

# GI III: Small Intestine & Colon Cheat Sheet by ksellybelly via cheatography.com/19318/cs/2427/

#### Diarrhea

#### Definition

Increased frequency or volume of stool (eg 3+ liquid/semisolid stools daily for at least 2-3 consecutive days)

#### Etiology

Infections, toxic, dietary (laxative use), other GI disease

## Pertinent Patient History

All current meds, illnesses among others who may have shared meals with pt.

# Clinical Features: Secretory Diarrhea

Large volume w/o inflammation (pancreativ insufficiency, ingestion of preformed bacterial toxins, laxative use)

#### Clinical Features: Inflammatory Diarrhea

Bloody diarrhea + fever (invasive organisms or IBD)

# Clinical Features: Antibiotic-Associated Diarrhea

Clostridium dificile (causes pseudomenbranous colitis in the most severe cases)

#### Lab Findings

WBCs in the stool = inflammatory process, and get cultures

# Treatment

Supportive therapy, antibiotics for pts with severe diarrhea and systemic sx (C. diff, Shigella, Campylobacter)

# Celiac Disease (celiac sprue)

#### Definition

Inflammation of the small bowel with the ingestion of gluten-containing foods (wheat, rye, barley) leading to malabsorption

# Multifactorial inheritance

Among the most common genetic conditions in Europe and USA

#### Celiac Disease (celiac sprue) (cont)

#### Clinical Presentation

Diarrhea, steatorrhea, flatulence, weight loss, weakness, abdominal distension (infants/kids - failure to thrive) (older pts - iron deficiency, coagulopathy, hypocalcemia)

# Diagnosis

Serologic screening tests: IgA antiendomysial and antitisuue transglutaminase antibodies

#### Treatment

*Gluten-free dieat*, should see nutritionist possibly lactose-free diet, supplementation, prednisone

# IBS (Irritable Bowel Syndrome)

# Definition

A functional disorder without a known pathology - thought to be a combination of altered motility, hypersensitivity to intestinal distention, and psychological distress, W>>M and can occur with menses/stress. A dx of exclusion.

# Most common cause of...

chronic or recurrent abdominal pain the the US. Usually an intermittent/lifetime problem.

# DDX

Lactose intolerance, cholecystitis, chronic pancreatitis, intestinal obstruction, chronic peritonitis, carcinoma of pancreas/stomach

# Clinical features

Abdominal pain (worsened with ingestion, relieved with defecation), pain may be associated with bowel distention from accumulation of gas and associated spasm of smooth muscle; postprandial urgency common, changes in stool frequency/character, dyspepsia, urinary frequency/urgency in women

# IBS (Irritable Bowel Syndrome) (cont)

#### Lab Findings

Generally normal - test stool for blood, bacteria, parasites, lactose intolerance. R/O other pathology with colonoscopy/barium enema/US.CT, and endoscopic studies in pts with persisten sx or weight loss/bleeding

#### Treatment

Avoid triggers, high-fiber diet, bulking agents, and symptom control (antispasmodics, antidiarrheals, prokinetics, antidepressants)

### **Colonic Polyps**

#### Definition

Fleshy growth on lining of colon/rectum; common and can be benign or malignant. Removal can reduce the occurence of colon cancer

#### Familial Polyposis Syndrome

Genetic predisposition to multiple colonic poolups with a near-100% risk of developing colon cancer (evaluate q1-2 yrs beginning at age 10)

#### Clinical Features

Asymptomatic, Can get contipation, flatulence, rectal bleeding, or iron deficiency anemia

# Lab Findings

Heme-positive stool, detected by colonoscopy, and must get histologic evaluation to determine dysplasia

# Treatment

Removal and FU

#### Constipation

#### Definition

A decrease in stool volume and increase in stool firmness accompanied by straining (normal BM ranges 3/day-3/wk)

# Red Flag

Patients >50 yo with new-onset constipation --> evaluate for colon cancer!



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# Cheatography

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#### Constipation (cont)

Basic Treatment/Lifestyle modifications

Increase fiber (10-20g/day), increase fluid intake (1.5-2L/day), increased exercise

Treatment if constipation lasts > 2wks or if refractory to lifestyle modifications

Investigate and treat underlying cause

#### **Bowel Obstruction**

Etiology: small bowel obstruction (SBO)

Adhesions or hernias, neoplasm, IBD, volvulus

Etiology: large bowel obstruction

*Neoplasm*, strictures, hernias, volvulus, intussusception, fecal impaction

Complete strangulation of bowel tissue can lead to

Infarction, necrosis, peritonitis, death

# Clinical Features

Andominal pain, distention, vomiting, obstipation, high-pitched/rushing bowel sounds, more severe cases pts can be febrile/tachycardic, in shock

# Lab Findings

Dehydration, electrolyte imbalance, upright radiographs showing air-fluid levels

# Treatment

NPO, NG suctioning, IV fluids, monitoring (surgery likely, esp. with large bowel obstruction)

#### Crohn's Disease (aka regional enteritis)

#### Definition

An IBD for which there is some genetic predisposition, but the cause is unknown.

Must be differentiated from ulcerative colitis (other IBD)

# Anatomical Involvement

Skip lesions, Terminal ileum and right colon most common, can also be in small and large bowels, mouth, esophagus, stomach (rectum frequently spared)



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# Crohn's Disease (aka regional enteritis)

#### Complications

Fistula, abscesses, aphthous ulcers, renal stones, predisposition to colonic cancer

#### Clinical Features

Abdominal cramps and diarrhea in pts <40yo (can also get low-grade fever, polyarthralgia, anemia, fatigue, bloody stool)

# Lab Findings

Colonoscopy, bx to reveal involvement (will often see granulomas), blood tests (anemia, decreased ESR, electrolyte imbalances)

#### Treatment

Acute tx: Prednisone +/e aminosalicylates (add metronidazole or cipro if perianal dz/fissures/fistula. Chronic management: Mesalamine, also smoking cessation

# Intussusception

#### Definition

The invagination of a proximal segment of bowel into the portion just distal to it (95% of the time occurs in *children*, following a viral infx. If in adults d/t neoplasm)

#### Clinical Features

Severe colicky pain, stool will contain mucus/blod (*currant jelly stools*), and sausage-shaped mass felt on palpation

# Lab Findings

Barium or air enema - diagnostic and therapeutic (plain-films, CT, surgery for adults)

#### Treatment

Hospitalization, and barium/air enema for kids (surgery if that doesn't help or for all adults)

# **Toxic Megacolon**

#### Definition

Extreme dilatation and immobility of the colon, *Emergency*!

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# Toxic Megacolon (cont)

# Etiology: Newborn

Hirschsprung's Disease = Congenital aganglionosis of the colon, leading to functional obstruction in the neworn

#### Etiology: Adults

Occurs as a complication of UC, Crohn's colitis, pseudomenbranous colitis, and specific infectious causes (Shigella, C. diff)

# Clinical Features

Fever, prostration, severe cramps, abdominal distension, and rigid abdomen and abdominal tenderness on exam

#### Lab Findings

Abdominal plain films will show colonic dilatation

#### Treatment

Decompression (sometimes colostomy or complete colonic resection may be necessary)

# Volvulos

# Definition

The twisting of any portion of bowel on itself (most commonly the sigmoid or cecal area)-->requires emergent decompression to avoid ischemic injury!

# Clinical Features

Cramping abdominal pai, distention, N/V, obstipation  $% \left( N/V\right) =\left( N/V\right) +\left( N/V\right)$ 

Ischemia from volvulus can lead to

Gangrene, peritonitis, sepsis

Signs/symptoms of Bowel Ischemia

Abdominal tympany, tachycardia, fever, severe pain

# Diagnosis confirmed by

Abdominal plain film-->showing colonic distention

#### Treatment

Endoscopic decompression, surgery if unresolved by non-surgical means

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# Malabsorption

#### Definition

May involve a single nutrient (like Vit B12 in pernicious anemia) or lactase deficiency (lactose), or it may be global (celiac disease, AIDS)

#### Etiology

Problems in digestion, absorption, impaired blood/lymph flow

# Clinical Features

Diarrhea +/- bloating and discomfort, weight loss, edema, steatorrhea (othersL bone demineralization, tetany, bleeding, anemia)

#### Lab Findings

If 72-hr fecal fat test is normal, consider specific defects (ie pancreatic insufficiency), and specific tests can detect deficiencies like B12/calciu/albumin

Therapeutic trials to help in dx/tx

Lactose-free diet, gluten-free diet, pancreatic enzyme, antibiotics in certain cases

# Ulcerative Colitis

# Definition

An IBD with ulcerated lesions in the colon, starts distally at the rectum and progresses proximally, continuous (NO skip lesions)

Clinical Features - most common

Tenesmus (feeling of constantly needing to pass BM despite empty colon) and bloody/pus-filled diarrhea

# Less common features

LLQ pain, weight loss, malaise, fevere, might see toxic megacolon and malignancy seen more in UC than Crohn's (smoking actually protective in UC)

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# **Ulcerative Colitis (cont)**

## Lab Findings

Anemia, increased ESR, decreased serum albumin, abdominal plain film-->colonic distension. Sigmoidoscopy or colonoscopy best to establish diagnosis

What to AVOID in pts with possible acute UC

Colonoscopy and barium enema - risk of perforation and toxic megacolon!

#### Treatment

Aminosalicyates + Corticosteroids (surgery can be curative, total protocolectomy most common type)

# Diverticular Disease

Diverticulosis (def.)

Large outpouchings of the mucosa of the colon

Diverticulitis (def.)

Inflammation of the diverticula caused by obstructing matter

In pts. with diverticulosis, can prevent diverticulitis with...

High-fiber diet and avoidance of obstructing/constipating foods (seeds, etc.)

Clinical Features (diverticulitis)

Sudden-onset LLQ/suprapubic pain +/-fever, altered BM, N/V

Diverticular bleeding presentation

Sudden-onset, large-volume hematochezia (resolves spontaneously)

### Lab Findings

Plain films + Ct: to r/o other causes of abdominal pain or tos how areas of edema/dilatation. Colonoscopy: best to evaluate for ischemia,

## Treatment

Surgical revascularization (+ hydration)

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### **Colorectal Cancer**

Risk Factors

Hereditary nonpolyposis colorectal cancer

#### Genera

3rd leading cause of cancer death in USA, >50yo, good prognosis if caught early

#### Clinical Features

Slow growing and no sx at first, Abdominal pain, change in bowel habits, occult bleeding, intestinal obstruction, anemia (fatigue, weakness), frank blood in stool, change in stool size/shape.

#### Lab Findings

Occult blood in stool, colonoscopy

#### Treatment

Surgical resection + chemo (stage III and higher)

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