

# 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)



By **ksellybelly** cheatography.com/ksellybelly/

## 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

#### 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.

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## IBS (Irritable Bowel Syndrome) (cont)

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

## 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)

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## 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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## 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)

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## 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)

## 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

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## 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*!

## Etiology: Newborn

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

## Toxic Megacolon (cont)

## 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

Ischemia from volvulus can lead to

Gangrene, peritonitis, sepsis

Signs/symptoms of Bowel Ischemia

Abdominal tympany, tachycardia, fever, severe pain

## Volvulos (cont)

## Diagnosis confirmed by

Abdominal plain film--->showing colonic distention

#### **Treatment**

Endoscopic decompression, surgery if unresolved by non-surgical means

## 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



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## **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)

## 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)

## Colorectal Cancer

## Risk Factors

Hereditary nonpolyposis colorectal cancer

## General

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

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## Colorectal Cancer (cont)

## 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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