NR 511 Differential Diagnosis & Primary Care Practicum Midterm study guide

N/B: Expand the boxes for a wide view

Disease	Risk	Subjective Finding	Objective Findings	Diagnostics	Treatment	Education
				GI DIS		
Appendicitis	-Most common between 10-30yrs; but can occur at any age; rare in infants and older adults -men more at risk - Diets low in fiber, high in fat, refined sugars, & other carbs at risk. - Obstruction of appendix is cause of majority of appendicitis - contributing factors: Intra-abdominal tumors, positive family hx - Recent roundworm infection or viral GI infection	-Dx made clinically based primarily on H&P exam - Classic presentation includes acute onset of mild to severe colicky epigastric, or periumbilical pain - Pain is vague at first then localizes within 24hrs to RLQ - Pain exacerbated walking\coughing - Men may feel radiated pain in testes - Abd muscle rigidity, N\V, anorexia - Mildly elevated temp 99-100F - If RLQ accompanied by shaking chills perforation should be suspected - Older adults may present with weakness anorexia, abd distention, mild pain leading to delayed dx and increased morbidity.	-May have HTN\tachy proportional to pain\symptoms -When lying flat, may flex R knee to relieve tension in abd muscle -Pain with palpation in abd, diffuse in stages. Localized to RLQ later -Positive for rebound pain; ask pt to cough to localize pain location -Sudden cessation of pain means perforation and is ER	-Labs are not diagnostic and nonspecific -Women should have urine human chorionic gonadotrophin to r\o ectopic pregnancy **+Rovsing's** deep palpation & release in LLQ causes rebound pain in RLQ - **+Psoas Sign** lift R leg against gentle pressure causes pain - **+Obturator Sign** flex R hip & knee and slowly rotate internally causes pain - **+McBurney's** pain with pressure applied to point between umbilicus & ilium - x-ray\CT helpful when paired with positive H&P findings	-Surgical; preoperative care, NPO, correction of fluid\electrolyte imbalances -Avoid narcotics -Atb with 3rd gen cephalosporin; Ex: ampicillin, gentamycin, flagyl	-F\U with surgeon -Ambulation after surgery -Adv diet when bowel sounds -Return to hosp with s\s of infection. Avoid for at least 2 wks
Celiac disease ** (autoimmune disorder caused by an immunologic response to gluten)	Mostly diagnosed in adulthood. A family member with celiac disease or dermatitis herpetiformis Type 1 diabetes Down syndrome or Turner syndrome Autoimmune thyroid disease Microscopic colitis (lymph	Many asymptomatic. May complain of diarrhea, gas, dyspepsia, wt. loss. Atypical symptoms: fatigue, bone or joint pain, arthritis, osteoporosis, or osteopenia (bone loss) liver and biliary tract disorders (transaminitis, fatty liver, primary sclerosing	Muscle wasting (anemia), reduces subcutaneous fat, ataxia, & peripheral neuropathy (vitamin B12 deficiencies) osteoporosis or osteopenia (bone loss) hypothyroidism Pts with dermatitis herpetiformis found to have signs of celiac disease on intestinal biopsy.	Serologic testing for anti-tTG IgA antibody Total IgA (2% of pts have IgA deficiency and will falsely test negative) duodenal biopsies Test for nutritional deficiencies associated with malabsorption of C.D. (hemoglobin, iron, folate, vit	lifelong adherence to a strict gluten-free diet. Referral to a dietician to help. Some pts may need treatment with immunomodulating agents.	teaching related to gluten free diet. Some people with celiac disease have vitamin or nutrient deficiencies that do not cause them to feel ill, such as anemia due to iron deficiency or bone loss due to vitamin D deficiency. However, these deficiencies can

		dermatitis herpetiformis (itchy skin rash)				
Cholelithiasis	is the formation of gallstones and is found in 90% of patients with cholecystitis. --Risk factors--2 types of stones (cholesterol and pigmented) a. Cholesterol (most common form): female, obesity, pregnancy, increased age, drug induced (oral contraceptives and clofibrates: cholesterol lowering agent), cystic fibrosis, rapid weight loss, spinal cord injury, Ileal disease with extensive resection, Diabetes mellitus, sickle cell anemia. b. Pigmented: hemolytic diseases, increasing age, hyperalimentation (artificial supply of nutrients, typically IV), cirrhosis, biliary stasis, chronic biliary infections	Patient complaint of indigestion, nausea, vomiting (after consuming meal high in fat), and pain in RUG or epigastrium that may radiate to the middle of the back, infrascapular area or right shoulder.	Right side involuntary guarding of abdominal muscles, Positive Murphy's sign, possible palpable gallbladder, Low grade fever between 99-101 degrees. Possible jaundice from common bile duct edema and diminished bowel sounds.	Mild elevation of WBC up to 15, 000 Abdominal Xray: Quick, noninvasive, reliable, and cost-effective means of identifying the presence of cholelithiasis.	*a. Initial management begins with definitive diagnosis. When asymptomatic (normally an incidental finding while exploring another problem) require no further treatment except teaching s/sx of "gallbladder attack". Nonsurgical candidate can be treated with dissolution therapy or lithotripsy. Acute includes hydration (IV fluids), antibiotics, analgesics, GI rest.* *b. Treatment of choice for Acute cholecystitis is early surgical intervention after stabilization. Poor surgical risk may benefit from cholecystectomy operatively or percutaneously.*	Nonsurgical intervention: weight loss, avoidance of fatty foods to decrease attacks, alternative birth control for persons taking oral contraceptives, menopausal women taking estrogen informed about alternative sources of phytoestrogens (soy products).
Crohn's **	Ages 15-25 of onset and then again at 50-80. Familial tendency, smoker Carcinoma less common in patients with CD due to treatment sometimes colectomy	Mild-Four or fewer loose bowel movements per day, can have small amounts of blood and mucus in the stool, and cramping in the rectum. Moderate-4-6 loose bowel movements per day containing more blood and mucus and other sx such as tachycardia, weight loss, fever, mild edema. Severe-frequent bloody	Tenderness in LLQ or across entire abd with guarding and abd distension. DRE performed to look for anal and perianal inflammation, rectal tenderness, and blood in stool. S/Sx of peritonitis and ileus may be found depending on severity of crohns. Tender mass in RLQ, anal fissure, perianal	Stool analysis to r/o bacterial, fungal, or parasitic infection for cause of diarrhea CBC to check for anemia, eval for hypocalcemia, vit D deficiency., hypoalbuminemia, and steatorrhea. LFT to screen for primary sclerosis cholangitis and other liver problems assoc with IBD. Check fluid and	Glucocorticoids, there is no cure for CD and treatment is aimed at suppressing inflammation and symptomatic relief of complications. Initially oral prednisone 40-60 mg/d tapered over 2-4 months then can have daily maintenance dose of 5-10mg/d. Sulfasalazine for mild to moderate CD 500 mg BID, increased to 3-4 g/d. Clinical improvement in 3-4 wks, and then	Pt educated on disease process, diet and lifestyle changes. Stress reduction, adequate rest to decrease bowel motility and promote healing Low residue diet when obstructive sx present such as canned fruits, vegetables and white bread

		bowel movements (6-10), abd pain and tenderness, sx of anemia, hypovolemia, impaired nutrition. Most common sx are abd cramping/ tenderness, fever, anorexia, spasm, flatulence, RLQ pain or mass	fissure, edematous pale skin tags. Extra intestinal finding may be episcleritis, erythema nodosum, nondeforming peripheral arthritis, and axial arthropathy	electrolytes. May have elevated WBC count and sed rate and prolonged prothrombin time Barium upper GI series, colonoscopy, and CT to determine bowel wall or abscess formation	tapered to 2-3 g/d for 3-6 months, this medication interferes with folid acid absorption and patient must take supplements. Metronidazole effective in tx perianal disease and in controlling crohns colitis, other ABT's such as Ampicillin, and Tetracycline effective in controlling CD ileitis, and ileocolitis.	

					Immunosuppressive meds when unresponsive to other treatments	
Diverticulitis **	-Uncommon under 40yrs; risk rises after -Rare in pediatric; equal in men\women -More common in developed countries -High in low fiber, high fat\red meat diets -Obesity, chronic constipation, h\o diverticulitis, & number of diverticula which occur in sigmoid colon.	-25% develop symptoms -LLQ abd pain, worsens after eating -Pain sometimes relieved with BM or flatus -BM may alternate between diarrhea\ constipation -May present with bleeding w\o pain or discomfort -Fever, chills, tachy; LLQ with anorexia, N\V -Fistula may form causing dysuria, pneumaturia, fecaluria	-LLQ abd tenderness with possible Firm, fixed mass may be identified in area of diverticula -May have rebound tenderness with guarding\rigidity -Tender rectal exam; stool usually + for occult blood	-Abd x-ray can reveal free air, ileus, obstruction -Barium studies show sinus tracts, fistulas obstruction -Colonoscopy to r\o Ca, but less than barium for diverticula -CT with contrast	-Asymptomatic cases managed with high fiber diet or fiber supplement with psyllium -Mild symptoms managed outpatient with clear liquid diet and rest -Atb should not be routinely used but can be with diverticula abscess culture -Amoxicillin\clavulanate K (or) flagyl with bactrim -Symptoms usually subside quickly and diet can be advanced slowly -Pain managed with antispasmotics Ex; Levsin, Bentyl, BuSpar -Avoid morphine -NG for ileus or intractable N\V -Pt can be D\C'd from hosp once able to adequate nutrition\ hydration if acute phase resolved -Colon resection may be necessary if no improvement or deterioration after 72hrs of treatment	-Increase fiber in diet to avoid constipation and straining -H2O intake of at least 8\8oz glasses to promote bowel regularity -Bulk-forming laxative may be needed Ex: psyllium, FiberCon, Metamucil
GERD **	-Can occur at any age -Risk increases with age, then decreases after 69yrs -Prevalence equal across gender, ethnic, cultural -Obesity, alcohol, caffeinated beverages, chocolate, fruit, decaf coffee, fatty foods, onions, peppermint\	-Heartburn; mild to severe -Regurgitation, water brash, dysphagia, sour taste in AM, belching, coughing, odynophagia (painful swallow), hoarseness or wheezing at night -Substernal\ retrosternal pain -Worsens if reclined	-H&P usually normal -May be + for occult blood in stool	-Usually Hx alone diagnoses -May manifest with atypical symptoms such as adult-onset asthma, chronic cough, chronic laryngitis, sore throat, noncardiac chest pain -If pt fails to respond to 4-8wks PPI, EGD is ordered	-8wk trial of PPI; weight loss, med compliance and avoidance of triggers -If unresponsive to once daily dosing; can increase to twice daily; if no relief EGD needed -PPI and H2-RA should not be taken together -Pt's on long term therapy should be re-eval'd q6mos	-Weight loss, med compliance and avoidance of triggers -Small frequent meals; main meal mid-day, avoid eating 4hrs before bed, avoid straining, sleep with HOB elevated, smoking cessation, stress mgmt

	spearmint, tomato products Anticholinergics, beta-adrenergics, CaChannel blockers, diazepam Estrogen\ progesterone, Nicotine	after eating, eating large meals, constrictive clothing -May present with dysphagia; dysphagia should only occur with first bite		-EGD warranted over empiric treatment when heartburn & dysphagia, bleeding anemia, weight loss or recurrent vomiting -EGD with esophagus q3-5yrs		

Giardia	Can harbor in intestine, protozoan attaches to mucosa of small bowel. In US, risk in adults is oral-anal intercourse, children in daycare. In third world	Bloating, flatulence, nausea, watery diarrhea, weight loss, anorexia,	Malabsorption	Stool testing positive for trophozoites 50% of the time. Duodenal aspirate or small bowel biopsy	Quinacrine Hydrochloride (Atabrine) 100 mg TID after meals for 5-7 days or Metronidazole (Flagyl) 250 mg TID for 5-7 days	Teach good hand washing technique, sanitize surfaces, and avoid swimming in all types of water sources to avoid further contamination.
H. Pylori Infection	Risks: Increased age, living in crowded conditions, no clean water source (nonfiltered water), smoking	Ache or burning pain in abdomen. Abdominal pain that is worse when stomach is empty. Nausea/loss of appetite/ unintentional weight loss. Frequent	Objective Findings RUQ/LUQ tenderness	-Fecal antigen assay -Urea breath Test -Biopsy with histological examination -Serological antibody	Standard triple drug therapy is clarithromycin and either amoxicillin or metronidazole with a PPI BID for 14 days. Amoxicillin preferred over metronidazole b/c there are some resistant strands of metronidazole.	-Complications (PUD) -Medication side effects
Irritable bowel syndrome **	Women more than men rate 3:1; starts in late adolescence and early adulthood; rare in pts >50	-2 kinds of patients those with abdominal pain and altered bowel habits, and those with painless diarrhea. -Left lower quadrant pain, sharp and burning with cramping or a diffuse, dull ache, precipitated by eating stress and relieved with a bm or flatus. -The pain does not interfere with sleeping frequent complaints of abdominal distention gas, and belching urgency to defecate passage of large volumes of mucus within the stool -frequently associated with psych dg, which presents in the form of anxiety, depression and somatoform disorders (marital discord, death, or	The physical exam tenderness in LLQ and over the umbilicus or epigastric area in those with small bowel involvement. Digital rectal exam may reveal tenderness and may exacerbate symptoms. -No weight loss or deterioration in health -Key to diagnosis is the lack of fever, leukocytosis, or bloody stools. pg579 advanced assessment	CBC, ESR, CMP (electrolytes, serum amylase), urinalysis stools for occult blood ova and parasites, and cultures. Labs mostly normal and any diagnostic clue as to the cause is helpful. If WBC found in the stool = infectious or inflammatory process and not IBS. Rule out food intolerance, lactase deficiency (hydrogen breath test or lactose tolerance test). IBS is often confused with lactose intolerance and can be by removing lactose from the diet for 2 weeks and monitoring the symptoms.	Producing IBS include caffeine, legumes (and other fermentable carbohydrates), and artificial sweeteners. alleviate symptoms by eating a lower-fat diet that contains more protein. High fiber diet is good, introduced slowly to avoid the sensation of bloating, 8 glasses of water per day probiotic VSL#3 one packet bid, Antidiarrheal medications only temporary. -If diarrhea is severe episodic use of loperamide (Imodium) 2 mg or diphenoxylate (Lomotil) 2.5–5.0 mg every 6 can be used as needed -Constipation-lactulose or magnesium hydroxide -Postprandial pain- dicyclomine 10 to 20 mg 3- 4x a day by mouth or hyoscyamine 0.125 to 0.75	Recognize triggers and avoid them. Patients must understand that the goal of treatment is to improve their symptoms, not cure the disease, and that improvement in symptoms can be a time-consuming process. Dietary education- fiber intake increase

		abuse)			mg twice a day. Anticholinergics avoid in glaucoma and bph. Tricyclic antidepressants and ssri in some pt	
Peptic ulcer disease ** (includes gastric ulcers and duodenal ulcers)	3 major causes: (1) Infection w/ H.Pylori, (2) chronic ingestion of ASA and other NSAIDs, (3) acid hypersecretion such as in Zollinger-Ellison syndrome. Genetics blood type, personality type, and cigarette smoking may also play a role in the development of PUD. Pts w/ COPD cirrhosis, renal failure and renal transplant have higher incidence	Hallmark: c/o burning or gnawing (hunger) sensation or pain (dyspepsia) in epigastrium, often relieved by food or antacids. Pts describe pain episodic pattern of c/o in which the pain tends to cluster and last for minutes, w/ episodes separated by periods of no sx. Almost half w/ NSAID-induced ulcers are asymptomatic. Nocturnal pain: in 2/3 of pts w/ duodenal ulcers and 1/3 of those w/ gastric ulcers. -Nausea & anorexia sometimes occur in pts w/ gastric ulcers. Vomiting and weight loss indicate more serious complications like gastric malignancy or pyloric obstruction. Pts w/ duodenal ulcers may report a reduction in pain after eating; pts w/ gastric ulcers tend to experience more intense pain after	Pts w/ duodenal ulcers often demonstrate epigastric tenderness 2.5cm to right of midline, but this may also be present in cholecystitis, pancreatitis, non-ulcer dyspepsia, and other GI disorders. Reports of melena or coffee-ground-like emesis usually indicate bleeding ulcer, and perforated ulcer may present w/ abdominal rigidity.	Routine lab tests: normal unless significant bleeding or vomiting. Pt actively bleeding à CBC w/ diff. to eval HGB levels is paramount. Most pts w/ upper GI bleeding should have restrictive strategy, defined as transfusing when HGB levels fall below 7 g/dL. Diagnostic standard à upper GI endoscopy. Serology test or direct bacteriological analysis via an esophagogastroduodenoscopy (EGD) Bx à to check for H. Pylori EGD is ordered for pts who have failed the standard triple-drug therapy for H. Pylori. A serological antibody (enzyme-linked immunosorbent assay) test can be used to detect infection w/ H. Pylori, doesn't distinguish between active or past (treated) infection and is expensive. Urease is plentiful in pts w/	Aim to relieve pain, heal ulcer, & prevent complication and recurrences. -PPIs: drugs of choice & paramount. Most pts w/ upper GI bleeding should have restrictive strategy, defined as transfusing when HGB levels fall below 7 g/dL. Diagnostic standard à upper GI endoscopy. Serology test or direct bacteriological analysis via an esophagogastroduodenoscopy (EGD) Bx à to check for H. Pylori EGD is ordered for pts who have failed the standard triple-drug therapy for H. Pylori. A serological antibody (enzyme-linked immunosorbent assay) test can be used to detect infection w/ H. Pylori, doesn't distinguish between active or past (treated) infection and is expensive. Urease is plentiful in pts w/ includes omeprazole, raveprazole, lansoprazole, esomeprazole, dexlansoprazole, pantoprazole. PPIs heal duodenal ulcers in 4 wks therapy and gastric ulcers after 8 wks. -H2-R eceptor Antagonists: Used for mild symptoms with no complication or serious disease; treatment for 2 wks. If symptoms persist past 2 weeks, EGD considered. If used for peptic ulcer tx, standard therapy is daily x 6 wks or half the dose bid x 8 weeks (cimetidine, ranitidine, nizatidine, famotidine) -Other agents: antacids were mainstay of treatment. Do not use antacids with calcium in PUD because calcium causes rebound acid secretion.	Smoking cessation; avoid foods that precipitate dyspepsia. MUST follow treatment regimen Educate about side effects such as change in stool color to black with bismuth preparations. If sucralfate with antacid, PPI, H2RA being taken, stress that sucralfate cannot be taken with other meds or with digoxin, ciprofloxacin, phenytoin due to it binding with these meds.

		eating.		H.Pylori infection Breath tests for H Pylori are based on the production of ammonia from the metabolism of urea by urease à indicate active infection and are noninvasive way of dx H. Pylori. In pts w/ increase in gastric acid secretion is suspected, a fasting serum gastrin level should be drawn Levels higher than 200 pg/mL should be confirmed on repeat testing and followed by basal and peak acid- output measurements Zollinger-Ellison	Sucralfate 1g QID heals duodenal ulcers, bismuth (also has antimicrobial action against H. Pylori) misoprostol (Cytotec) used for prophylactic measure to prevent gastric ulcer formation in pts who use NSAIDs. Triple therapy for H. Pylori is a combination of 2 antibiotics (clarithromycin and either amoxicillin or metronidazole) w/ a PPI BID x 14 days. Amoxicillin preferred over metronidazole due to resistant h. pylori strains. Bismuth subsalicylate & 2 antibiotics is also effective but dosing is QID.	

				syndrome should be suspected in pts whose fasting serum gastrin level is > 600 pg/mL and who have a basal acid		

Pancreatitis **ACUTE**\ **CHRONIC**	**ACUTE**: About 80% of hospital admissions are a result of biliary tract disease (passing gallstones) or alcoholism. --Risk: Infection (mumps), Hyperlipidemia, Metabolic disorders (hyperparathyroidism, hypercalcemia), Drugs (furosemide, valproic acid, sulfonamides, thiazides), Endoscopic retrograde cholangiopancreatograp hy (ERCP), Abn pancreatic duct (stricture, carcinoma, pancreas divisum), Abn Common bile duct and ampullary region, Surgery of stomach and biliary tract, vascular disease (artherosclerosis, severe hypotension), trauma. **CHRONIC:** *Slow progressive process* *--Risk: alcoholism, diets high in protein*	**ACUTE:** Pain that is intense, abrupt onset deep epigastric pain that last for hours to days. Radiates straight through the back. Pain is often refractory to narcotics. Aggravated by vigorous activity (coughing) and lying supine. Alleviated when seated and leaning forward. Intractable nausea/ vomiting. Depending on severity may present with seating, weakness and anxiety. May report ingestion of alcohol or big meal before onset of symptoms. **CHRONIC:** Patient presents with intractable abdominal pain, weight loss, diarrhea but can be mild (dyspepsia, nausea, vomiting). Abdominal pain normally epigastric/LUQ	**ACUTE:** Severe abdominal tenderness over epigastric area accompanied by guarding. Abdominal distension presents in about 20% of patients. Bowel sounds hypoactive or absent if paralytic ileus present. Tachycardia (100-140 b/ min) with rapid, shallow respirations. Increased blood pressure due to pain. Temp initially normal but increases to 100.4- 102.2. **CHRONIC:** Mild to Moderate epigastric tenderness without rebound tenderness or guarding.	**ACUTE:** Abdominal Pain Elevated Serum Amylase/ Lipase that return to normal after 3-7 days WBC between 12-20, 000 CT of abdomen: provides fast and accurate for definitive diagnosis **CHRONIC:** CT and /or US of the abdomen to show abnormal size or consistency of pancreas. Evaluation of pancreatic function: Bentiromide Test-- collections of normal volume and low in bicarbonate suggest chronic pancreatitis.	**ACUTE:** Management is aimed at limiting severity of pancreatic inflammation, preventing further complications and managing symptoms. Mild symptoms can resolve on its own and managed outpatient conservatively. Fasting is necessary until symptoms have subsided. Maintain fluid status with parenteral fluids Pain medication other than opiates (to prevent pressure within sphincter of Oddi). Introduction of clear fluids implemented once pain free, amylase/lipase levels returned to normal, bowel sounds have returned, Low fat diet as patient tolerates. **CHRONIC:** Aimed at preventing further pancreatic damage, managing pain and supplementing exocrine and endocrine function. Sustaining from alcohol use.	ACUTE: Informed the cause of pancreatitis Reduction of dietary intake of fat Abstain from alcohol abuse Drug induced-- avoid causing agent Hyperlipidemia--diet instruction and information on avoidance of factors such as alcohol, estrogens. **CHRONIC:** Patho of disease and long- term outlook Decrease in frequency in attacks after 5-10 years Medication regimen/ Rational for medications (control diarrhea and gain body weight) Pain management if long term narcotic is needed.
Salmonella **	One of the major causes of diarrhea worldwide. Three species:	Present with varying degrees of nausea, vomiting, diarrhea,	Present with varying degrees of nausea, vomiting, diarrhea,	The physical exam is usually normal except for the aforementioned	Treatment includes trimethoprim-sulfamethoxazole (Bactrim	Stress proper handling of food, thorough cooking