# PTS x MedSoc 2a Questions - GI

Questions

1. A 23 YO patient with a 3 month history of abdominal pain, weight loss, lethargy and diarrhea. He is anemic and has raised inflammatory markers. He is followed up in the gastrointestinal clinic with a colonoscopy that found skip lesions.

   Which of these features is more commonly associated with this disease?

A. Peripheral oedema
B. Mouth ulcers
C. Uveitis
D. Primary sclerosing cholangitis
E. Kayser-fleischer rings

2. A 55 YO man referred to a gastroenterology clinic with 6 month history of worsening dyspepsia and epigastric pain. No weight loss or history of dysphagia. No change in his bowel movements. He reports taking ibuprofen for back pain regularly.

   What is the most appropriate step?

A. Refer for Colonoscopy within 2 weeks
B. Request full blood count
C. Refer for Abdominal ultrasound in 2 weeks
D. Refer for Upper GI endoscopy within 2 weeks
E. Prescribe omeprazole

3. A 5 year old boy is brought to the GP by his concerned mother. He is found to be underweight, ‘’tired all the time’’, complains of intermittent stomach pain, nausea and diarrhea. His mother has a history of thyroid disease. They have no history of

   What is the gold standard investigation for the most likely diagnosis?

A. Stool antigen sample
B. Endoscopic intestinal biopsy.
C. Serology for tissue transglutaminase (TTG) antibodies (IgA)
D. Full blood count and inflammatory markers on blood test
E. Skin patch testing

4. A 24 YO woman who smokes has a 6 month history of abdominal pain with bloating and increased straining while going to the toilet. The symptoms are worse when she is eating but get better when she defecates. She reports feeling very stressed at work. She has no weight loss or family history of bowel cancer or any rectal bleeding.

   What is the most appropriate first line management of this condition?

A. Give dietary advice and a mild laxative
B. Prescribe loperamide
C. Prescribe amitriptyline
D. Refer patient to smoking cessation service
E. Refer for colonoscopy

5. A 72 YO female patient with a history of heart burn with epigastric pain that is worse between meals and at night and seems to stop temporarily when she eats.

   Which of these medications is not a risk factor for peptic ulcer disease?

A. Ibuprofen
B. Alendronic acid
C. Omeprazole
D. Prednisolone
E. Diclofenac

6. S 15 YO boy presents to A+E with a temperature of 38 degrees, and sudden central abdominal pain that has spread to the right iliac fossa. The patient has vomited once. One examination he appears thin and dehydrated, has pain when extending his hip and a rigid abdomen.

   What is the most definitive treatment of this condition?

A. Cholecystectomy
B. ERCP (endoscopic retrograde cholangiopancreatography)
C. Pancreatectomy
D. Endoscopic variceal band ligation
E. Laparoscopic appendicectomy

7. A 42 YO man presents to A+E with a distended and painful abdomen. He had been operated for an inguinal hernia 4 weeks ago, has a history of hypertension type 2 diabetes mellitus and smokes 20 cigarettes a day. On examination there are no bowel sounds and he has not passed stool in 3 days.

   Considering the likely diagnosis, which of the following is the most likely cause of this patient's condition?

A. Hypertension
B. Diabetes mellitus type 2
C. Intra-abdominal adhesions
D. Smoking
E. Crohn's disease

8. A 35 YO alcoholic with chronic cough and dyspepsia undergoes an upper GI endoscopy which reveals changes in his oesophagus.

   Which of the following describes barrett's oesophagus

A. Columnar epithelium in the lower third of oesophagus replaced with squamous cell epithelium
B. Squamous epithelium of the lower third of oesophagus replaced with columnar epithelium
C. Squamous cell cancer in the upper 2 thirds of the oesophagus
D. Lower esophageal sphincter fails to relax causing failure of oesophageal peristalsis
E. Inflammation of the oesophagus caused by alcohol

9. A 60 YO man has difficulty swallowing foods and occasionally regurgitates and aspirates when swallowing. He reports having a chronic cough but no respiratory conditions. His partner has complained of bad breath. On examination he has a midline throat lump that gurgles on palpation.

   What is the most likely diagnosis?

A. Myasthenia gravis
B. GORD
C. Achalasia
D. Pharyngeal pouch
E. Diffuse esophageal spasm

10. A 77 YO male patient has a 3 week history of painless rectal bleeding, weight loss and lethargy. He has a family history of colorectal cancer and his grandmother has endometrial cancer.

    What would his blood results most likely show?

A. Pernicious anaemia
B. Iron deficiency anaemia
C. Folate deficiency anaemia
D. Haemolytic anaemia
E. Anaemia of chronic disease

11. A 21-year-old female presents to A&E with epigastric pain and haematemesis. She reports that there has been no visible blood in her stools. She is known to have a history of bulimia.

    What is the most likely diagnosis?

A. Oesophageal varices
B. Bleeding gastric ulcer
C. Mallory Weiss tear
D. Oesophagitis
E. Oesophageal carcinoma

12. A 47-year-old male presents to his GP with a history of epigastric pain after eating. His Helicobacter Pylori stool antigen test is positive.

    Which first line treatment regimen is the most appropriate?

A. Lansoprazole, clarithromycin, and amoxicillin
B. Ranitidine, omeprazole, and metronidazole
C. Lansoprazole, bismuth subsalicylate, metronidazole and amoxicillin
D. Omeprazole, amoxicillin, and tetracycline
E. Omeprazole, bismuth subsalicylate and rifabutin

13. A 20-year-old male is admitted to A&E with umbilical pain which becomes localised to the right iliac fossa. He had vomited before coming to hospital and had a temperature of 37.8°C.

    What is the most likely diagnosis?

A. Urinary tract infection
B. Acute pancreatitis
C. Appendicitis
D. Intussusception
E. Diverticulitis

14. A 23-year-old male presents with a 6-month history of lower left quadrant abdominal pain and bloody diarrhoea with mucus. He also has uveitis.

    What are you least likely to find on colonoscopy or biopsy?

A. Crypt abscesses
B. Goblet cell depletion
C. Inflammation limited to the mucosa
D. Non-caseating granulomatous inflammation
E. Continuous inflammation

15. Stem: 50-year-old female undergoes colonoscopy for investigation of suspected inflammatory bowel disease and an incidental finding of outpouching in the sigmoid colon is made. Prior to the colonoscopy, she never complained of any symptoms.

    Question: Which condition is responsible for the incidental finding?

A. Acute diverticulitis
B. Perforated bowel
C. Diverticular disease
D. Diverticulosis
E. Diverticular stricture

16. A 55-year-old male presents with new rectal bleeding and pruritis ani. The blood is bright red seen on the toilet paper when he wipes. There has been no change in his bowel habit, no pain on defecation, and he has not lost any weight.

    What is the most likely diagnosis?

A. Haemorrhoids
B. Pilonidal abscess
C. Anal fissure
D. Colorectal cancer
E. Anal fistula

17. A 50-year-old male patient has a diagnosis of stomach cancer. The doctor palpates an enlarged lymph node, known as Virchow's node

    Where is the location of the node?

A. Cervical
B. Mediastinum
C. Supraclavicular
D. Inguinal
E. Axilla

18. A 19-year-old female presents with a 6-month history of abdominal discomfort and bloating. Her symptoms are worse after eating all types of food and are relieved on opening her bowels. Her stools are a mixture of diarrhoea and constipation. There is no blood in her stools, and she has no systemic symptoms.

    What is the most likely diagnosis?

A. Crohn's disease
B. Ulcerative colitis
C. Coeliac disease
D. Irritable bowel syndrome
E. Gastroenteritis

19. A 34-year-old present with a history of burning epigastric pain. The pain is worse on an empty stomach and is relieved by eating

    What is the most likely diagnosis?

A. Gastric cancer
B. Duodenal ulcer
C. Gastroesophageal reflux disease
D. Gastric ulcer
E. Pancreatitis

20. A 30-year-old female with Crohn's disease undergoes ileo-caecal resection. Following surgery, she requires dietary supplementation.

    Which supplement is she most likely to require?

A. Bile salts
B. Iron
C. Vitamin B12
D. Folate
E. Intrinsic factor

21. A 65-year old male presents to his GP with a burning pain in the centre of his chest, nausea and bloating. He states that the pain is worse when eating. You suspect he has a peptic ulcer.

    Which of these is not a cause of peptic ulcers

A. Autoimmune gastritis
B. Mucosal ischaemia
C. Excessive NSAID use
D. Bile reflux
E. H. Pylori

22. A 40-year old male presents to the Accident and Emergency department because he has been vomiting blood. He said he had been having some abdominal pain, feeling very nauseous and had been retching several times a day before finally vomiting this morning and it had blood in it.

    He hasn't noticed any weight loss, fevers or any other systemic symptoms. He drinks 1-2 pints every evening and has been eating/drinking as normal. He doesn't take any prescribed or over the counter medication and has no significant past medical or family history.

    What is the most likely diagnosis?

A. Gastroesophageal reflux disease
B. Mallory Weiss tear
C. Rupture of oesophageal varices
D. Gastric malignancy
E. Rupture of a peptic ulcer

23. A 65-year old male presents to the GP with a 3-month history of weight loss. He says that he was having bloody diarrhoea for a few but now hasn't opened his bowels for 2 days. He is worried because his father died of colorectal cancer when he was 70 and worries he also has cancer. You refer him for an urgent colonoscopy.

    What is the most common site for colorectal cancers to develop in the large intestine?

A. Caecum
B. Sigmoid colon
C. Ascending colon
D. Descending colon
E. Rectum

24. A 70-year old male is referred to the endoscopy appointment to have a gastroscopy as he had been complaining of reflux and severe epigastric pain which has been affecting him for years but he didn't want to go to the doctor in case he was wasting their time. The GP suspects he has been suffering from chronic untreated gastro-oesophageal reflux and worries he could have Barrett's Oesophagus.

    Histologically, what type of epithelium would you expect to see in the lower oesophagus of a patient with Barrett's oesophagus?

A. Pseudostratified squamous epithelium
B. Pseudostratified columnar epithelium
C. Simple columnar epithelium
D. Simple cuboidal epithelium
E. Stratified squamous epithelium

25. A 24-year-old female presents to the GP with abdominal pain and diarrhoea. She explains that she has been opening her bowels upwards of 5 times a day and she has noticed her stools floating. She works at a school and has found that this usually happens at lunchtime after she has eaten her packed lunch, commonly a sandwich, packet of crisps and some fruit.

    You take some bloods, do an antibody screen and genetic typing for HLA-DQ2 and HLA-DQ8. She is positive for these genes and has a raised TTG and is referred for a duodenal biopsy. The biopsies come back and show intraepithelial lymphocytes, crypt hyperplasia and mild partial villous atrophy.

    On the Marsh Classification for Coeliac DIsease, what classification does she fall under?

A. Marsh 1
B. Marsh 2
C. Marsh 3a
D. Marsh 3b
E. Marsh 3c

Answers

| Answer | Explanations |
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| 1. B | This patient has Crohn's disease. Any patient coming in with abdominal pain, mucousy stools and painful diarrhea, suspect Inflammatory bowel disease. Crohn's disease shows skip lesions on a colonoscopy and ulcerative colitis shows continuous disease from the ileocaecal valve. UC - more likely to have bloody diarrhoea. (crohns - oh no it's everywhere!, UC - you see it's only in one place)<br>A. Peripheral oedema - seen in cirrhosis/ heart failure<br>B. Mouth ulcers - crohn's has skip lesions from mouth - anus.<br>C. Loss of haustrations on barium enema - Ulcerative colitis<br>D. Primary sclerosing cholangitis - more commonly associated with Ulcerative colitis<br>E. Kayser-fleischer rings - wilson's disease. Recessive condition causes copper deposition in tissues. Increased 24 hr urinary copper secretion |
| 2. D | A. Colonoscopy within 2 weeks - colonoscopy is an examination of the lower GI tract. This patient has no bowel symptoms.<br>B. Request full blood count - useful for identifying anaemia if patient comes with blood loss (eg. haematemesis) or malabsorption (eg. weight loss)<br>C. Abdominal ultrasound in 2 weeks - useful for investigating liver pathology. Eg. patient coming in with RUQ pain, abnormal LFTs, or abdominal masses<br>D. Upper GI endoscopy within 2 weeks - correct. Anyone with a longer history of dyspepsia - suspect oesophageal cancer. He takes NSAIDs with are a risk factor for esophageal cancer. NICE recommends an endoscopy in 2 weeks when cancer is suspected.<br>E. Prescribe omeprazole - this is a PPI (proton pump inhibitor) to treat GORD/ reflux disease. This could be appropriate but important to exclude serious causes in this age group eg cancer. GORD could present with regurgitation symptoms/ chronic cough. |
| 3. B | This is a classic presentation of coeliac disease in a child. Failure to thrive, tired all the time and family history of autoimmune conditions.<br>A. Stool antigen sample - used for a H.pylori diagnosis in peptic ulcer disease. Can also use a carbon-13 urease breath test for diagnosing H. pylori. Suspect this if a patient has unresolved GORD symptoms. Do not give PPI or any antibiotics 2 weeks before this test.<br>B. Endoscopic intestinal biopsy. - gold standard diagnosis. Classic finding for coeliac: jejunal/ duodenal biopsy showing villous atrophy, crypt hyperplasia and lymphocytes. |

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| | C. Serology for tissue transglutaminase (TTG) antibodies (IgA) - often requested first line from the GP and can suggest a diagnosis for coeliac, but does not give a definitive diagnosis.<br>D. Full blood count and inflammatory markers on blood test - Coeliac patients can be anaemic and have raised inflammatory markers<br>E. Skin patch testing - usually for suspected skin allergy symptoms. Coeliac patients can often have dermatitis herpeticum (rash) but skin testing is not used. |
| 4. A | This is irritable bowel syndrome. Patient has abdominal pain, bloating with a change in bowel pattern (ABC) for 6 months, could be diet-related and stress related. Pain is better on defecation. Dietary advice is first line management, tricyclic antidepressant (amitriptyline is 2nd line). CBT and psychological therapies could also be trialled when pharmacological managements have failed.<br><br>A. Advise patients to limit coffee, alcohol and fibre intake.<br>B. Prescribe loperamide - Can help with IBS related diarrhea but this patient is suffering from constipation symptoms<br>C. Prescribe amitriptyline - this is a tricyclic antidepressant, 2nd line treatment.<br>D. Refer patient to smoking cessation service - reasonable but not specific 1st line management for this condition<br>E. Refer for colonoscopy - you would do this if you suspected inflammatory bowel syndrome. |
| 5. C | Classic peptic ulcer disease picture. Pain better with eating is likely a duodenal ulcer. Pain worse on eating is likely a gastric ulcer. Major risk of haemorrhage because of proximity of gastroduodenal Artery. RF: h.pylori, NSAIDs, corticosteroids, bisphosphonates<br><br>A. Ibuprofen - NSAIDs<br>B. Alendronic acid - bisphosphonate<br>C. Omeprazole - proton pump inhibitor used to treat peptic ulcer disease by blocking the gastric parietal cells, reducing HCl acid produced.<br>D. Prednisolone - corticosteroid<br>E. Diclofenac - NSAIDs |
| 6. E | Classic history of acute appendicitis. Young central abdo pain to RIF pain with fever and anorexia. Treat with appendectomy (removal of appendix).<br><br>A. Cholecystectomy - definitive treatment of symptomatic gallstones. |

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| | B. ERCP (endoscopic retrograde cholangiopancreatography) - endoscope and X-ray look at the bile duct and pancreatic duct to search for and remove present gallstones<br>C. Pancreatectomy - removal of pancreas<br>D. Endoscopic variceal band ligation - used in acute variceal haemorrhages.<br>E. Appendicectomy |
| 7. C | This is a small bowel obstruction. Most common cause is abdominal surgeries causing adhesions of the small bowel. Other causes include: inflammatory bowel conditions eg crohns (not the most likely in this case) and hernias.<br><br>A. Hypertension<br>B. Diabetes mellitus type 2<br>C. Intra-abdominal adhesions<br>D. Smoking<br>E. Crohn's disease |
| 8. B | Barrett's oesophagus is a risk factor for adenocarcinoma at the lower third of the oesophagus.<br>Alcohol, smoking and achalasia, obesity are also risk factors for adenocarcinoma.<br>A. Columnar epithelium in the lower third of oesophagus replaced with squamous cell epithelium<br>B. Squamous epithelium of the lower third of oesophagus replaced with columnar epithelium<br>C. Squamous cell cancer in the upper 2 thirds of the oesophagus - this is a type of cancer most common in developing world. Adenocarcinoma is most common in UK.<br>D. Lower esophageal sphincter fails to relax causing failure of oesophageal peristalsis - this is known ans achalasia and commonly presents in middle age with dysphagia of both liquids and solids and regurgitation<br>E. Inflammation of the oesophagus caused by alcohol - oesophagitis |
| 9. D | This is likely a pharyngeal pouch. Represents a posteromedial herniation between thyropharyngeus and cricopharyngeus muscles.<br><br>A. Myasthenia gravis - would usually see ocular muscle weakness or ptosis and dysphagia with liquids<br>B. GORD<br>C. Achalasia |

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| | D. Pharyngeal pouch<br>E. Diffuse esophageal spasm - presents similar to achalasia. |
| 10. B | This patient has a family history of colorectal cancer ( HNPCC, which is also associated with endometrial cancer). Patients usually show iron deficiency anaemia on their blood results.<br><br>A. Pernicious anaemia - can be caused by malnutrition,gastrectomy, H.ylori infection, can have a sore tongue and mild jaundice.<br>B. Iron deficiency anaemia<br>C. Folate deficiency anaemia - type of megaloblastic anaemia.<br>D. Haemolytic anaemia - any cause of blood loss could result in this<br>E. Anaemia of chronic disease - no evidence of this patient having chronic diseaese |
| 11. C | A. Oesophageal varices most commonly occur due to portal hypertension as a result of liver cirrhosis. The bleeding associated with them is typically painless.<br>B. Although gastric ulcers can present with haematemesis and epigastric pain, the stools would contain dark/black blood, otherwise known as melena. The blood becomes dark due to degradation by intestinal enzymes.<br>C. Mallory Weiss tears often occur following severe retching or vomiting. A sudden rise in intragastric pressure causes the oesophageal mucosa to tear.<br>D. Oesophagitis is associated with dysphagia, retrosternal pain, and hoarseness.<br>E. Oesophageal carcinoma presents with a throat lump, progressive dysphagia, and weight loss. There does not tend to be vomiting; however, there may be regurgitation which can be confused with vomiting. |
| 12. A | A. Helicobacter Pylori is managed using a 7-day course of triple therapy which consists of 1 proton pump inhibitor and 2 antibacterials. If penicillin allergic, metronidazole can be used instead of amoxicillin.<br>B. Ranitidine is a H2 antagonist which is not used in the management of Helicobacter Pylori.<br>C. The use of a proton pump inhibitor, bismuth subsalicylate and two antibacterials is recommended for third line treatment, lasting 10 days.<br>D. The use of a proton pump inhibitor, amoxicillin and tetracycline is recommended for second line treatment, lasting 7 days.<br>E. The use of a proton pump inhibitor, bismuth subsalicylate and rifabutin is recommended for third line treatment, lasting 10 days. |
| 13. C | A. Urinary tract infections can cause vomiting; however, a lower UTI will present with suprapubic pain and an upper UTI will present with loin, suprapubic or back pain.<br>B. Vomiting is a prominent symptom in acute pancreatitis; however, the pain associated is epigastric or centrally abdominal, radiating to the back. (Note: pain associated with pancreatitis may be relieved by leaning forward) |

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| | C. This presentation is typical of a patient with appendicitis<br>D. Intussusception can present with vomiting and is associated with severe, colicky abdominal pain; however, it is more common in children. (Note: a description of “red currant jelly” stools and a palpable sausage like lump in the right upper quadrant likely describes intussusception)<br>E. Pain associated with diverticulitis occurs in the left iliac fossa as the sigmoid colon is most commonly affected. |
| 14. D | A. It can be determined that the patient has ulcerative colitis (UC) rather than Crohn’s disease (CD) as uveitis is seen more commonly in UC, and diarrhoea associated with CD is not bloody. Crypt abscesses are associated with UC as neutrophils migrate to intestinal cysts.<br>B. Goblet cells are depleted in UC.<br>C. Inflammation in UC affects the submucosa or mucosa, whilst inflammation in CD is transmural.<br>D. Granulomatous inflammation is a feature of CD.<br>E. Inflammation in UC is contiguous whereas there are ‘Skip’ lesions in CD. |
| 15. D | A. Diverticulitis is the inflammation of diverticulum, which are out outpouchings of the large intestine<br>B. Perforation usually presents with severe generalised abdominal pain. This does not match the description of the patient; however, perforation can occur as a complication of diverticulitis presenting with ileus and peritonitis, with or without shock.<br>C. Diverticular disease occurs when diverticula cause symptoms<br>D. Diverticulosis is the presence of diverticula which are asymptomatic<br>E. A. A diverticular stricture is a complication of diverticulitis |
| 16. A | A. The description is consistent with haemorrhoids, which are enlarged anal vascular cushions often seen with constipation and straining. (Note: blood in haemorrhoids does NOT mix with the stools).<br>B. The acute presentation of a pilonidal abscess is a painful swelling with leakage of foul-smelling pus and systemic signs of infection. The chronic presentation is discharge which can be purulent, mucoid or blood stained<br>C. Anal fissures may be associated with bleeding, which is commonly bright red on wiping; however, they are associated with intense pain post defecation which can last for several hours.<br>D. Colorectal cancer is associated with a change in bowel habit, weight loss, and abdominal pain<br>E. Anal fistulae usually present with recurrent perianal abscesses or continuous discharge onto the perineum which can consist of mucus, blood, pus or faeces |
| 17. C | A. Cancers causing enlarged cervical nodes include Hodgkin’s and non-Hodgkin lymphoma<br>B. Cancers causing enlarged mediastinal nodes include lung cancer |

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| | and Hodgkin's and non-Hodgkins lymphoma (Note: mediastinal lymphadenopathy is more common in Hodgkin lymphoma occurring in about 85% compared to 45% in non-Hodgkin lymphoma)<br>C. Virchow's node is located in the left supraclavicular area.<br>D. Cancers causing enlarged inguinal nodes include testicular and ovarian.<br>E. Breast cancer can result in enlarged axillary nodes due to being responsible for draining around 75% of breast lymph. |
| 18. D | A. Constipation is not a feature of Crohn's disease. It is also associated with systemic symptoms such as weight loss, making this diagnosis less likely.<br>B. Diarrhoea associated with ulcerative colitis tends to be bloody, making this diagnosis less likely.<br>C. Coeliac disease symptoms would be associated with foods high in gluten; however, she experiences symptoms regardless of the type of food she eats, making this diagnosis less likely.<br>D. Irritable bowel syndrome (IBS) symptoms include diarrhoea, constipation, fluctuating bowel habits and abdominal pain and bloating which are worse after eating. Symptoms tend to be improved by opening bowels. Therefore, it is most likely that this patient has IBS.<br>E. Gastroenteritis is mainly caused by viruses, occurring in outbreaks in the winter (e.g., rotavirus or norovirus). It presents with vomiting and diarrhoea and usually resolves in a few days, making this diagnosis less likely. |
| 19. B | A. Gastric cancer features include dyspepsia, nausea and vomiting, anorexia and weight loss and dysphagia, making this diagnosis less likely.<br>B. Relieving of pain following eating is characteristic of duodenal ulcers making this diagnosis most likely.<br>C. Gastroesophageal reflux disease (GORD) can present with epigastric pain; however, relief on eating is not characteristic, making this diagnosis less likely.<br>D. The pain associated with gastric ulcers tends to get worse with eating, making this diagnosis less likely.<br>E. Pancreatitis can present with severe epigastric pain which radiates to the back. The pain can become worse with eating, particularly of fatty foods. |
| 20. C | A. Bile salts are absorbed in the terminal ileum; however, impaired absorption of bile salts can be compensated by an increase in their synthesis.<br>B. Iron is absorbed in the duodenum.<br>C. Vitamin B12 is absorbed in the terminal ileum.<br>D. Folate is absorbed in the duodenum and jejunum.<br>E. Intrinsic factor is produced by parietal cells of the stomach, necessary for the absorption of vitamin B12. |
| 21. A | A. Autoimmune gastritis is not a cause of peptic ulcers |

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| | B. Reduced blood flow to the stomach means the stomach cells are not supplied with sufficient blood flow. Gastric cells die off and don't produce mucin. The gastric attacks those cells and they die off causing an ulcer<br><br>C. Mucus secretion stimulated by prostaglandins. COX-1 needed for prostaglandin synthesis. NSAIDs inhibit COX-1. No COX-1 = mucous isn't secreted which means there is reduced mucosal defense leading to mucosal damage<br><br>D. Regurgitated bile in bile reflux strips away the mucus layer on the stomach, reducing the mucosal defense and causes an ulcer<br><br>E. H.pylori lives in gastric mucus. It secretes urease which splits urea in the stomach into $CO_2$ + ammonia. Ammonia combines with H+ in the stomach to make ammonium. Ammonium causes an inflammatory response and reduces the mucosal defense and causes an ulcer |
| 22. B | A. Severe untreated GORD can occasionally cause haematemesis. However, he isn't complaining of any epigastric pain or dyspepsia so GORD doesn't seem likely<br><br>B. Mallory Weiss tears occur when there is a tear in the mucosal lining at the oesophagogastric junction due to a sudden increase in intra-abdominal pressure. Things such as recurrent retching, vomiting etc. can force stomach contents into the oesophagus, dilate it and tear it resulting in haematemesis<br><br>C. Oesaphageal variceal rupture can cause haematemesis but there is no indication to suggest he has varices as this is commonly associated with chronic liver disease and there are no signs of jaundice, ascites etc.<br><br>D. Gastric malignancy isn't suspected in this case as the man is young and doesn't have any systemic symptoms such as unexplained weight loss<br><br>E. Peptic ulcer ruptures do cause haematemesis but there are no indications to suggest he could have a peptic ulcer. He doesn't have any epigastric pain, any pain eating or when he's hungry or take any medications especially NSAIDs |
| 23. E | Colorectal cancers are most commonly found in the rectum followed by the sigmoid colon and then the caecum. As you can see from the diagram, it is important to perform a digital rectal exam on patients you |

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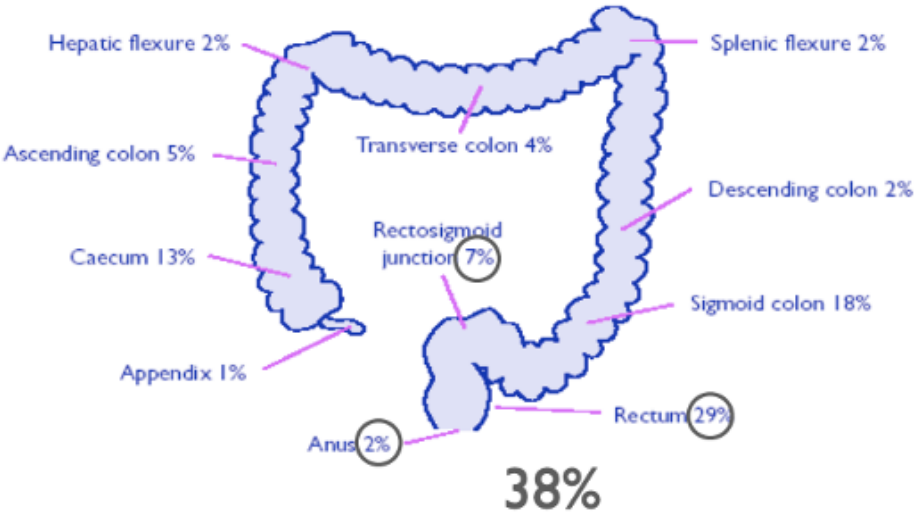
| | suspect have colorectal cancer as this can help detect 38% of colorectal cancers<br>  <br> |
| 24. E | In healthy patients, the oesophagus is lined with stratified squamous epithelium and the stomach is lined with simple columnar epithelium. In Barrett's Oesophagus, the excess stomach acid in the oesophagus causes the oesophageal epithelium to undergo metaplasia and develop into simple columnar epithelium.<br><br>A. Pseudostratified squamous epithelium - honestly no idea but it's not the oesophagus in Barrett's :)<br>B. Pseudostratified columnar epithelium - lines the majority of the respiratory tree<br>C. Simple columnar epithelium - epithelium found in the stomach<br>D. Simple cuboidal epithelium - epithelium found in areas such as bronchioles<br>E. Stratified squamous epithelium - normal epithelium in the oeosphagus |
| 25. C | This patient falls under the Marsh 3a classification<br><br>A. Marsh 1 - solely intraepithelial lymphocytes with NO crypt hyperplasia<br><br>B. Marsh 2 - intraepithelial lymphocytes and crypt hyperplasia<br><br>C. Marsh 3a - intraepithelial lymphocytes and partial/mild villous atrophy<br><br>D. Marsh 3b - intraepithelial lymphocytes and subtotal/moderate villous atrophy<br><br>E. Marsh 3c - intraepithelial lymphocytes and total villous atrophy |

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