#### **CC**: Abdominal pain

HPI: 54 year old woman.

- usual state of health until 2 months ago
- sharp, LLQ abdominal pain that comes and goes
- eating sometimes worsens pain
- eating triggers diarrhea and abdominal cramping; occurs with any type of solid food
- endorsed bright red blood and maroon blood in stool
- losing unknown amount of weight
- at least 3x daytime BMs and 3x nighttime BMs
- endorsed fevers (up to 104F)
- no recent travel, no sick contacts, no undercooked food
- rest of ROS negative

#### PMH:

- none

#### SH:

- Tobacco: denied - EtOH: denied - Drugs: denied

#### **OUTPATIENT MEDS:**

- none

#### **PHYSICAL EXAM:**

Tmax: 37.8C, BP: 124/65, HR: 114, RR: 20, SpO2: 98% on RA

General: In NAD

**HEENT:** PERRL, EOMI, non-icteric sclera

CV: Tachycardic rate, regular rhythm, no murmurs/rubs/gallops

**Pulm:** CTAB, no wheezes/rhonchi/crackles

**GI:** Non-distended, soft, tender to palpation at LLQ, no rebound, no

guarding, no masses or organomegaly

**Neuro:** AOx3, no asterixis, answering questions appropriately,

moving all extremities spontaneously against gravity

Skin: No rashes, no jaundice

#### LABS: Bs: 12 5.8 2.6 105 134 12.7 406 0.3 < 0.2 3.9 0.6 16 6 MCV: 99 C diff: GDH negative, toxin A/B negative 113 INR: 1.2 Enteric pathogen panel: negative

CRP: 30 / ESR: 78

Stool calprotectin:

>3000

Iron: 17

TIBC / Transferrin: 150 % Transferrin sat: 11

Ferritin: 276

Cryptosporidium Ag: negative CT Abd/Pelv W Con:

Stool O&P: negative

Giardia Ag: negative

Diffuse wall thickening & mucosal hyperenhancement of the entire colon. Inflammatory vs infectious

colitis

Flex sig: Continuous & circumferential inflammation from rectum to sigmoid

Path:

Chronic active colitis...cryptitis w/ crypt abscesses

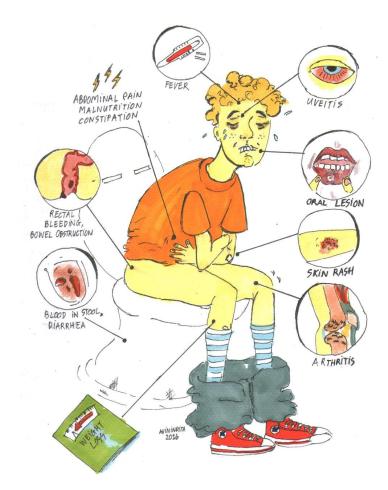
#### PROBLEM REPRESENTATION:

Middle aged woman w/ depression, presenting with acute on chronic abdominal pain, blood diarrhea, tenesmus, found to have...

## ULCERATIVE COLITIS

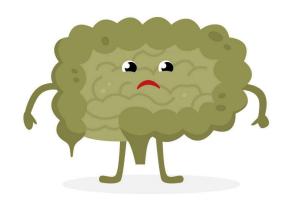
## CLINICAL MANIFESTATIONS

- Fever, weight loss, abdominal pain
- BM characteristics
  - Diarrhea
  - Urgency
  - Tenesmus
  - Incontinence
  - Frequency?
  - Blood in stool?
- Ask about infectious exposures



## **WORKUP**

- R/o infection
  - C diff
  - Enteric pathogen panel (Shiga toxinproducing E coli, campylobacter, Salmonella, Yersinia)
  - Stool O&P
  - CMV (endoscopic specimen)
- Inflammatory markers (e.g. ESR / CRP)
- Imaging (e.g. KUB) to r/o toxic megacolon



**BAD BACTERIA** 







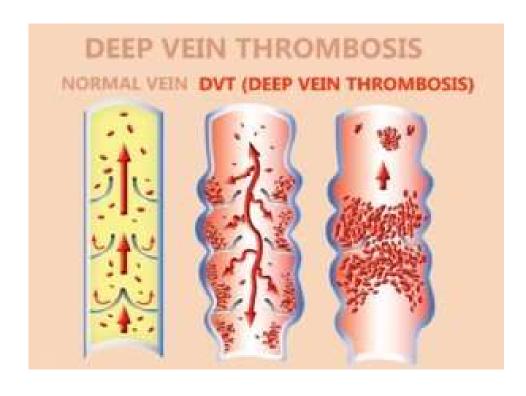
Enterococcus faecalis



Clostridium difficile

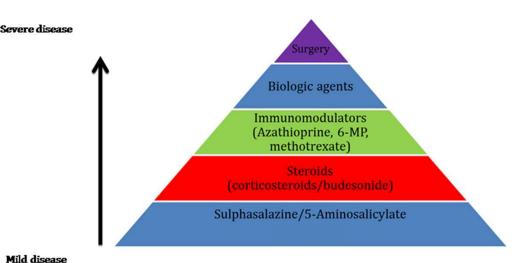
# DAILY ASSESSMENT / INTERVENTIONS

- GI Symptoms
  - Abdominal pain
  - Frequency of BM
  - Consistency of stool
  - Presence of blood in stool
- DVT prophylaxis
  - LMWH, unfractionated heparin, fondaparinux
  - Mechanical DVT ppx only if severe GI bleeding



### TREATMENT

- 5-Aminosalicylates (nonsteroidal anti-inflammatory e.g mesalamine)
- Glucocorticoids
- Immunomodulators (thiopurines e.g. azathiopurine)
- Biologics (anti-TNF agents e.g. infliximab)
- Surgery



#### Severe Ulcerative Colitis Inpatient Protocol



#### 2. Initial Assessment

#### History

- Confirm IBD diagnosis and course (use and response to prior meds, surgeries, EIMs)
- · Stool frequency, presence of blood
- · Abdominal pain
- Fever
- · Weight loss
- · Infectious exposures

#### Physical

- · Signs of dehydration
- · Abdominal tenderness

#### Labs

- · CBC, CMP, Mg, CRP
- · Stool calprotectin, GI PCR, C. diff
- Pregnancy test when applicable
- . If not documented- Quant gold, HBV, HCV
- Consider: Blood Cx, TPMT phenotype, drug levels naging
- KUB (Concern for megacolon if >6cm and toxic)
- Consider cross-sectional imaging if severe pain, fever, leukocytosis
- Consider small bowel imaging if not previously documented

#### GI Consult

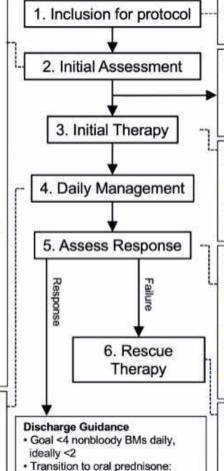
- GI team will determine timing of flexible sigmoidoscopy or other endoscopy
- For flex sig, prep with 1-2 tap water enemas spaced at least 1 hour apart, NPO at least 6 hours

#### 4. Daily Assessment

- Clinical: Number of stools, formed vs. liquid, blood, urgency, pain, tenderness
- Labs: CBC, BMP, Mg, CRP
- Imaging: KUB only if previously abnormal or symptoms worsen

#### **Daily Interventions**

- Advance diet if no abdominal pain
- SubQ Heparin
- Avoid opiates for pain control



40mg for 2 weeks, 30mg for 2

Followup with GI/IBD provider

weeks, 20mg until followup

within 2 weeks

#### 1. Inclusion for Protocol

Ulcerative Colitis patients admitted with

- ≥6 BMs/day AND
- HR >90 or T >37.5 or HgB <10.5 or CRP >4.5

#### If Concurrent Process is Present

- C. diff: Start PO Vancomycin 125mg q6h and discuss with GI consult to continue or hold steroids
- <u>CMV (from endo specimen)</u>: Start IV Valcyte 5mg/kg q12h, consult infectious disease, and discuss with GI consult to continue or hold steroids

#### 3. Initial therapy (if low concern for infection)

- IV Methylprednisolone 30mg q12h
- Topical therapy if tolerated: Anusol gAM and Rowasa gHS
- Continue home IBD meds
- · NPO or low residue diet
- IV Fluid

#### 5. Assess Response to Steroids

- · Assess response by BM frequency, pain, CRP
- Within 24-48h if no improvement, consult colorectal surgery to begin early discussions of potential surgical options with patient
- By steroid day 3 if no improvement, then Pt has failed steroids
- By steroid day 5 if some improvement, but Pt is still too sick to start oral steroid taper, then Pt has failed steroids
- · Consider calculating Travis or Ho index

#### 6. Rescue therapy

- Infliximab is first choice unless prior anti-TNF failure or documented antibodies to infliximab
- Inpatients receiving IFX should get 10mg/kg with Tylenol 650mg + Benadryl 50mg 30 minutes prior
- Ensure stool calprotectin and CRP within last 48h
- Send TPMT if female or male older than 40
- Discuss with GI consult about concurrent immunomodulator

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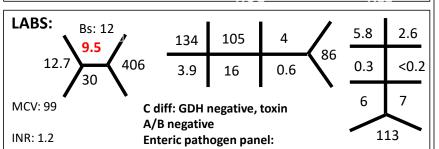
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**DIAGNOSIS: ULCERATIVE COLITIS** 

#### **LEARNING POINTS:**

- Clinical manifestations
  - Fever, weight loss, abdominal pain
  - Diarrhea, urgency, incontinence, tenesmus
  - Ask about stool frequency & presence of blood
  - Evaluate for infectious exposures
- Important initial workup
  - R/o infection (Cdiff, enteric pathogen panel, CMV)
  - Stool calprotectin
  - Inflammatory markers (e.g. CRP)
  - Imaging to r/o toxic megacolon
- Important daily interventions
  - DVT prophylaxis (LMWH, unfractionated heparin, fondaparinux)
- Treatment
  - 5-ASA (non-steroidal anti-inflammatory e.g. mesalamine)
  - Glucocorticoids
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  - Biologics (anti-TNF agents e.g. infliximab)