Approach To The Patient with Chronic Diarrhea

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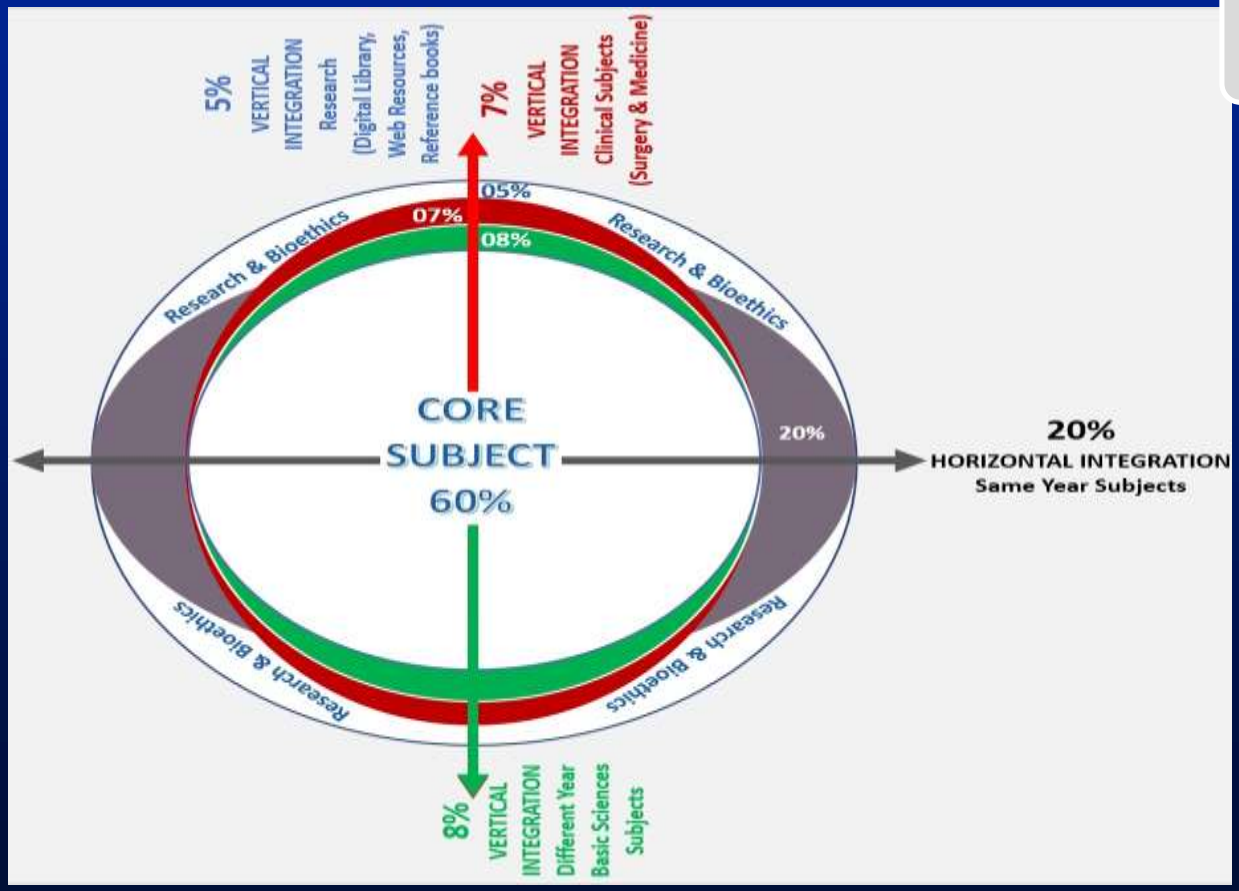
Mission Statement of RMU

- To impart evidence based research oriented medical education
- To provide best possible patient care
- To inculcate the values of mutual respect and ethical practice of medicine

Professor Umar Model of Integrated Lecture



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Physiology
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Ethics
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Chronic Diarrhea

- Definition
- “Old” sub-types
  - Osmotic, secretory, motility, inflammatory
- “New” Subtypes
  - Inflammatory, Fatty, and Watery
- General Approach

Diarrhea

Advances over the last 100 years

Chronic Diarrhea

- Definition
  - Subjective - >3 BMs per day
  - Objective - >200-300 gms of stool per day
  - Complaint of Liquidity
  - Chronic > 4 weeks

- A 35 year old male presents in opd with history of diarrohea which is stained with blood and mucous for the last 6 weeks.
- Associated with weight loss

Chronic Diarrhea

Think about IBS and lactose intolerance!!

“Old” Sub-types of Diarrhea

- Osmotic
- Secretory
- Motility Induced
- Inflammatory

Diarrhea..Cha-cha-cha

Osmotic Diarrhea

- **Mechanism** –
  - Unusually large amounts of poorly absorbed osmotically active solutes
  - Usually Ingested
    - Carbohydrates
    - laxatives

Osmotic Diarrhea

- Lactose-Dairy products
- Sorbitol-Sugar free gum, fruits
- Fructose-Soft drinks, fruit
- Magnesium-Antacids
- Laxatives-Citrate, NaSulfate

Osmotic Diarrhea

- History –
  - Ingestions
    - Laxatives
    - Unabsorbed Carbohydrates
    - Magnesium containing products

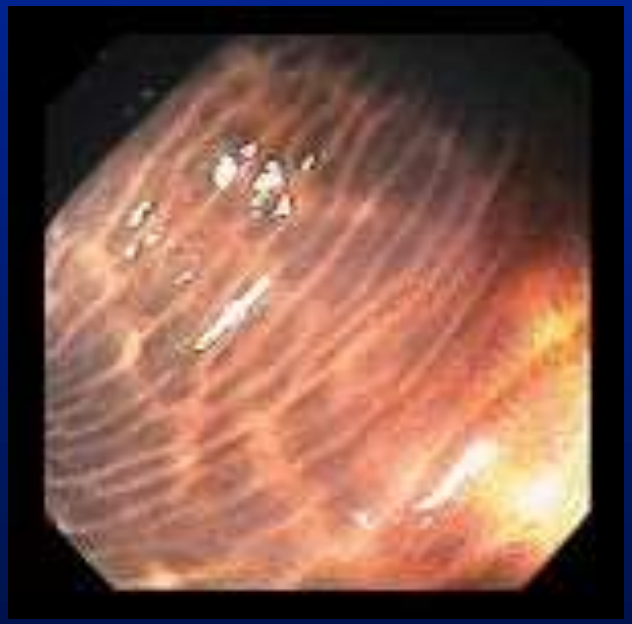
Osmotic Diarrhea

- History –
  - Can be *watery* or loose.
  - No blood, Minimal cramping, No fevers
  - Diarrhea stops when patient fasts!
  - Stool analysis
    - Osmotic gap > 125

$290 - 2([Na+] + [K+]) = ??$

Osmotic Diarrhea

- Work-up
  - Order stool lytes (Na+ and K+) and stool osmolality and pH
  - HISTORY!!!!
    - Specifically ask about ingestions



Melanosis Coli

Secretory Diarrhea

- Much Bigger group and more complex
- Defects in ion absorbtive process
  - Cl-/HCO3- exchange
  - NA+/H+ exchange
  - Abnormal mediators – cAMP, cGMP etc

Secretory Diarrhea

- History –
  - More difficult – but is usually WATERY
  - Non-bloody, persistent during fast
    - ….but not always – malabsorptive subtype (FA's etc)
  - Non-cramping

Chronic Secretory Diarrhea

- Villous adenoma
- Carcinoid tumor
- Medullary thyroid CA
- Zollinger-Ellison syndrome
- VIPoma
- Lymphocytic colitis
- Bile acid malabsorbtion
- Stimulant laxatives
- Sprue
- Intestinal lymphoma
- Hyperthyroidism
- Collagenous colitis

Dysmotility Induced Diarrhea

- *Rapid* transit leads to decreased absorption
- *Slowed* transit leads to bacterial overgrowth

Dysmotility Induced Diarrhea

- Irritable bowel syndrome
- Carcinoid syndrome
- Resection of the ileo-cecal valve
- Hyperthyroidism
- Post gastrectomy syndromes

Fatty Diarrhea

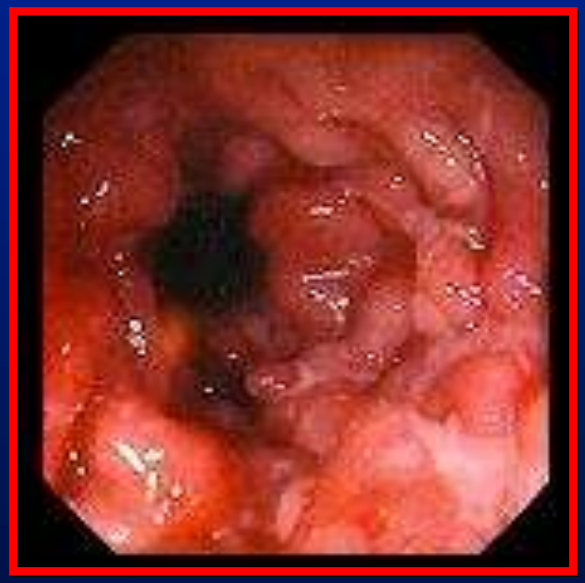
- Malabsorbtion – secondary to pancreatic disease, Bacterial overgrowth, Sprue and occasionally parasites
- Greasy, floating stools
- Measure 24 hour fecal fat
  - > 5g per day = fat malabsorbtion
  - Trial of Panc enzymes, measure TTG

Inflammatory Diarrhea

- Inflammation and ulceration compromises the mucosal barrier
- Mucous, protein, blood are released into the lumen
- Absorption is diminished

Inflammatory Diarrhea

- Inflammatory bowel disease
- Celiac Sprue?
- Chronic infections
  - Amoeba
  - C. Difficile, aeromonas,
  - Other parasites
  - HIV, CMV, TB,



Ulcerative Colitis

Inflammatory Diarrhea

- History
  - Bloody diarrhea
  - Tenesmus, and cramping
  - Fevers, malaise, weight loss etc
  - May have FMHx of IBD
  - Travel?

“New” Sub-types

- Inflammatory – IBD, parasitic infections, fungal, TB, viral, Sprue(?), rare bacteria
- Watery – Secretory, osmotic and some motility types
- Fatty - Pancreatic insufficiency, sprue, bacterial overgrowth, large small bowel resections

Chronic Diarrhea

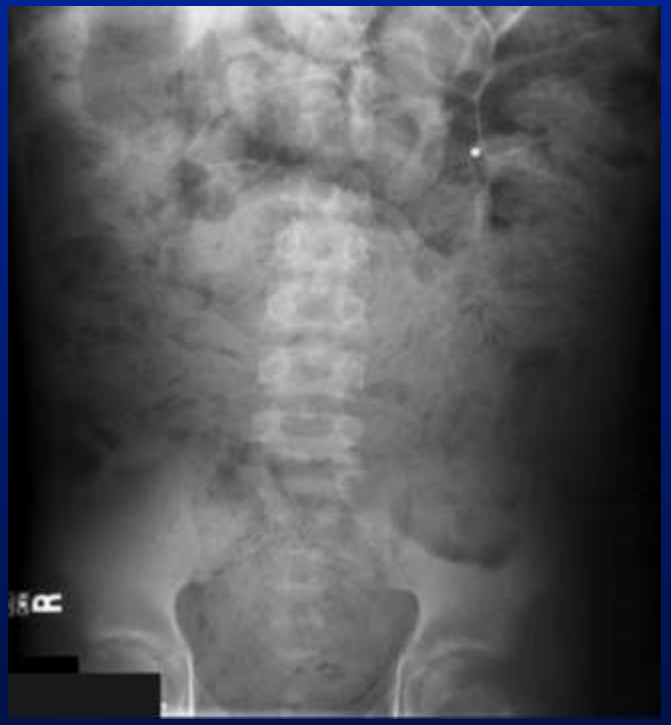
Think about IBS and lactose intolerance!!

Surgical causes

- Spurious diarrohoea

CONSTIPATION!!!

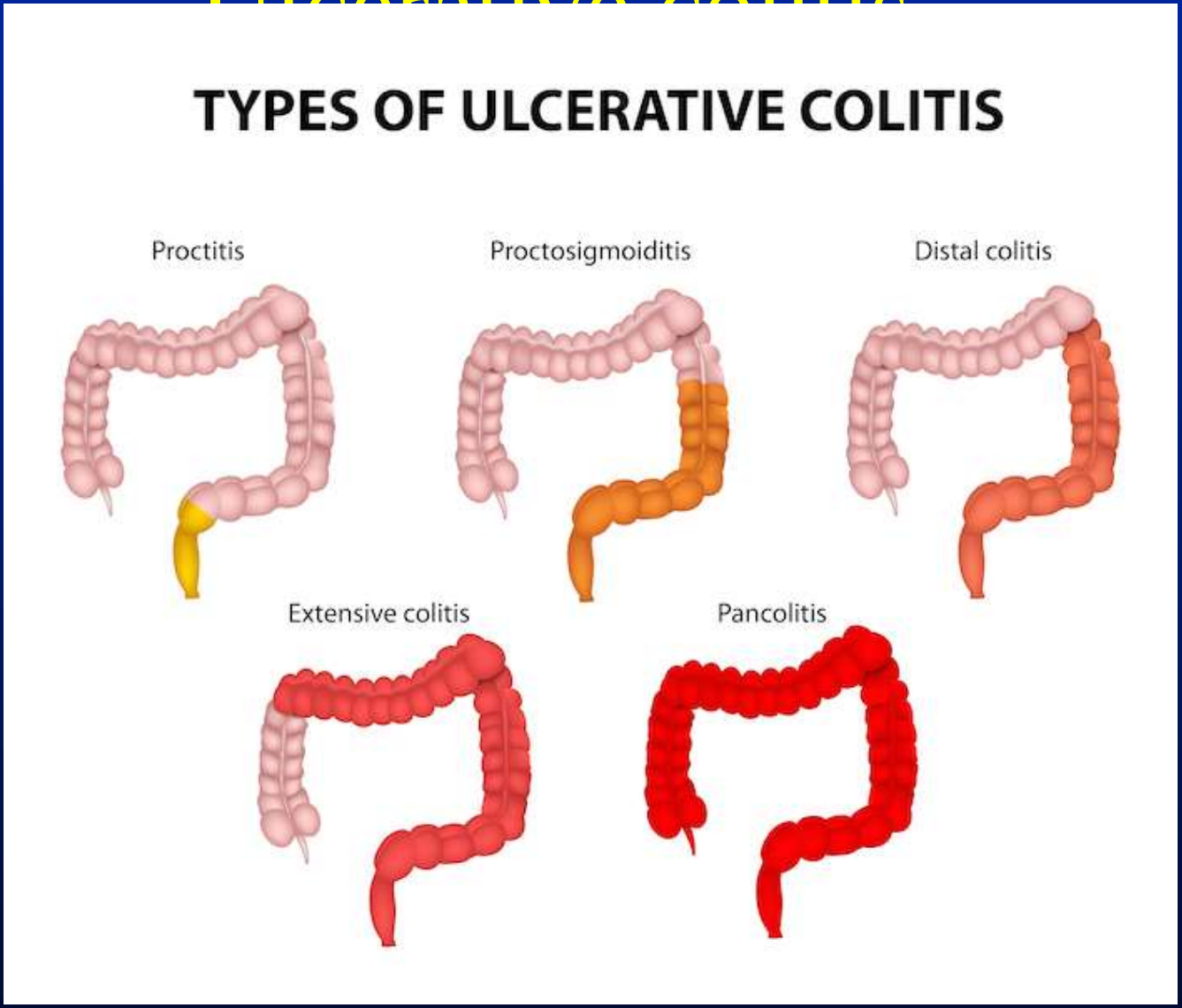
- Yes that's right ***constipation***!
  - "Overflow" diarrhea
  - Extremely common!
  - Check KUB!!
  - Often in elderly with fecal incontinence
  - Think fiber



- Sense of incomplete daefecation
- Tenesmus

Inflammatory bowel disease

Ulcerative colitis



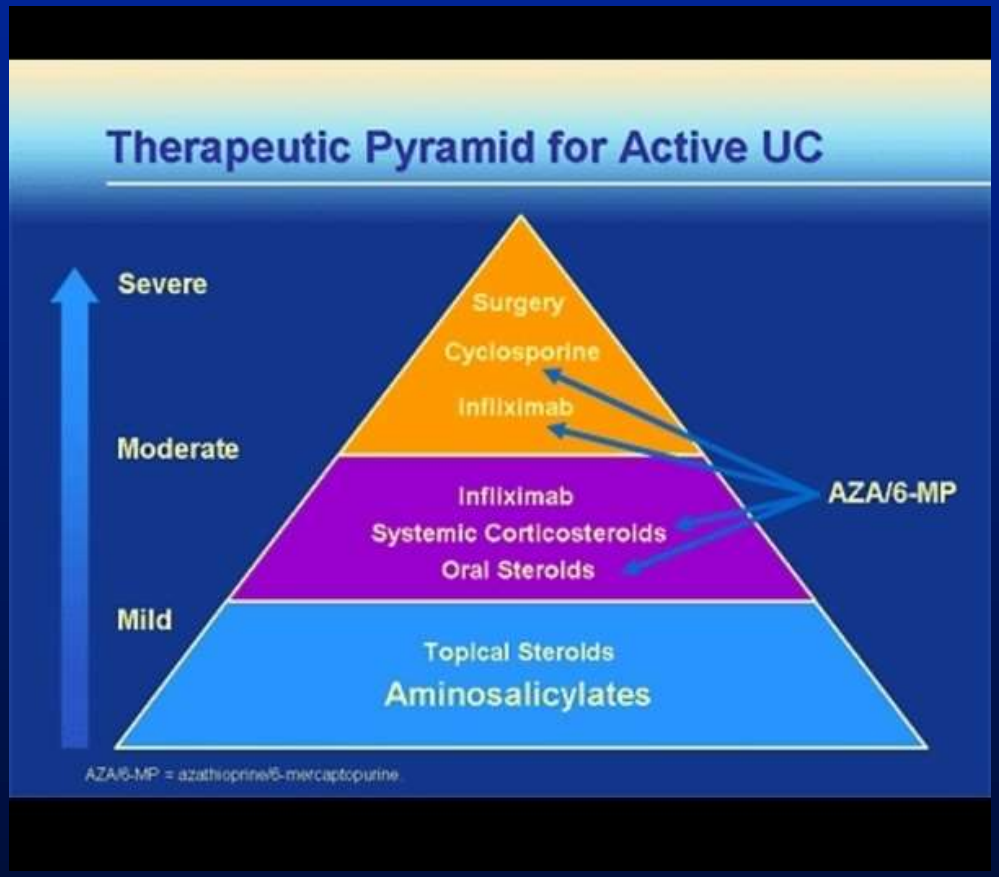
Treatment of Ulcerative Colitis

- Medical therapy
  - 5-ASA drugs
  - Steroids
  - Immunosuppressants (azathioprine)
- Surgery

Oxford

Colorectal

Surgical intervention



Crohn s disease

Malignancy

History

- Describe diarrhea
- Onset?
- Pattern
  - Continuous or intermittent
- Associations
  - Travel, food (specifics)

  Stress, meds,
- Weight loss? Abd pain?
- Night time symptoms?
- Fmhx –
  - IBD, IBS, other?
- Other medical conditions?
  - Thyroid, DM, Collagen vascular, associated meds???

Physical Examination

- Vital Signs, general appearance
- Abdomen – tenderness, masses, organomegally
- Rectal exam – Sphincter tone and squeeze
- Skin – rashes, flushing,
- Thyroid mass??
- Edema?

Initial Work Up

- Again, address any obvious causes
- Somewhat different then a GI approach
- Initial labs
  - CBC, Chemistry,
  - Stool analysis
    - Wt., Na+, K+, osm, pH, Fat assessment (sudan), O&P, C Diff. stool cx? WBC?

Chronic Diarrhea

Don’t forget to consider fecal incontinence!

And *Constipation*

Strongly consider *IBS* and going with minimal work-up.

Colonoscopy

CT scan

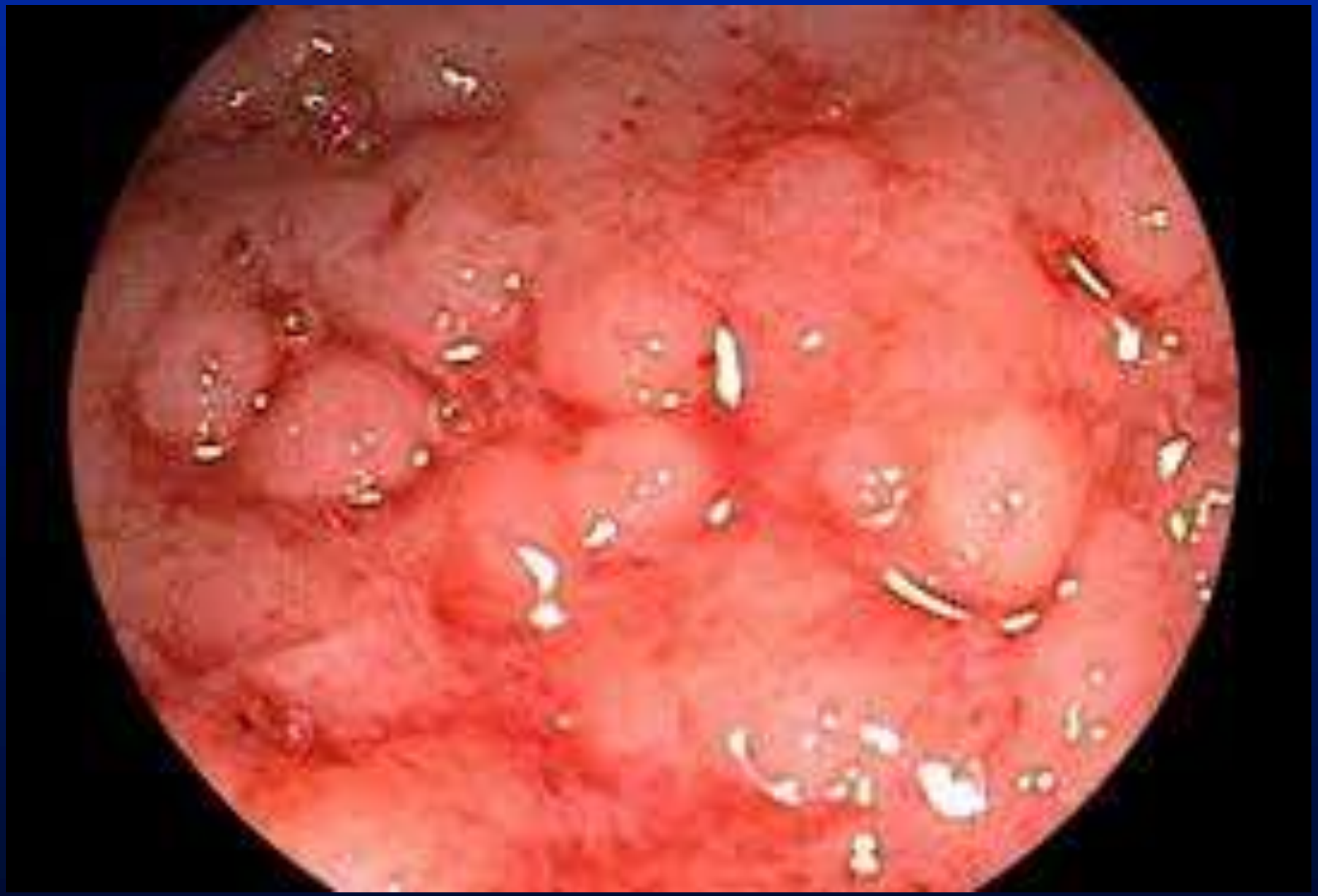
History
Localizing the source

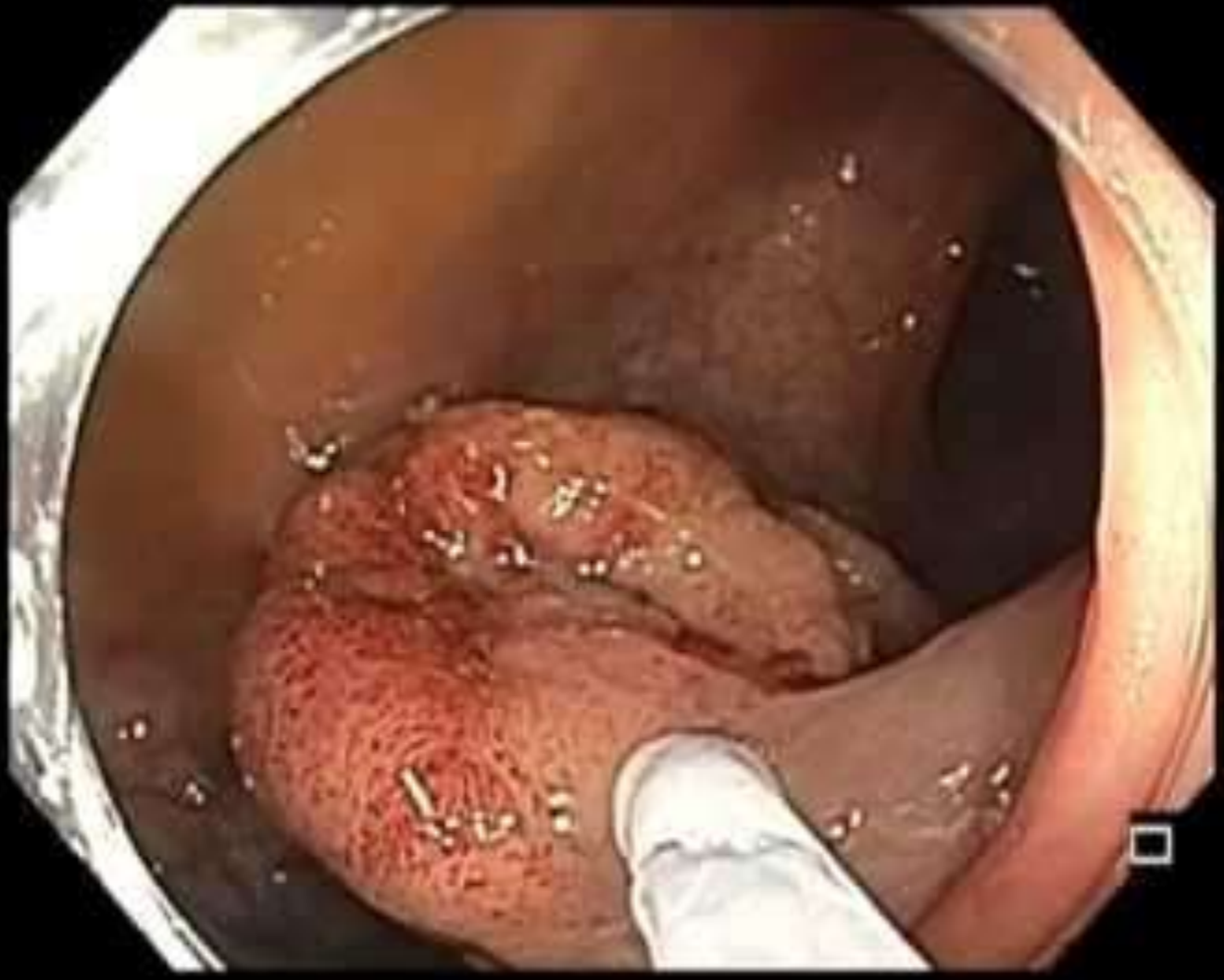
Small bowel source

- Large volume
- Steatorrhea
- No blood
- No tenesmus
- Peri-umbilical pain

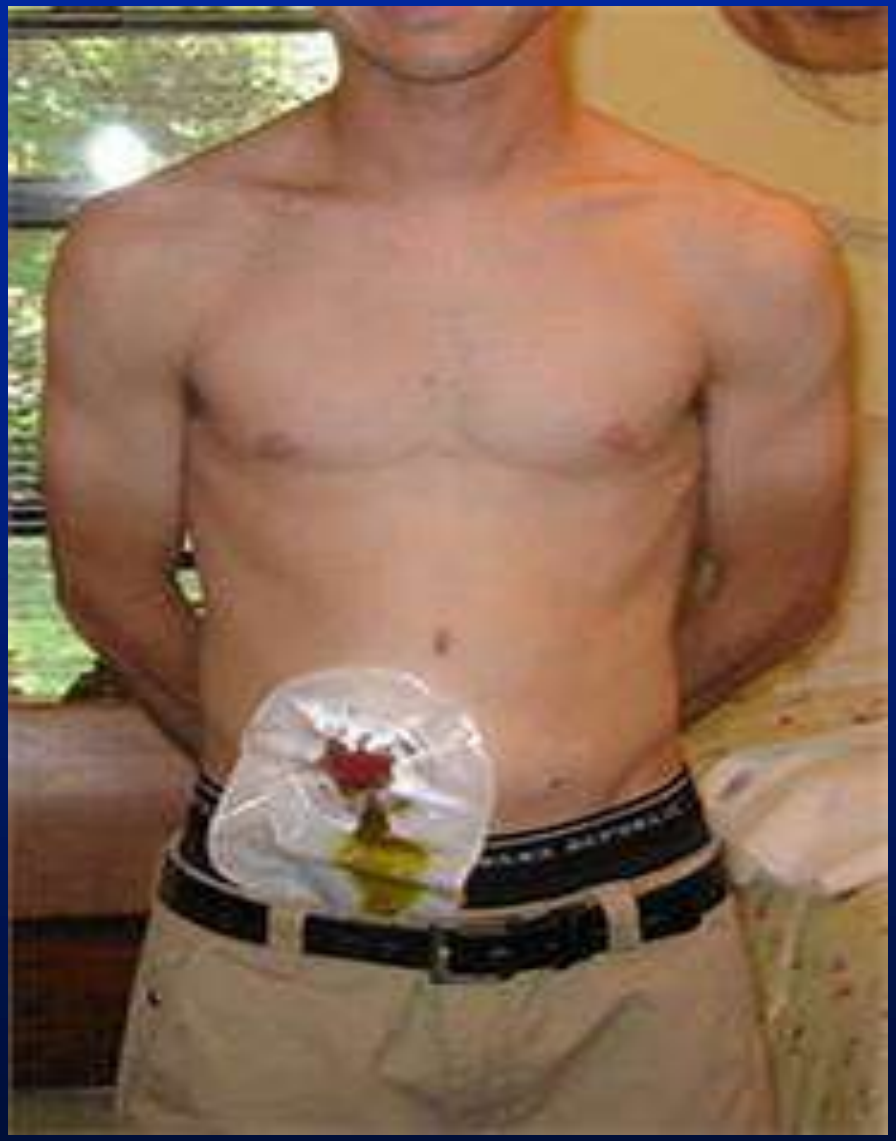
Colonic source

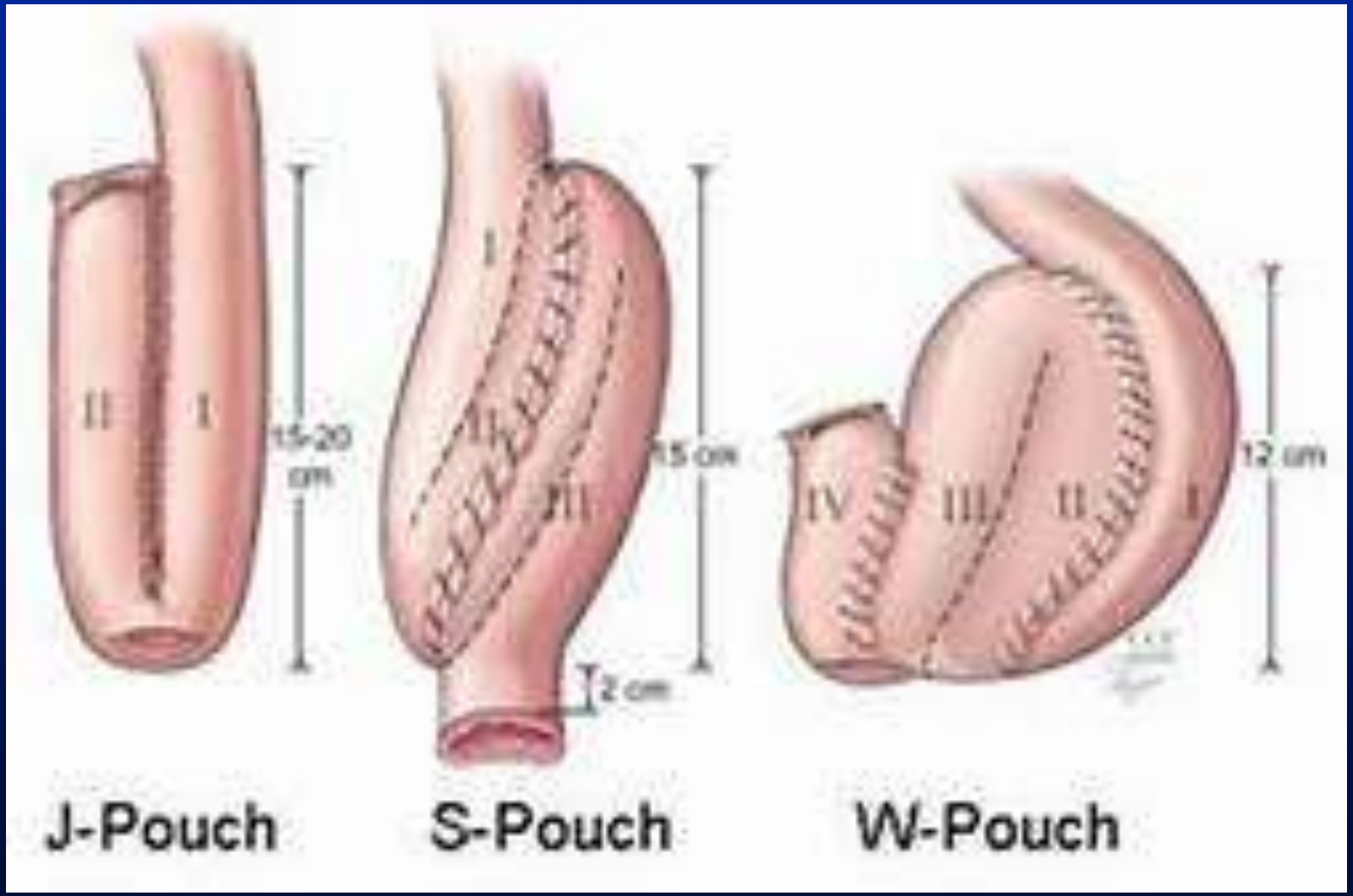
- Small volume
- No steatorrhea
- Bloody
- Tenesmus
- Lower quadrant pain





Treatment




II
I
15-20 cm
I
II
III
15 cm
2 cm
IV
III
II
I
12 cm
J-Pouch
S-Pouch
W-Pouch