reported in 1 in 40 patients with celiac disease.
D. Correct. Malignant tumors are more common in patients with IgA deficiency and in patients with other immunodeficiencies.

6. Concerning duodenal ulcers, which one is TRUE?

A. Free air is seen on conventional x-rays in up to 2/3 with perforation.
B. Duodenal peptic ulcers have a 5% chance of being malignant.
C. Multiple ulcers throughout the duodenum are most frequently associated with aspirin therapy.
D. Altered mucosal resistance is a major factor in the pathogenesis of duodenal peptic ulcers.

Rationales:
A. Correct.
B. Incorrect. Gastric ulcers have a 5% chance of being malignant. In contrast, duodenal ulcers are virtually always benign.
C. Incorrect. Eighty-five percent of duodenal ulcers are solitary. Multiple ulcers in the postbulbar duodenum should raise the possibility of Zollinger-Ellison syndrome. Chronic aspirin therapy is associated with multiple gastric ulcers, seen in over 80% of these patients. It is not associated with duodenal ulcers.
D. Incorrect. This is thought to be the major factor in gastric peptic ulcers. Duodenal ulcers are due to increased peptic acid secretion.

7. Concerning esophageal intramural pseudodiverticulosis, which one is TRUE?

A. Most commonly associated with Candida infection
B. Is a pre-malignant condition
C. Histologically represents dilated submucosal mucus glands
D. Outpouchings range in size from 1 cm to 2 cm

Rationales:
A. Incorrect. Esophageal intramural pseudodiverticulosis (EIPD) is most commonly associated with reflux disease, but can be seen in Candidiasis, stricture, or esophageal carcinoma.
B. Incorrect.
C. Correct.
D. Incorrect. Outpouchings are usually on the order of 1 – 4 mm.

References:

8. Concerning intrahepatic cholangiocarcinoma, which one is TRUE?

A. It is usually hyperdense during the arterial phase of contrast enhancement.
B. It demonstrates washout during delayed CT imaging.
C. Postobstructive hepatic atrophy can be a prominent feature.
D. Extrahepatic spread of intrahepatic cholangiocarcinoma is uncommon.

Rationales:
A. Incorrect. In the absence of primary sclerosing cholangitis, intrahepatic cholangiocarcinoma usually presents as a bulky mass. The lesion tends to be hypodense to background liver on noncontrast CTs. Following the dynamic administration of IV contrast, intrahepatic cholangiocarcinoma tends to remain relatively hypovascular (not hyperdense), particularly centrally.
B. Incorrect. Increased patchy enhancement can be observed during the portal venous phase. Retention of contrast within the extracellular space of the central stoma at delayed CT imaging (5 – 10 minutes) is relatively characteristic for these lesions.
C. Correct. High-grade obstruction from intrahepatic and hilar cholangiocarcinomas can cause atrophy of the hepatic parenchyma surrounding the pathologically dilated biliary tree. Capsular retraction occurs in about 20% of cases. This retraction likely reflects the atrophy of a small volume of hepatic parenchyma beneath Glisson’s capsule. Surprisingly marked segmental and lobar atrophy can occur when cholangiocarcinoma affects more central intrahepatic or hilar bile ducts.
D. Incorrect. The extrahepatic spread of peripheral, intrahepatic cholangiocarcinoma is not uncommon. In autopsy series, it is noted in about 50 – 70% of cases. Metastatic disease to regional celiac and left gastric nodes occurs frequently. The prevalence of microscopic nodal disease with its tendency to spread back to the liver makes the preoperative diagnosis of cholangiocarcinoma a contraindication for hepatic transplantation.

9. Concerning Crohn’s disease, which one is TRUE?

- A. In the United States, ulcerative colitis is less common than Crohn’s disease.
- B. Ulcerative colitis can affect any part of the alimentary tract.
- C. Crohn’s disease is limited to the mucosa of the gastrointestinal tract.
- D. Crohn’s disease does not contiguously affect the bowel.

Rationales:
A. Incorrect. Among the general population of the United States, ulcerative colitis is more common than Crohn’s disease. The incidence of ulcerative colitis is 11 per 100,000. The incidence of Crohn’s disease is about 7 per 100,000.
B. Incorrect. Crohn’s disease can affect any part of the gastrointestinal tract, from the mouth to the anus. About 75% of Crohn’s patients will have disease of the small intestine, without or with concomitant disease elsewhere. Of all patients with small intestinal Crohn’s, 90% have involvement of the terminal ileum. Ulcerative colitis affects the colon. The terminal ileum can be secondarily affected, backwash ileitis.
C. Incorrect. Crohn’s disease is associated with transmural inflammation of the bowel wall. At histology, noncaseating granulomas can be found throughout all layers, from the mucosa to the serosa. Granulomas, lymphoid aggregates, inflammatory changes and fissures can penetrate through the bowel wall to involve the adjacent mesentery (fibrofatty change) and mesenteric lymph nodes.
D. Correct. Crohn’s disease tends to have a discontinuous distribution. Lengths of involved gut will have disease free segments or “skip areas”. Crohn’s disease often spares the rectum. This contrasts with ulcerative colitis, in which the rectum is almost always involved. In ulcerative colitis, disease extends upstream from the rectum and is continuous, without intervening normal segments.
10. Regarding achalasia, which of the following is CORRECT?

A. It may be characterized by high-amplitude, simultaneous, and repetitive contractions of the esophagus
B. Ganglionic cells are decreased in number, with a characteristic narrow aganglionic segment present
C. It is more common in men than in women
D. A diverticular defect may be seen following pneumatic dilatation

RATIONALES:
A. Correct. Achalasia is usually characterized by absence of primary peristalsis, elevated or normal resting LES pressures, and incomplete or absent LES relaxation. However, vigorous achalasia a variant presentation of primary achalasia presents with high-amplitude, simultaneous, and repetitive contractions of the esophagus.
B. Incorrect. While it is true that ganglionic cells are decreased in number in achalasia, compatible with a neurogenic disorder, a narrow aganglionic segment is characteristic of Hirschsprung’s disease and NOT of achalasia.
C. Incorrect. It occurs equally among males and females. Carcinoma arising in achalasia is more common in men than in woman.
D. Incorrect. A diverticular defect may be seen following Heller myotomy.

References:

11. Regarding internal hernias, which of the following is TRUE?

A. They can often be managed with NG tube decompression.
B. Transmesenteric hernias in children are usually due to trauma.
C. Pericecal hernias account for 13% of internal hernias.
D. Broad ligament hernias usually involve the sigmoid colon.

RATIONALES:
A. Incorrect. These are closed-loop obstructions that require surgical repair. They most commonly present as a strangulated small bowel obstruction.
B. Incorrect. Transmesenteric hernias in children are usually due to a congenital mesenteric defect.
C. Correct.
D. Incorrect. Broad ligament hernias usually involve the small bowel.
12. Concerning acute pancreatitis, which of the following is TRUE?

A. The degree of pancreatic necrosis is best prognostic indicator.
B. Severe acute pancreatitis is found in approximately 50% of patients.
C. It is commonly caused by hypertriglyceridemia in the United States.
D. The initial diagnostic test should be abdominal ultrasonography.

RATIONALES:
A. Correct. The degree of pancreatic necrosis corresponds to the severity of the patient’s acute pancreatitis episode. Early assessment is critical for predicting which patients are likely to suffer lethal attacks, which occur in 2-10% of cases. The increased frequency of death in acute pancreatitis is directly correlated with the development and extent of pancreatic necrosis.
B. Incorrect. Of all patients who present with acute pancreatitis, 70-80% have mild episodes and 20-30% have severe attacks.
C. Incorrect. Acute pancreatitis in the U.S. is most commonly associated with choledocholithiasis and ethanol abuse, with other etiologic factors such as metabolic disorders (hypercalcemia and hyperlipidemia), trauma, including ERCP-induced pancreatitis, medications (azathioprine, sulfonamides), and structural abnormalities such as pancreas divisum and tumors being much less common.
D. Incorrect. Abdominal ultrasound should not be the first diagnostic test ordered for patients presenting to the emergency department with acute pancreatitis. Dynamic contrast enhanced CT (creatinine permitting) is the diagnostic test of choice because it allows characterization of the inflammation and calculation of the degree of pancreatic glandular necrosis (see A above).

References: