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F.R.C.S.I

GENERAL & COLORECTAL

CONSULTANT SURGEON



Inflammatory bowel disease

Ulcerative Colitis

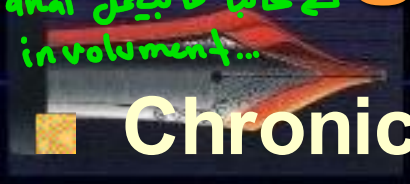
Crohn's Disease



Introduction

- Ulcerative Colitis & Crohn's Disease.
- Obscure etiology → كلاهما غير معروف السبب
- Chronic , Relapsing , Inflammatory Bowel Disorders.
  - Chronic: symptoms لكن بتقل او تد
  - Relapsing: بيروح ويجي
- Ending in inflammatory damage.
  - may leued to fistula - stricture
- Extra-intestinal manifestations.
  - ↳ Jaundice - eye complian - backache .. etc.
  - very important to ask about it in the history ...
- Late complications include malignancy.
  - * The Dis plasia:- mild - moderate - severe ..
    - mild بتقدر تخليها pre Cancerous
    - severe ..Cancer إذا
  - displasia يعني بدها تتحول
  - The IBD is premalignant dz...
  - * The severe displasia near to Carcinoma in Situ...

ULCERATIVE COLITIS



- Chronic mucosal IBD.
- Remissions, and exacerbations.
- Unknown etiology , confined to large bowel.
- Genetic, Microbial, Immunological factors play and environmental and seasonal factors .
- 30% of patient used to come to surgery now is decreasing.
- Young , equal sex , white , rich.
- 10% of patients have first degree relative affecte
- smoking is protective .
- Hypersensitivity lamina propria to luminal antig

* In CD there is Anal involvment espically with colonic CD [may be preceed the GI symp]

* 10% of IBD present in children...

30 - 50%

UC

* In IBD the systemic symptoms preceeds the GIT symptoms espically in children...

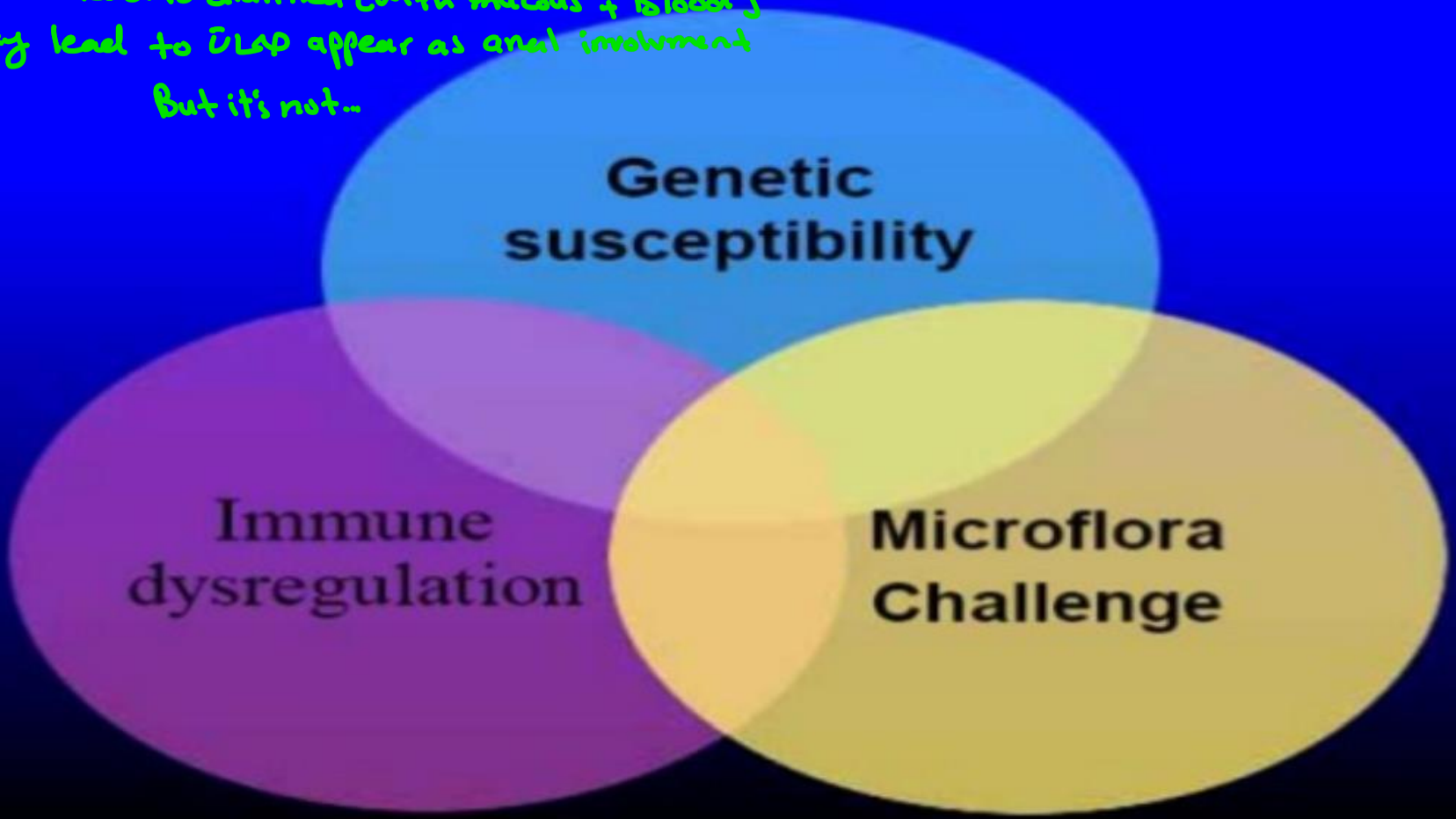


Clip sl

Etiologic Factors in IBD

*The UC leads to diarrhea [with mucous + Blood] may lead to ULAD appear as anal involvment

But it's not..





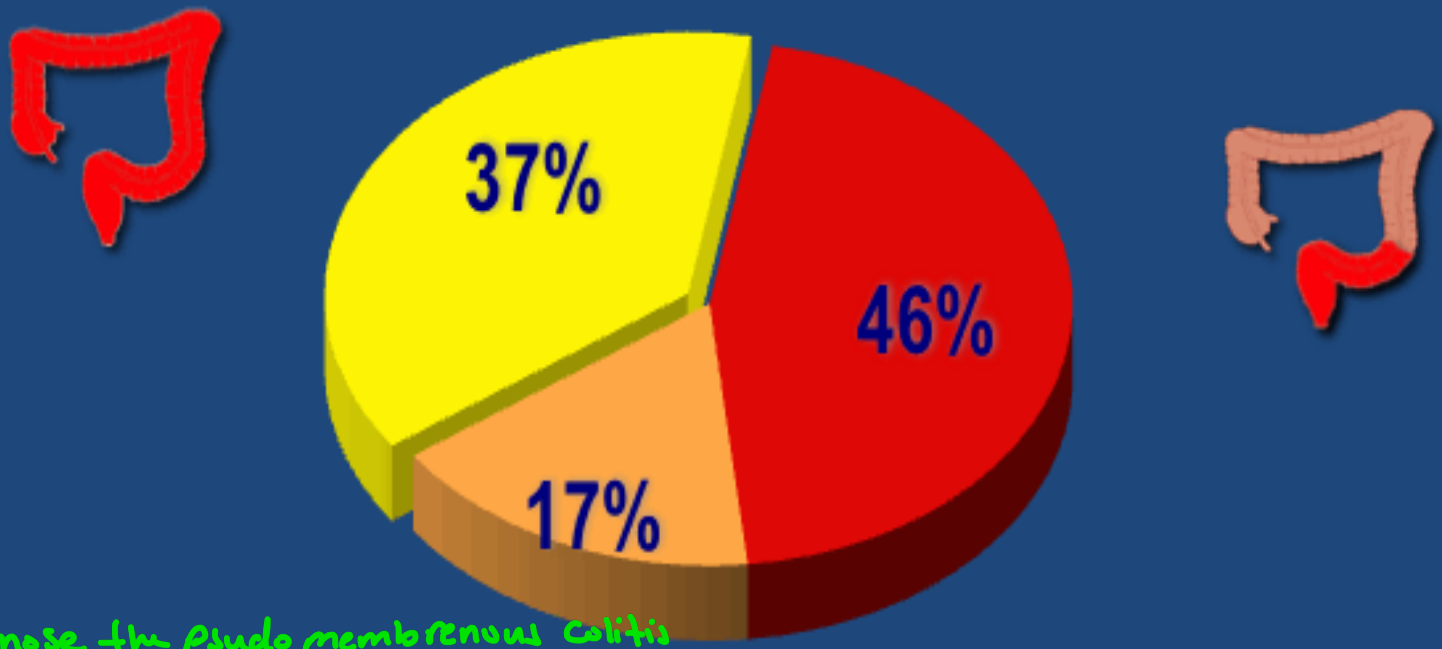
Presentation

25-40%

- 40% rectum (proctitis). alone — Not has systemic symptoms...
  - * Rectum length: 12cm * Anal canal length: 4cm...
  - ↳ need suppository ##
- 20% rectum and left colon (procto - sigmoditis).
- 30% beyond splenic flexure.
- Anal disease Rare 10%. due to diarrhea which lead to ulcers - ...بواسير
- Bimodal presentation. in young age [15-25] and old age [65-65]
  - young: more severe [worse] → ↑risk for malignancy later on...
  - old: milder form
- * Pancolitis in 10% .. [need oral ##]
  - ↳ all colon is involved. [high risk for systemic symptoms]
- NB Abdominal examination is unrewarding
  - ... severe UC ... exam ... severity of UC ... [usually the pt has no abdominal signs] ...

Disease Distribution at Presentation: UC

n = 1116



* we diagnose the pseudo membranous colitis by:- finding Colisdridum toxins in the stool..

and treated by:- metranidazole + stop other antibiotics... or vancomycin...

* The Colistridium infection [psudo membranous colitis] lead to diarrhea occur in the UC ↓ infectious diarrhea..



PROCTITIS

* DDx of IBD:-
1- infections diarrhea...
2- Amoebasis gardia [desintry]...
3- Ischemic Colitis...

26-40%

- Commonest presentation.
- Diarrhea +mucus discharge.
- Bleeding per rectum. if there is no BPR [no Rectal dz] → ① not UC... ② respond to medical ttt ③ CD... [But in CD may be the rectum spared]...
- Tenesmus and urgency.
- Rare anal involvement.
- Systemic symptoms are rare. [12cm] ...
- Proximal extension with time. may reach sigmoid - splenix flexure...
- Constipation rare. ... ممكن تحصل

NB No Bleeding Diagnosis is usually Incorrect. غالباً ... يعني شي

Proctocolitis reach the sigmoid



- Diarrhea , urgency, tenesmus. more than proctitis...
- Blood + mucous discharge.
- Protein losing enteropathy , anemia. due to chronic Blood loss [IDA]
  (due to ↑release of mucous [rich in K^+ and protein] so lead to hypokalemia and hypoproteinemia..
- Exacerbations and Remissions.
  (in winter.. ... history of this disease
- Extra-alimentary Manifestations. extra-intestinal

* The systemic symptoms:-
1- low grade fever...
2- wt loss..
3- sweating..
4- malaisia...
5- joint pain..



Acute presentation

we can't diff. between CD and UC... [But in chronic stage we do Biopsy to diff. them]...

* The first attack was so severe [Bad] → 5-10%.
[this lead to Bad prognosis → ↑ possibility of surgery need 40%]

- 5-10% present with acute symptoms.
  - Bad 1st attack
- Toxic dilatation, bleeding, perforation.
  - more than 7cm in diameter..
  - [not stricture]
  - more in Rt Colon then TC then ceccum...
- Severe local symptoms, electrolyte disturbances.
- 40% will need emergency surgery.
  - in acute presentation

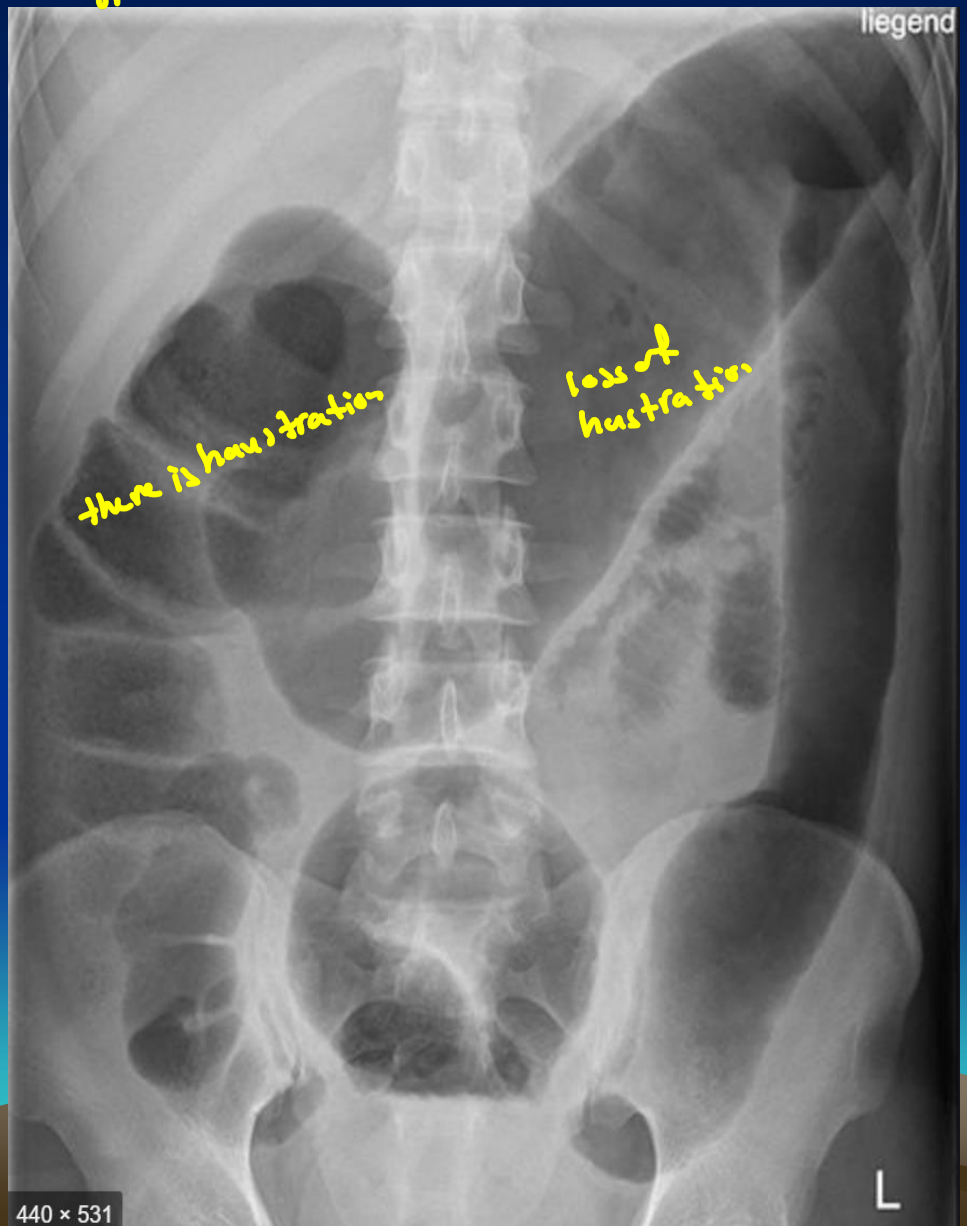
* The diverticular dz more common in the sigmoid...

→ But in usuall presentation the precentage is 30%... ↵

loss of haustrations — typical for UC

Toxic megacolon

dilated colon.



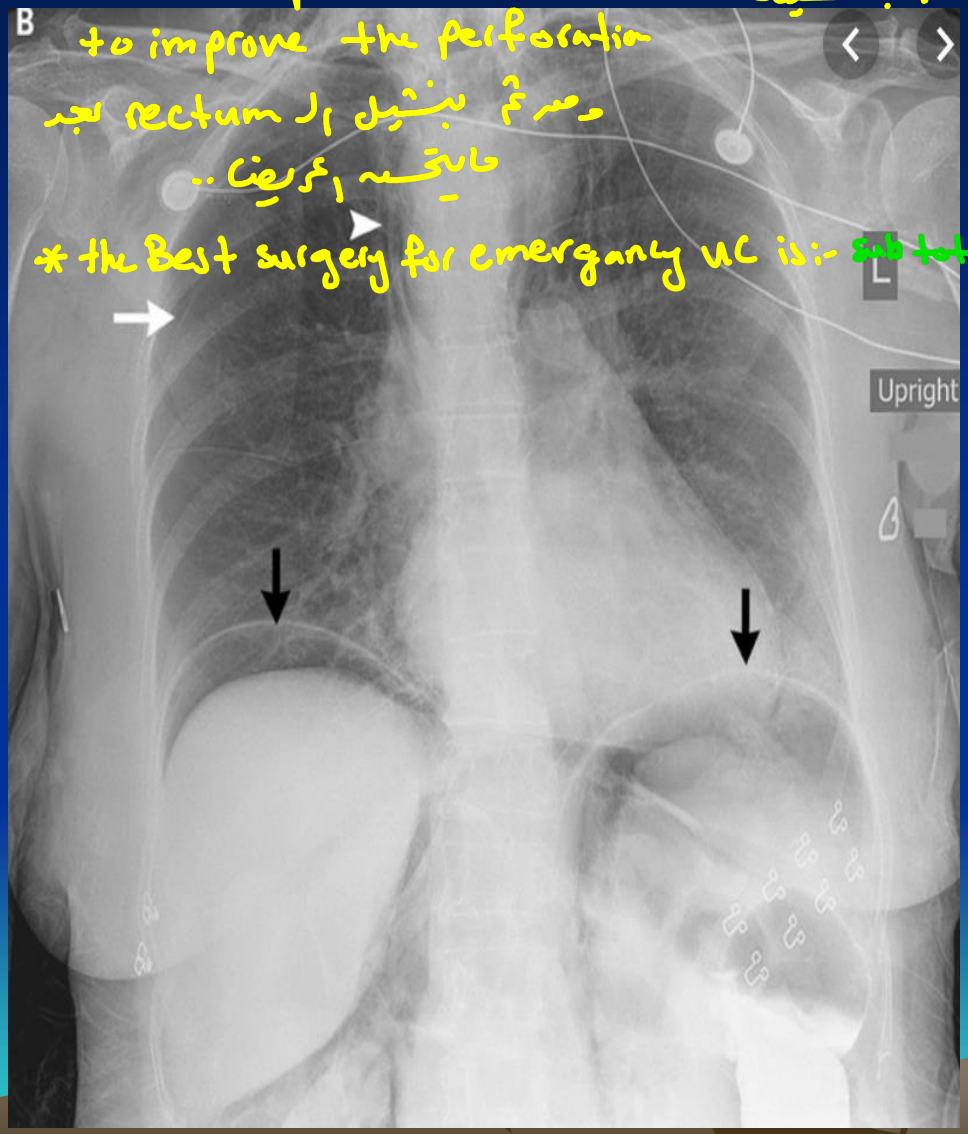


* In UC elective surgery we do Procto Colectomy and we do Pouch anal anastomosis or do end-ileostomy...

we do sub total colectomy ← **Perforation** → air under diaphragm [emergancy]...

Rectal stump الـ نعمل +

.. وجب نحيده Rectum و/أو Colon الـ بنشيل لـ

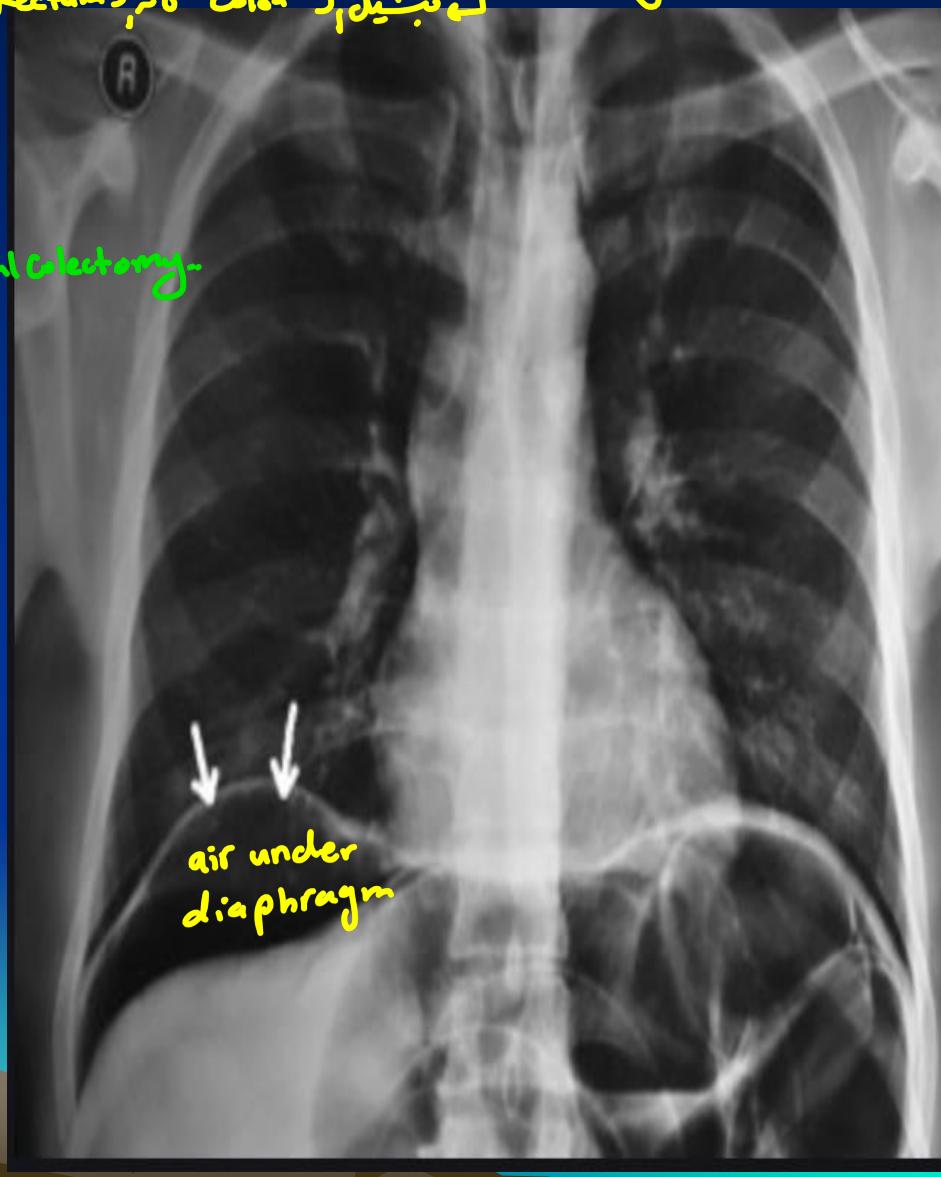


to improve the perforation

وعشان بنشيل الـ rectum نجبر

.. طبيعي وكويس

* the Best surgery for emergancy UC is:- sub total colectomy-



Classification of ulcerative colitis

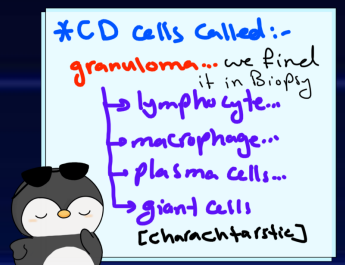


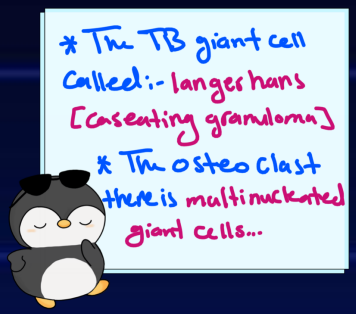
- ***Mild disease***
- Fewer than four stool daily blood or no blood.
- No systemic signs of toxicity.
- Normal ESR.

bowel motion per day

may be minimal

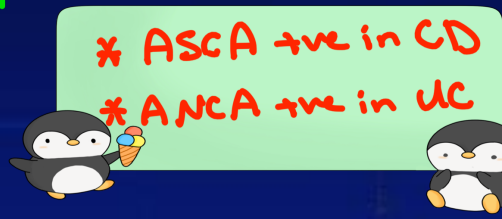
[mild dz]





- ***Severe disease***
- Greater than six bloody stool per day.
- Fever , tachycardia, anemia.
- High ESR.

[systemic symptoms]



NB 75% of patient have p ANCA +ve

[IBD unclassified] کہتے ہیں we doit in indermimt colitis

* The indeterminat colitis occur in acute stage...

Ulcerative Colitis – Clinical Presentation



not true name due to there is late ulcer after granularity-edema - loss of vascular pattern...

*if the CD affect the colon alone ANCA and ASCA...

Mild	Moderate	Severe
2 more than usual stools/day	3-4 stools/day	>5 stools/day
Mild blood per rectum	Moderate bleeding per rectum	Severe bleeding per rectum
Endoscopic assessment Mild	Moderate	Severe

Classification of ulcerative colitis

Montreal classification of extent and severity of ulcerative collitis	
E1 (proctitis)	Inflammation limited to rectum
E2 (left sided; distal)	Inflammation limited to splenic flexure
E3 (pancolitis)	Inflammation extends to proximal splenic flexure.
S0 (remission)	No symptoms
S1 (mild)	4 or less stools per day (with or without blood), absence of systemic symptoms, normal inflammatory markers
S2 (moderate)	4 stools per day,minimum signs of systemic symptoms
S3(severe)	6 or more bloody stools per day,pulse rate ≥90 beats per min,temp≥37.5°C(99.5°F), hemoglobin concentration < 10.5 g/dl,ESR ≥30mm/hr


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LASER-FILM
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* The coagubility and DVT and osteoperosis - renal and gall stones increased in IBD...

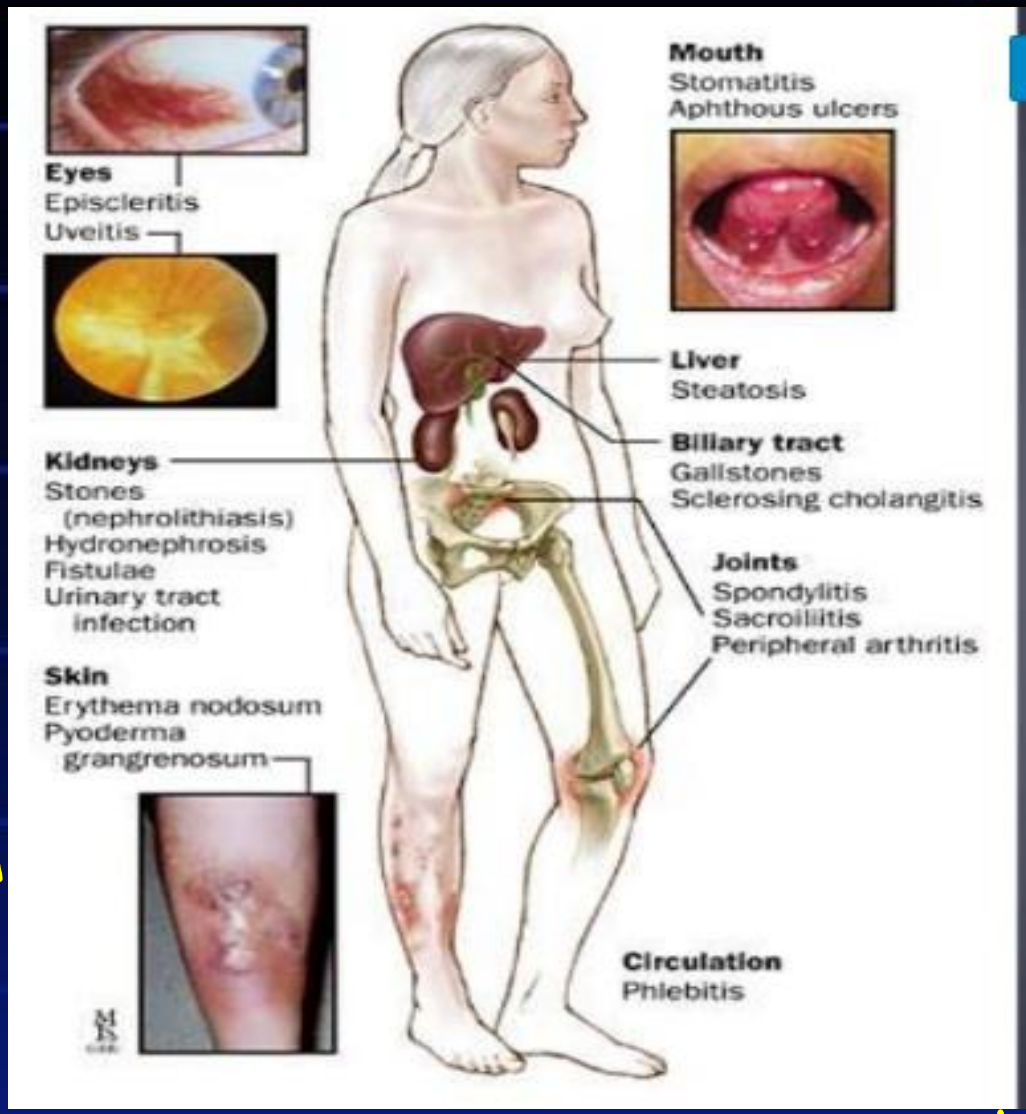
Extra-alimentary manifestations

[Back pain - renal stone - eye problem]

- 30% will have extra-colonic symptoms.

* The Back pain not improved when we treat the UC But the joint pain improved...

- Related to disease activity. as joint pain - تكلم في
* IBD pt may has osteoperosis due to steroid or malabsorption of V.D - fat malabsorption of Ca^{+2} ← fat يخلي dis. Ca^{+2} لـ to lead to osteo perosis → pathological fracture...
- Not related to disease activity.
↳ as Back Pain - Sacroilitus...



* The IBD may lead to gall stones due to ↓ etero hepatic circulation → ↓ Bile salt → ↑ cholesterol and precipitate → stone...

* The IBD lead to Renal stone due to malabsorption of Ca^{+2} so ↓ bind of Ca^{+2} with oxallate so ↓ insoluble complexes so the oxallate become free → bind with Na^{+} → ↑ absorption of Na^{+} - oxallate in colon then reach the kidney and form renal stones...



Arthropathy

Commonest.

* any pt has ileostomy ؟ش colon ما فيه ايه
[Renal] oxallate stone يعني

Activity Related Poly-Arthropathy

- 20 % of patients .
- Large joints , fleeting, asymmetrical.
- Rheumatoid-Factor negative.
- *Ankylosing Spondylitis,* 5%, not related to activity.
- Asymptomatic Sacro-Ileitis.

* The incidance of cancer in the UC 2x time more than in CD...

Dysplasia in IBD



↳ 1% at 8-10 year [rarely occur befor 10 years of dz]...

Risk factors for Malignant Transformation

* To find the displasia we do ① Random Biopsy [كل ما بنزل 10cm of Bowel بآخذ] so at least we take 30 Biopsy.. ② chromoendoscopy → displasia is ... في Colon بيظهر

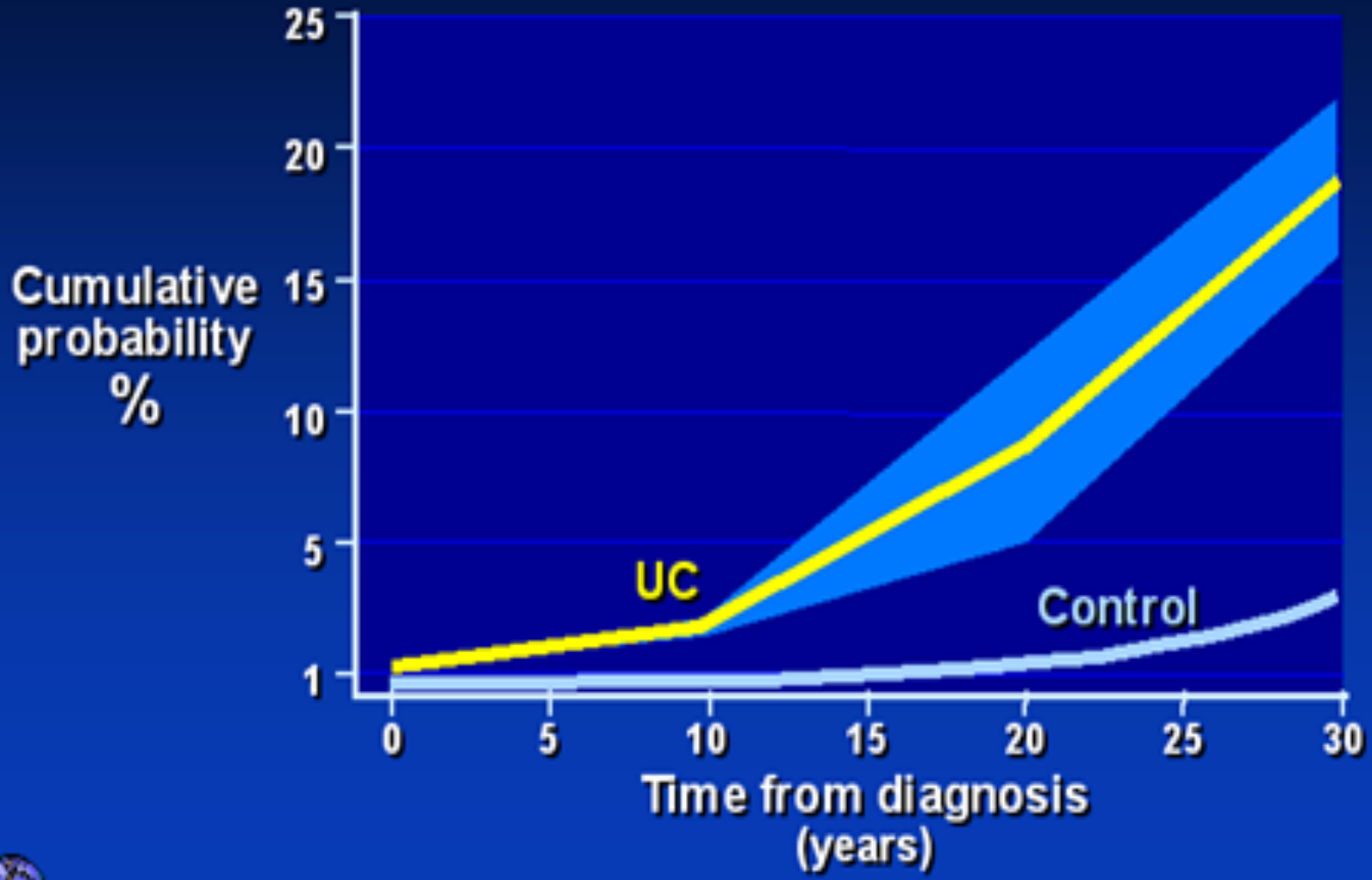
- Disease Duration. → ↑ risk of dysplasia and cancer..
  ↳ [anuualy increase the risk of dysplasia 0.5%]...
  ↳ after 1st 10 years of dz...
- Young Age .
- Disease Extent.
- Persistent mucosal inflammation. [mucinous cancer]
- Primary Sclerosing cholangitis

* Just severe displasia is indication for surgery...
* medium age of colon cancer: 68 y/o..
* The cancer due to IBD come in younger age than colon cancer...
  ↳ diagnosed late [the IBD attack symptoms mask the cancer] ← بتزيد الكتلة السرطانية

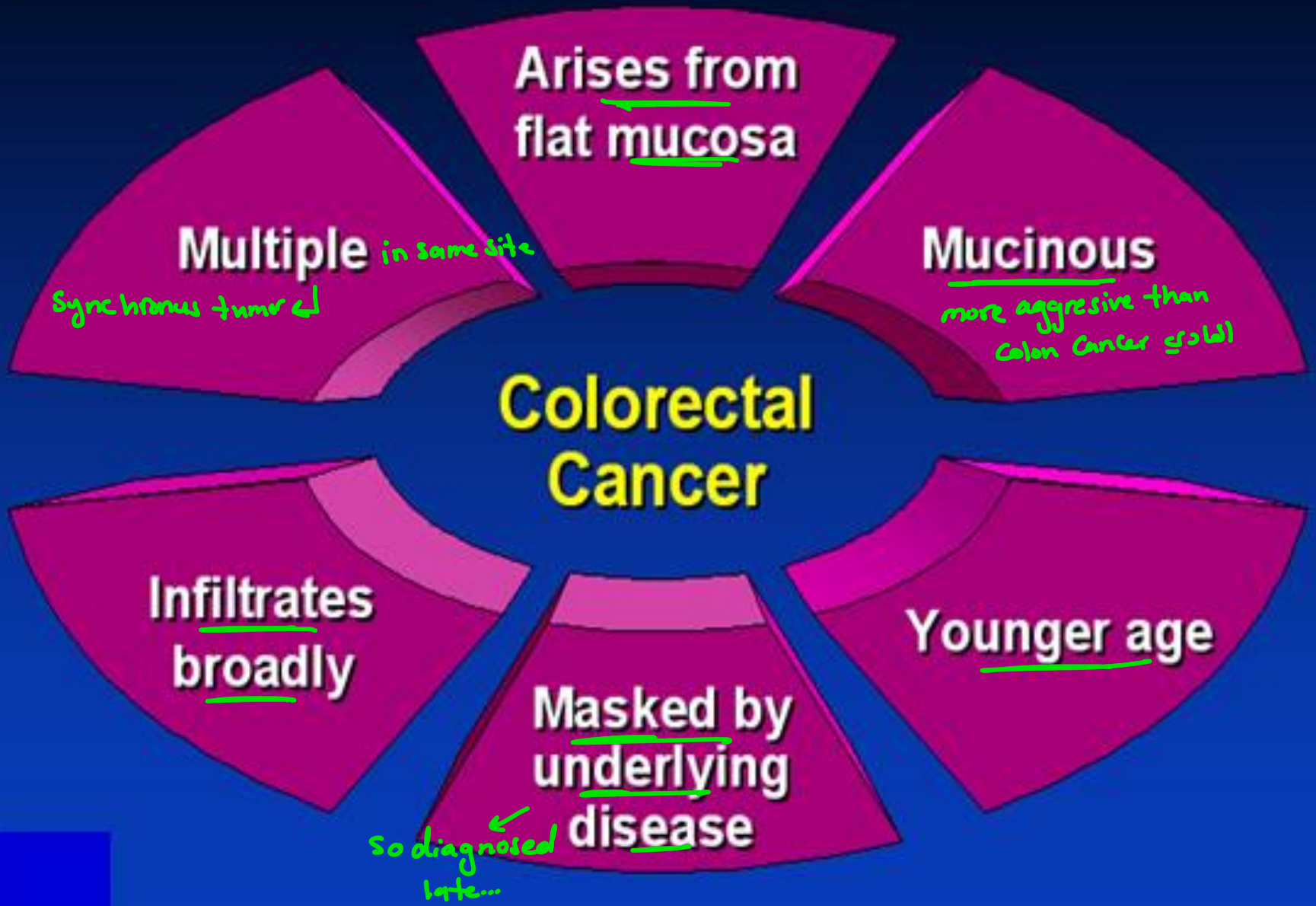


- ***Liver:*** **5%, primary Sclerosing cholangitis.**
- ***Skin:*** ***Erythema*** **Nodosum , Pyoderma10-15% Gangrenosa.**
- ***Eyes:*** **Uveitis,Episcleritis, Iritis**
- **Cancer risk**
  - **1% at 10 years.**
  - **10% at 20 years.**
  - **35% at 30 years.**
  - **65% at 40 years**
  - ***Presence of Dysplasia is Indication for Surgery??.***

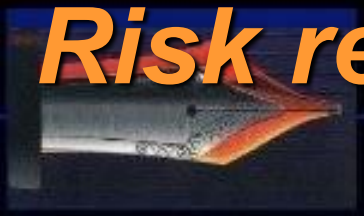
Risk of Colorectal Cancer



Gut 2001, 48:526


Arises from flat mucosa
Multiple in same site
Synchronous tumor
Mucinous
more aggressive than colon cancer
Colorectal Cancer
Infiltrates broadly
Masked by underlying disease
so diagnosed late...
Younger age

Risk relative to duration of disease



	10y	20y	30y
Eaden et al. 2001	2	8	18
Rutter et al. 2006	0	2.5	7.6

Annual CRC after 10years is 0.5-1% per- year

Erythema Nodosum

↳ on legs [not respond to the antibiotic]
But respond to corticosteroid [بشكل كبير]

[not inflammation
[anti biotic ما بتفيد









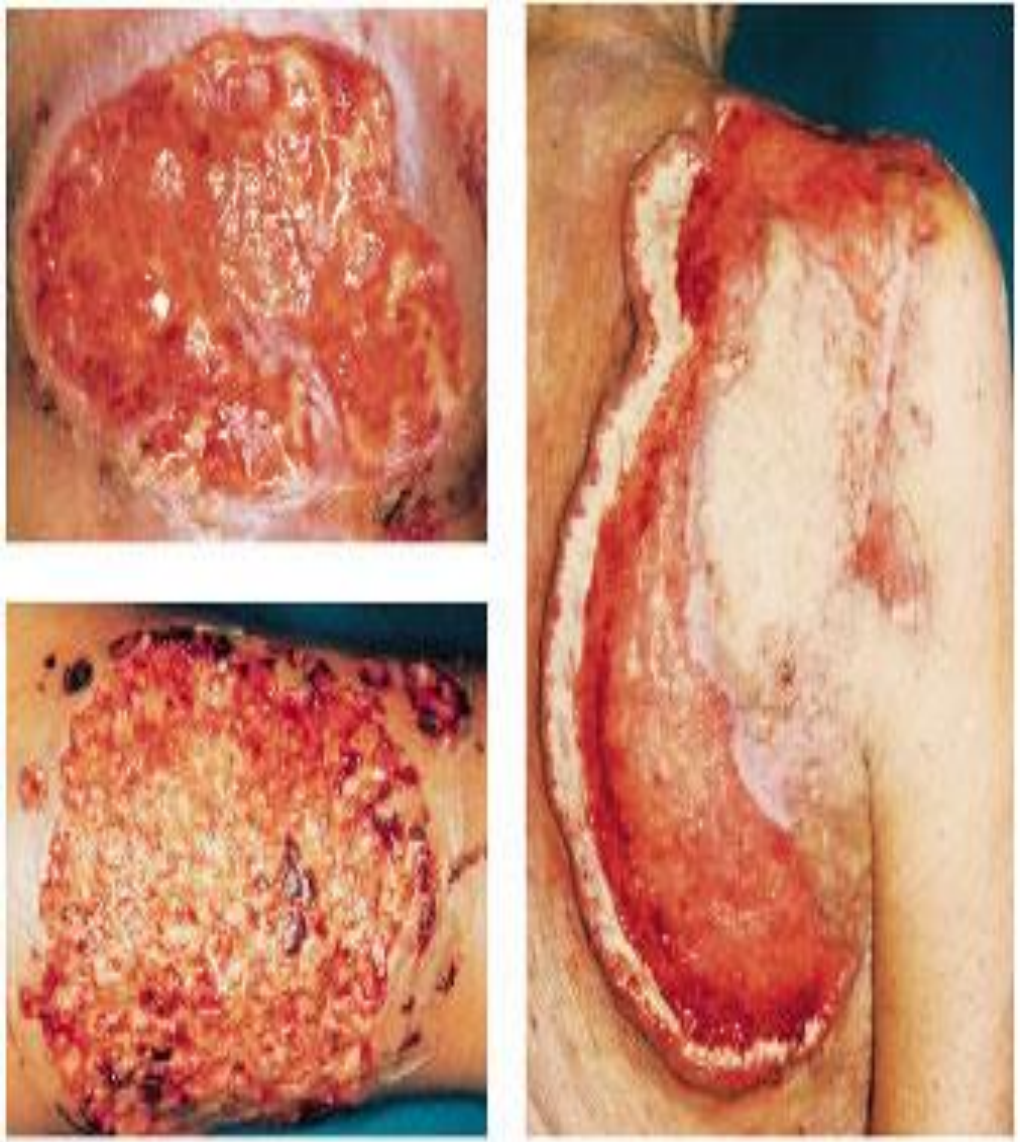


Figure 2. Ulcerative pyoderma gangrenosum is one of the most destructive and excruciatingly painful cutaneous diseases. The violaceous lesions are characterized by a distinctive rolled border such as seen in these patients with rheumatoid arthritis (top left), Crohn's disease (bottom left), and B-cell lymphoma (right).

more aggresive
need ttt asap

Pyoderma Gangrenosum

(not related to the dz activity







iritis or **Uveitis** [eye symptoms]



episcleritis

Erythema Nosdum





Peristomal Pyoderma gangrenosum



Aphthous ulcers



(more in CD than UC)

painfull ulcer in the tounge...

Extra-intestinal Complications of UC

* In UC [mucosal- submucal dz] so lead to early loss of vascular pattern - edema- erythema - psudo polyp - granulosum + late ulcers...

...[infection diarrhea - Ischemic colitis] تقل في UC في المرضى





* Aphtous ulcer [every painfull mouth ulcer] + anal ulcer indicate:- behceet disease...

Aphthous ulceration

Investigations



- ***Endoscopy.***

  Loss of vascular pattern, Edema, Erythema, Contact bleeding on touch, Granularity, Mucosal ulceration ,Pseudo polyps.

- ***Bacteriology***

  Amoebiasis, giardia, shigella, E coli, campylobacter, clostridium difficile cytomegalovirus.

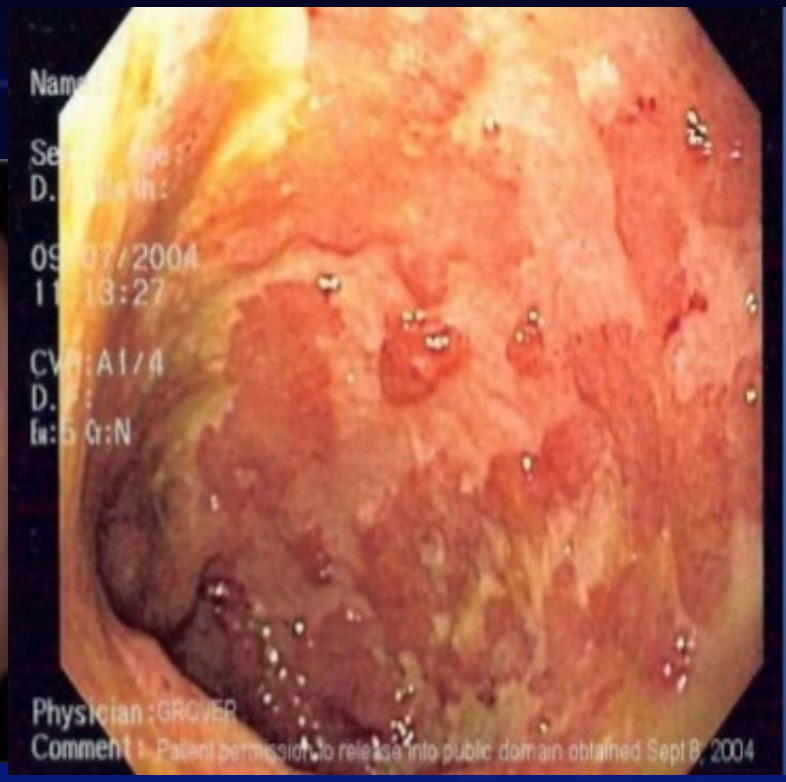
- ***Radiology***

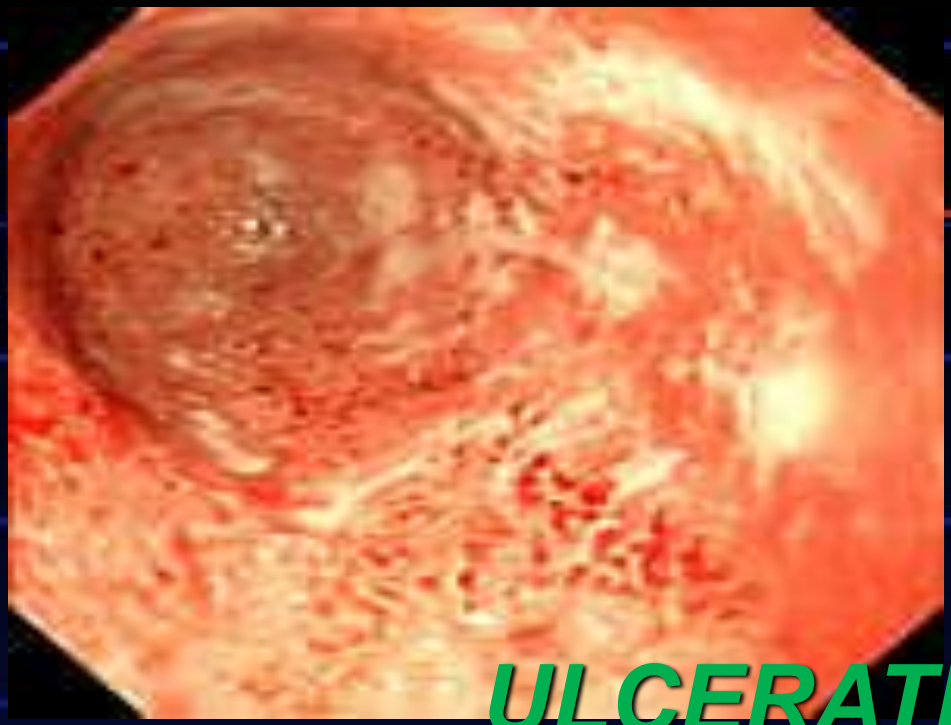
  Barium enema.

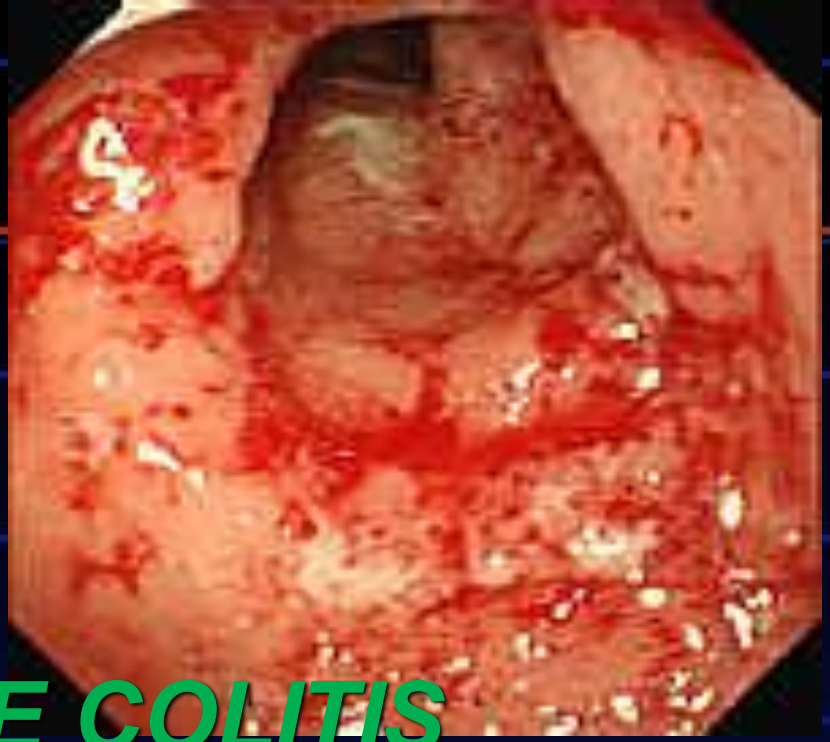
- ***Biopsy***

  ↳ Best for diagnosis we see acute inflammatory cells [neutrophils ..etc].





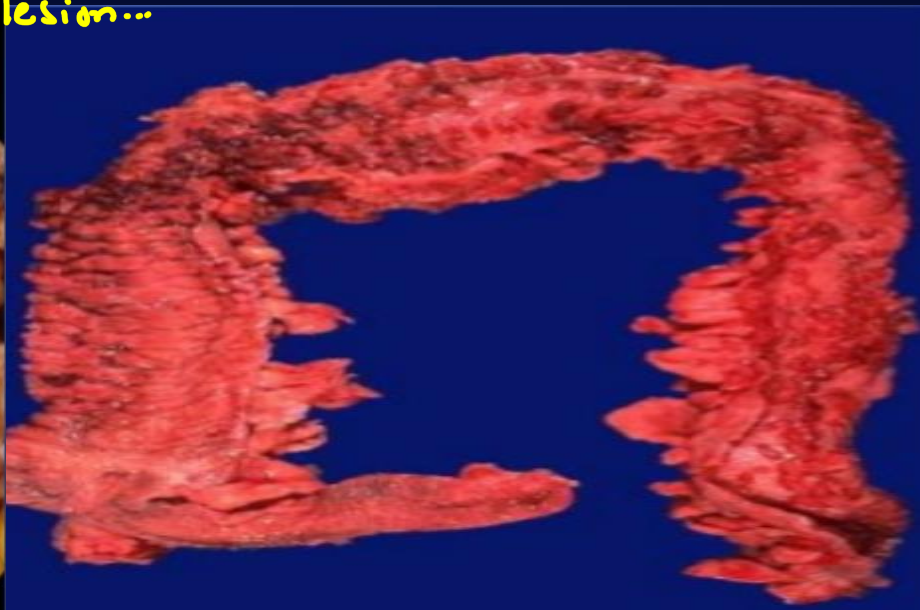




ULCERATIVE COLITIS

- There is No skip lesion...



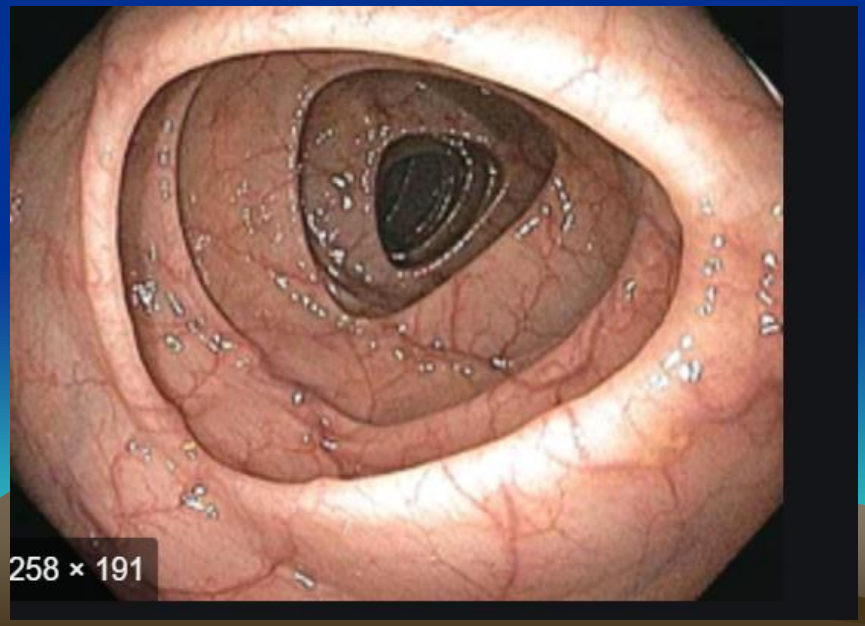


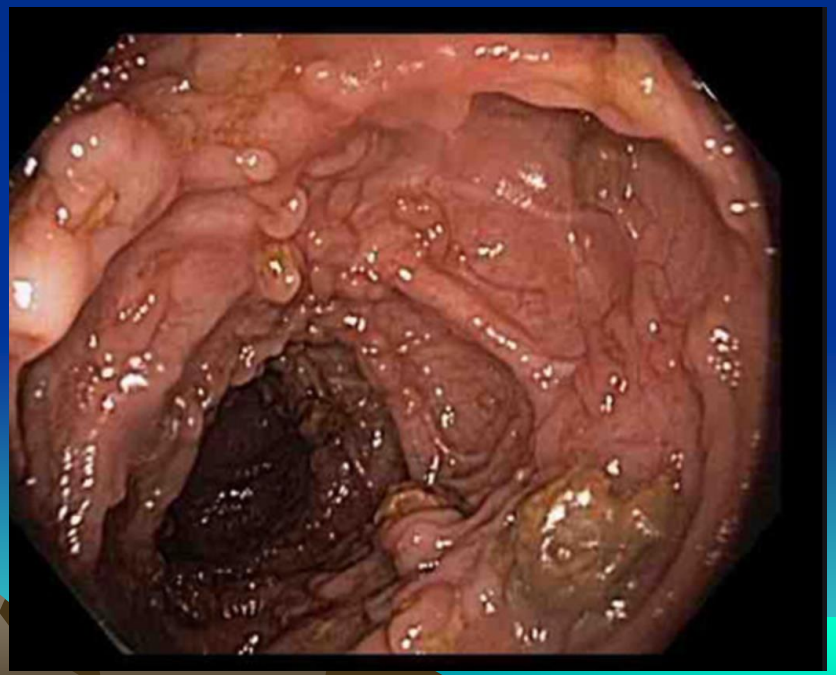


submucosa visible



we don't see the mucosa or submucosa due to edema





BARIUM ENEMA

Chronic stage

- **Loss of haustration**

  Demage to muscularis propria results in colonic dilation and loss of haustra

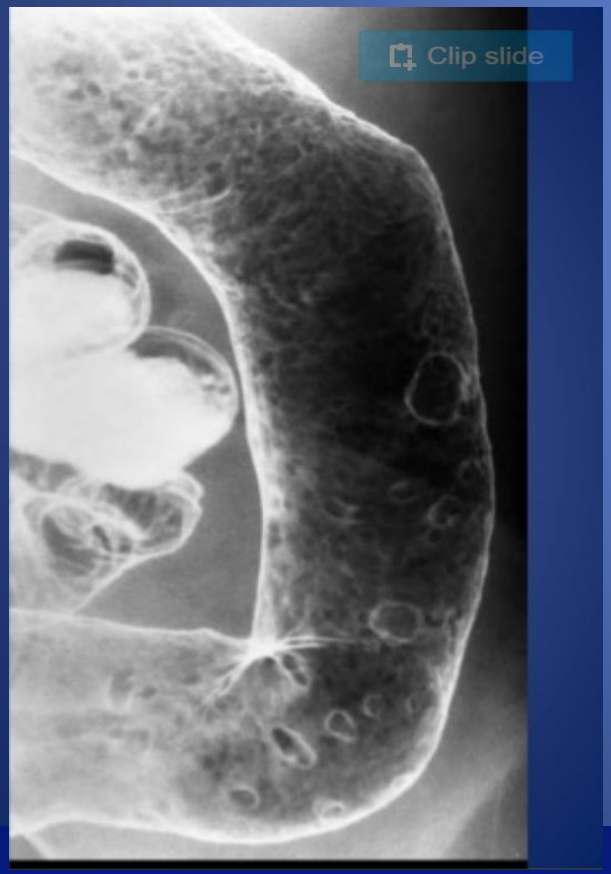


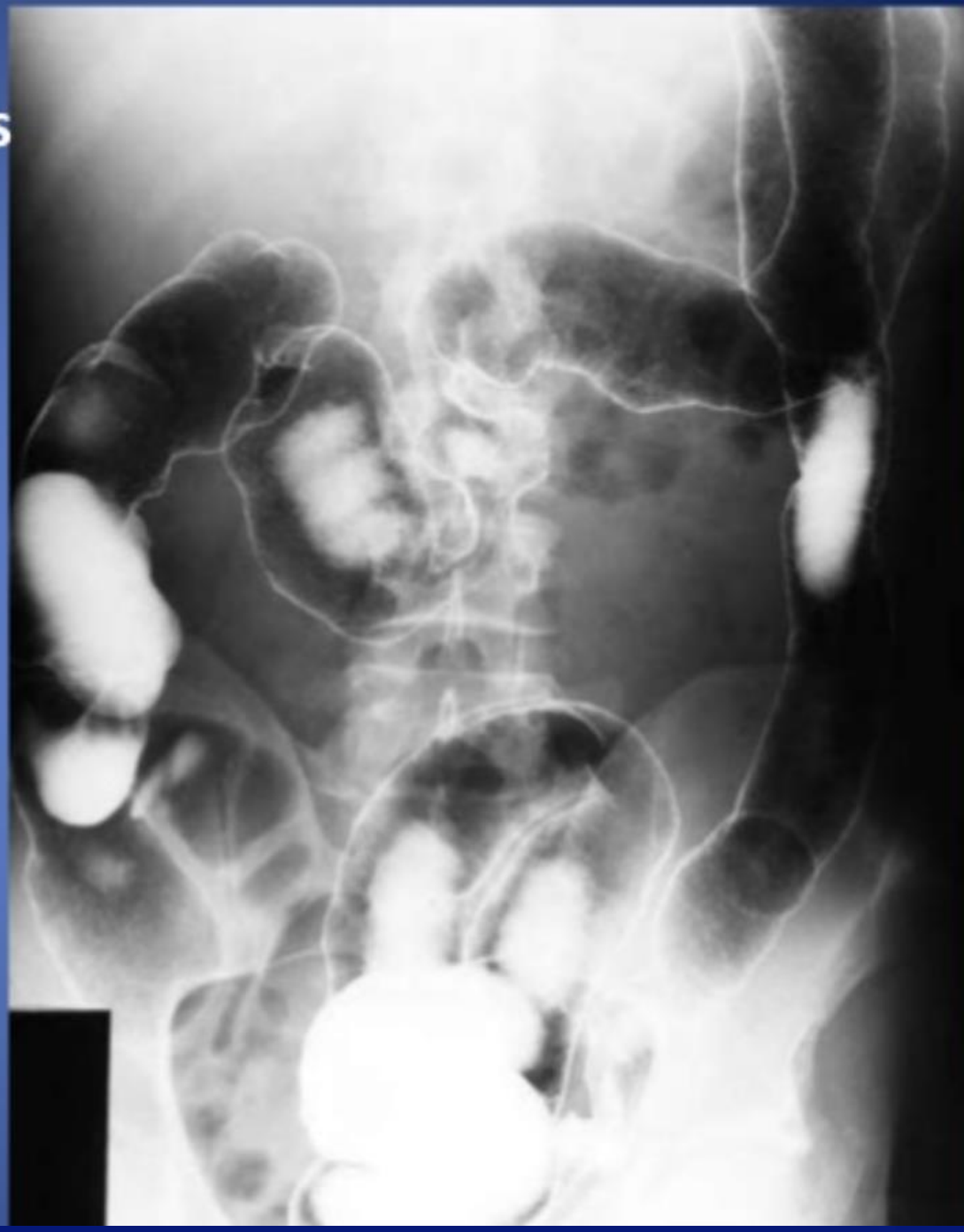




1. Loss of Haustrations
   - ↳ loss of tinua Coli [outer longtudinal has 30cm length. begin at base of appendix and end at recto sigmoid J..
2. Dilatation
3. Lead pipe deformity تصبح مثل ال سبونج
4. No faecal residue

Double-contrast barium enema. The entire colon is ahaustral, with a diffuse granular-appearing mucosa. The air-filled terminal ileum is dilated.



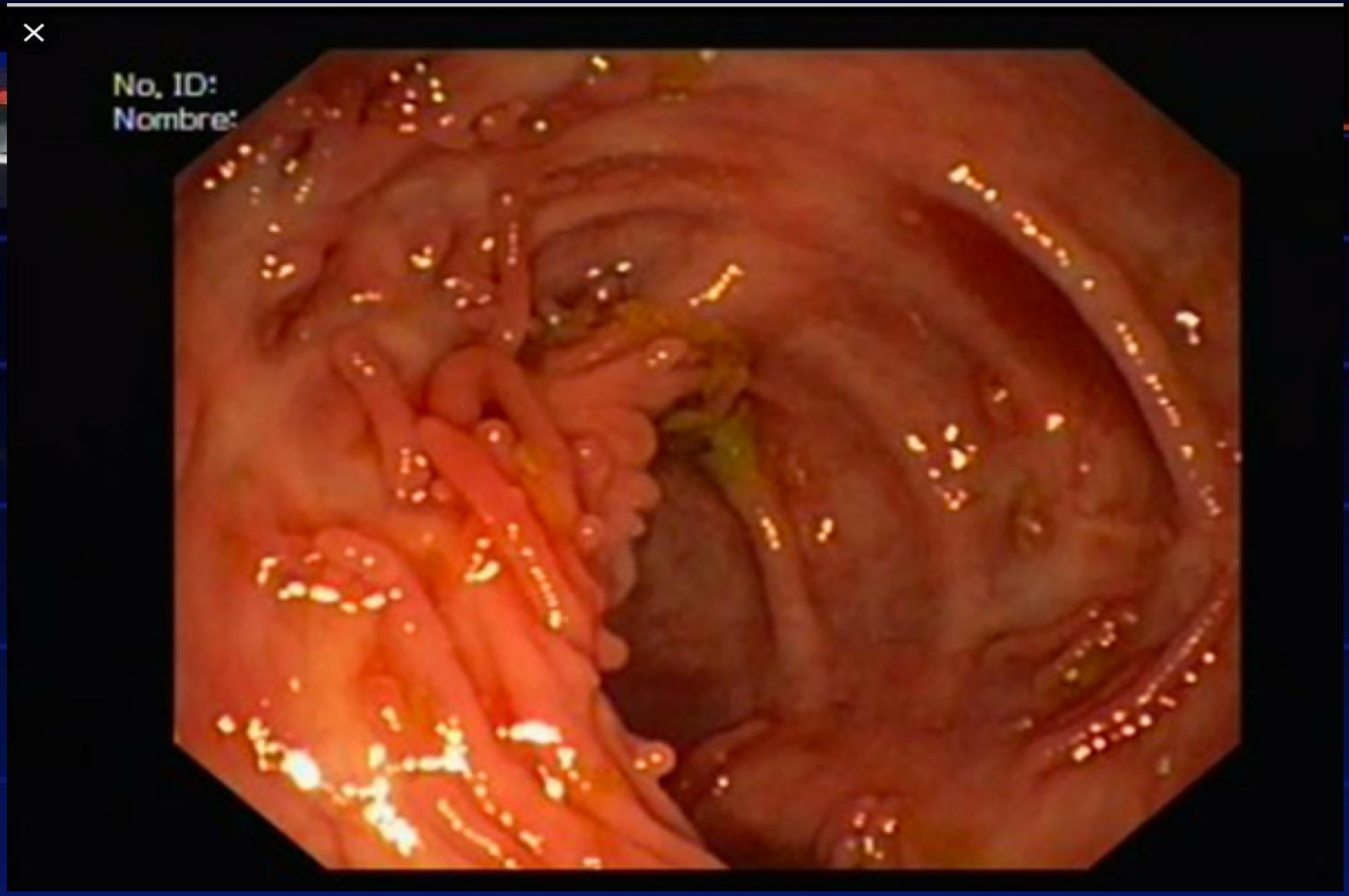


Histo-pathological distinction

Macroscopic	Ulcerative Colitis	Crohn's Disease
Distribution	Colon, rectum	GIT
Rectum	Involved [not spared]	Often spared
Anal disease	Rare	Common
Malignant risk	15% at 25 year [2 times more than CD]	8% at 25 year
Fistula	Never	Common
Stricture	Very rare except in malignancy...	Common

Histopathological distinction

Microscopic	Ulcerative Colitis	Crohn's Disease
Bowel wall	Mucosa ,sub mucosa	Full thickness [trans mural]...
Granulomata	None	40%
Mucus secretion	Goblet cell depletion (not has mucus indicate acute severe - stage) [the mucus rich in K+ - protein] (presented indicate responce of treatment...)	Slightly impaired (mucus in goblet cells...)
Fissuring	Absent	Common [longitudinal - trans mural fissure]...
Crypt abscess	Common	Rare



Inflammatory and pseudo polyp

* complication of inguinal hernia is scrotal edemea and hematoma...

Treatment



- Not curative.
- Induction and Maintenance of Remission.
- Anticipate and treat Complication.
- Correction of Malnutrition and Growth failure.
- Improve quality of life.

② Steroid ① 5-amino Salicylic acid... → will not stop the Bleeding
↳ we stop it once the Bleeding stop... ③ Azathioprine [for remission] 50mg twice daily... ④ Biological ttt ⑤ surgery...

compli: كتتح إذا وعزم نعالجها

... severe colitis بالحضه لحكاه Biological ttt ← ممكن السريع أول حتى نبدأ بال
↳ to ↓ surgical need...

[in children]..

*CD Types:-
1- inflammatory → Better
2- fistulating
3- stricturing → worse
[if there is stenosis need surgical ttt]..

respond well to Biological ttt



Medical treatment

- ***Prednisolone*** 20-60mg daily, to induce remission.
- ***Salaszopyrin*** 1000-2000mg qds,to maintain it.
- ***5 ASA ,*** mesalasine (pentasa- rafasal) 4gm daily in divided dose,remission1.5gm in divided dose.
- osalasine(dipentum),250mg2x2.
- Balsalazide sodium(colazide) 750mg 3tab tds,maintenance2tab bid.



- ***Budesonide*** 3mg cap 3x1,budesonide retention enemas.
- Prednisolone retention enema.
- 5ASA retention enemas, and suppositories
- Azathioprine 50mg1x2.
- Anti diarrhea,loperamide,codeine phosphate.



Indication for surgery

- Failure of medical treatment.
- Toxic dilatation.
- Perforation.
- Bleeding.
- Retardation of growth in young.
- Malignant transformation.

Complication

Causes of failure of medical treatment



- Chronic colitis.
- Steroid dependence.
- Recurrent acute exacerbations.
- Severe symptoms.
- Extra-alimentary manifestations

Choice of operation



- Colectomy ,ileostomy and rectal preservation.
- Colectomy and ileorectal anastomosis.
- Conventional proctocolectomy and permanent ileostomy.
- Restorative proctocolectomy and ileal reservoir.

Pouch anal anastomosis

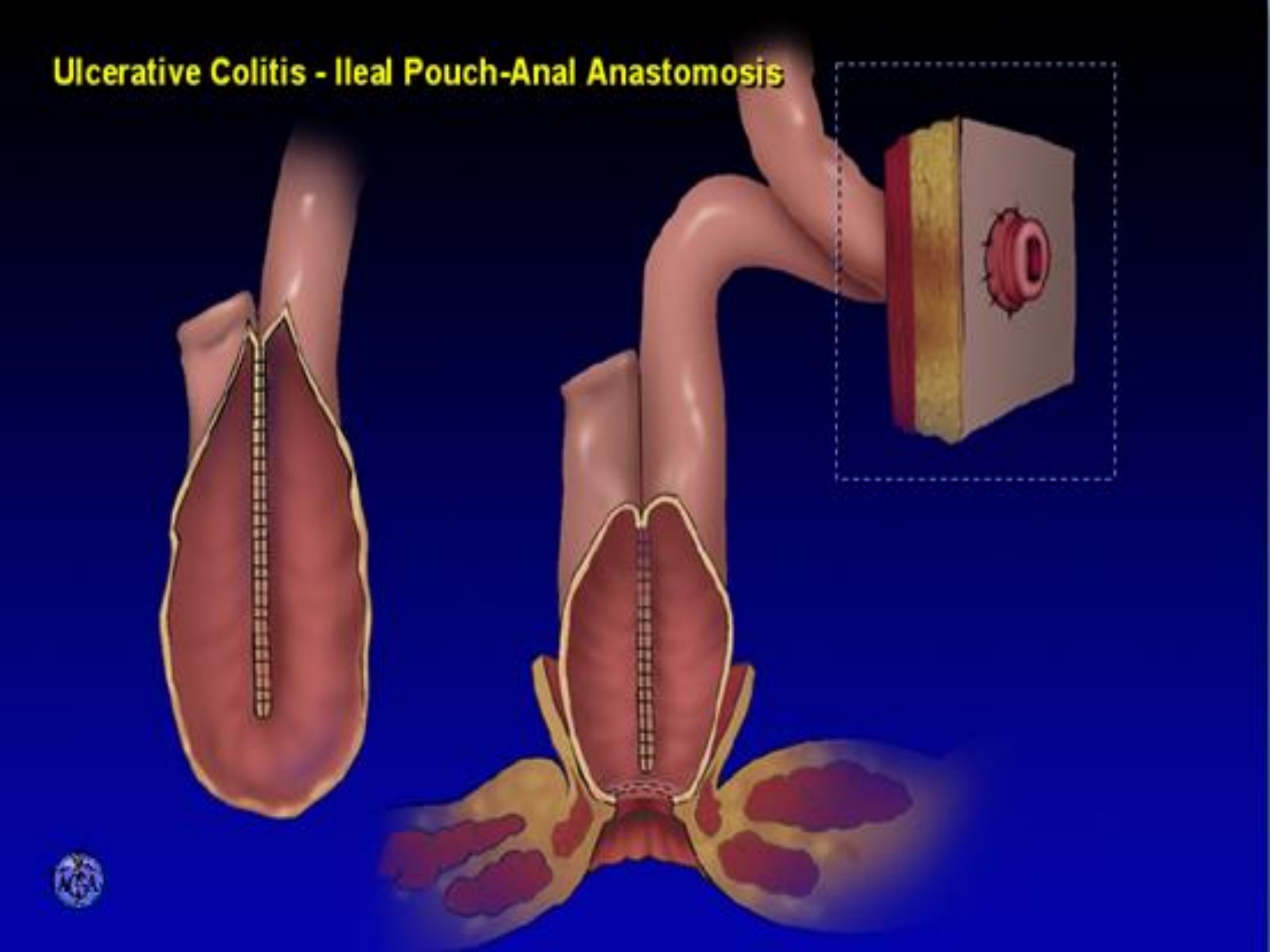


- Types of pouches:J,S,W pouch.
- Only in ulcerative colitis.
- Ileoanal ,not ileo low rectal pouch anastomosis.
- Not to be done in active anal disease.
- Defunction ileosromy routinely.


18 9 2001

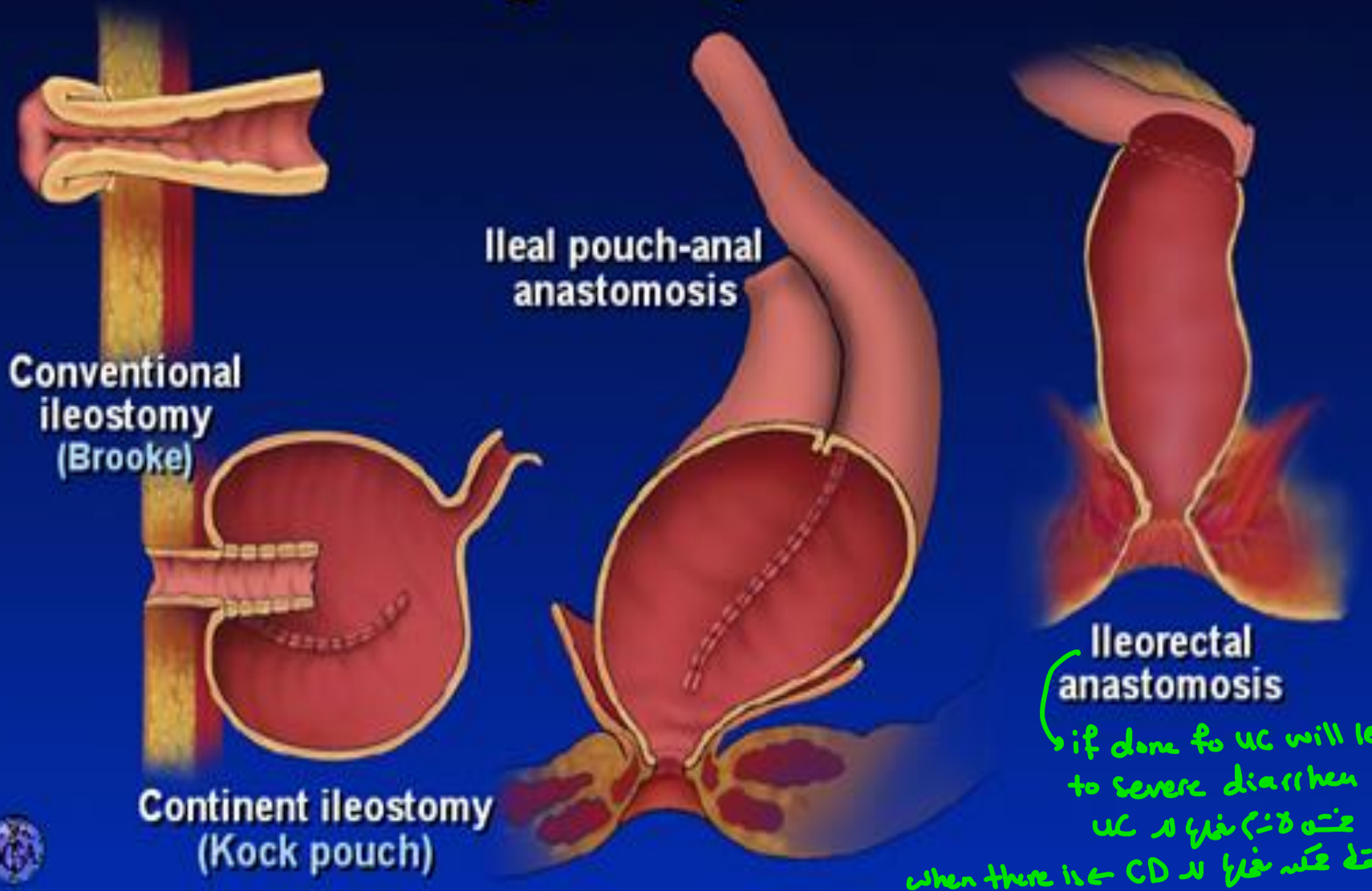

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Ulcerative Colitis - Ileal Pouch-Anal Anastomosis

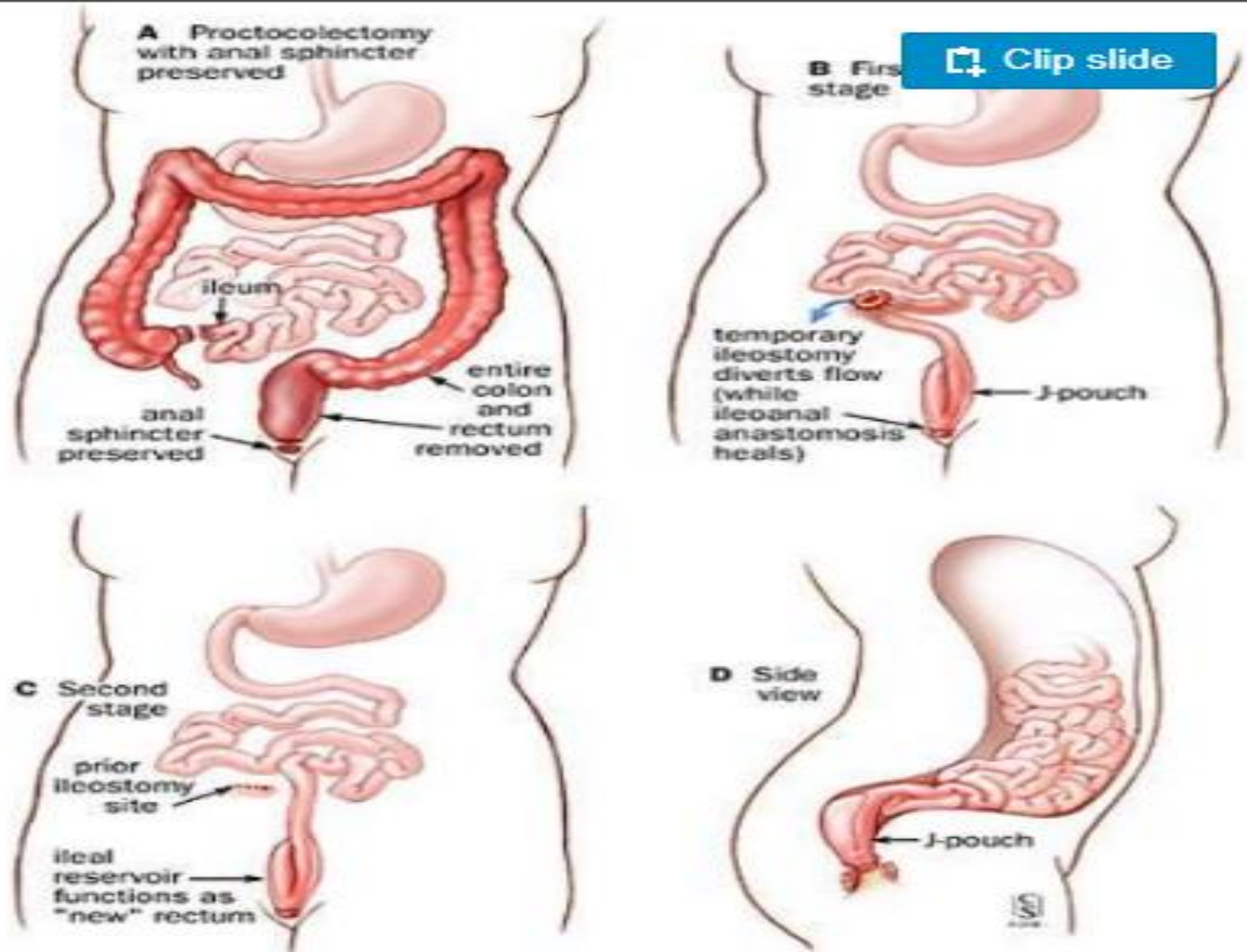


Ulcerative Colitis

Surgical Options



if done to UC will lead to severe diarrhea
UC ما فيه خيار تاني
when there is CD ما فيه مشكلة
Rectal sparing..


A Proctocolectomy with anal sphincter preserved
ileum
entire colon and rectum removed
anal sphincter preserved
B First stage
temporary ileostomy diverts flow (while ileoanal anastomosis heals)
J-pouch
C Second stage
prior ileostomy site
ileal reservoir functions as "new" rectum
D Side view
J-pouch

Complication of pouch surgery



- Failure: defined as need to remove pouch and establish end ileostomy 10%.
- Pelvic sepsis.
- Stricture at anastomosis.
- Pouch vaginal fistula.
- Pouchitis.



Pouchitis

- Acute inflammation,frequency,urgency,

liquid stool,extracolonic symptoms.

- Diagnosis,clinical,endoscopy,histology.
- Common after ileostomy closure.
- Treatment, metronidazole,ciprofloxacin,

Augmentin, Remove 3%.

Crohn's disease (Regional Ileitis)



incurable...

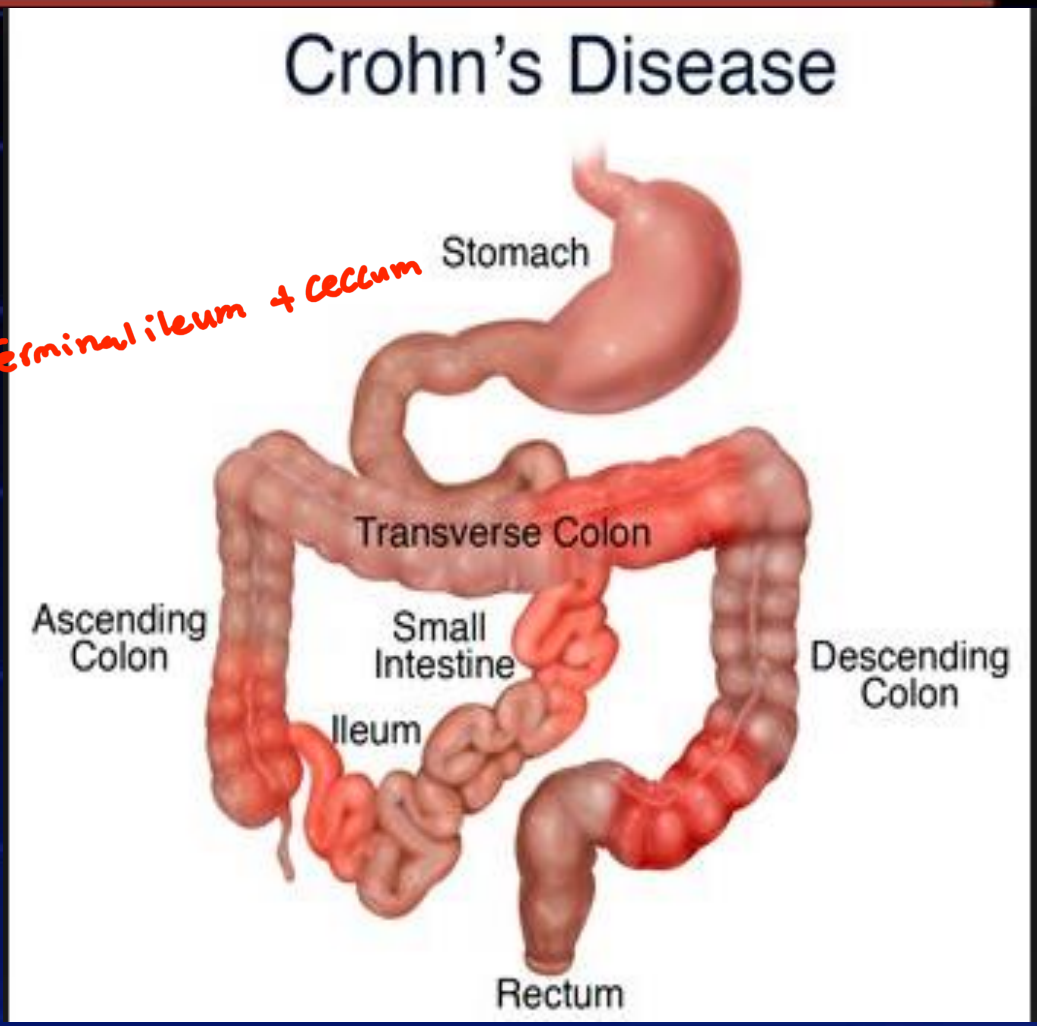
- Chronic , Progressive Relapsing Transmural Inflammatory process.
- Affect all GIT from mouth to anus ,with extra intestinal manifestations .
- Slight female predominance.
- Age 20-30 year 50 – 60 y *(Bimodal) .* But >80% occur in young age..
- Smoking not protective increase risk 2-4 times.
- Genetic and environmental factors , luminal content and gut microflora and intestinal immune system play a role.
- Higher sugar consumption increase risk.

Pathology



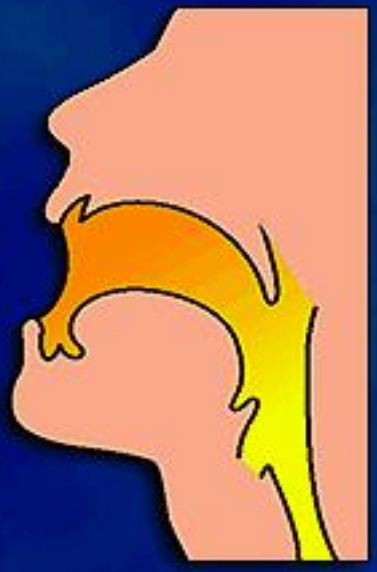
30%.

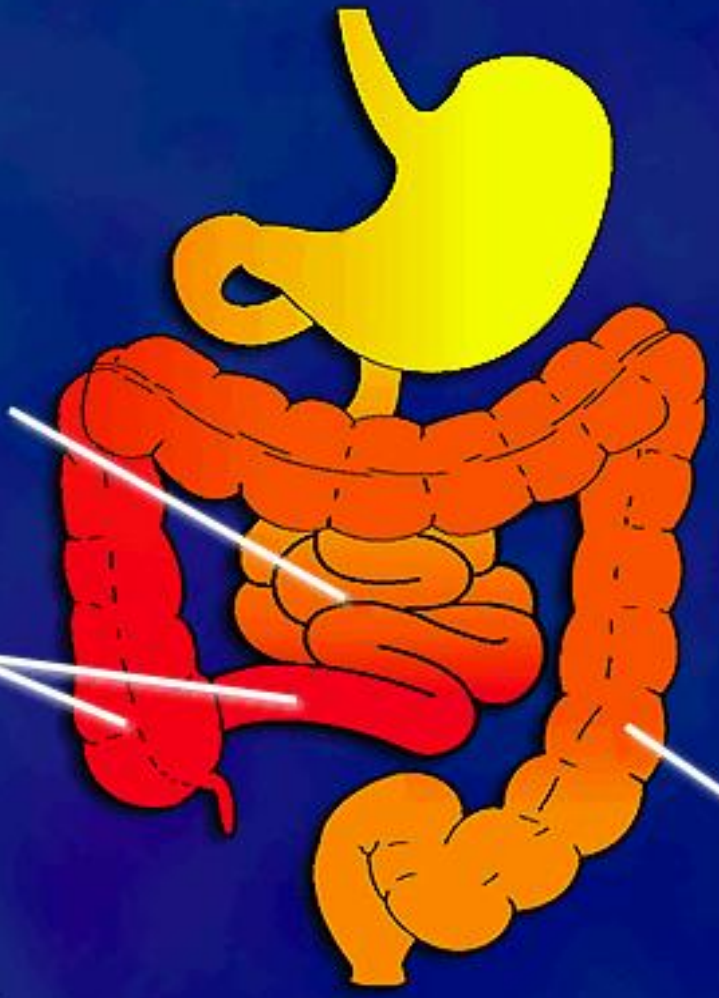
- Small bowel alone 30 -35%.
- Colon alone 20 - 25%.
- Small bowel and colon 45 % *(ileocolic).* Terminal ileum + ceccum
- Perianal lesion 50 %.
- Stomach and duodenum 5%.
- *Skip lesions* are diagnostic. fo CD...



Bipass نعمل ستة involved area نشيل زي CD لا surgical ## ←
is just done in case of stomach - duodenum CD...

Crohn's Disease: Anatomic Distribution

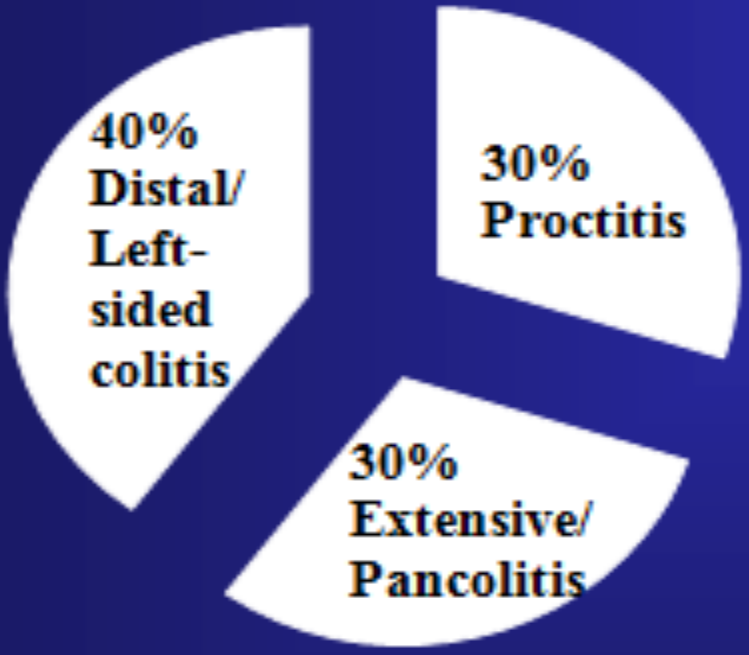




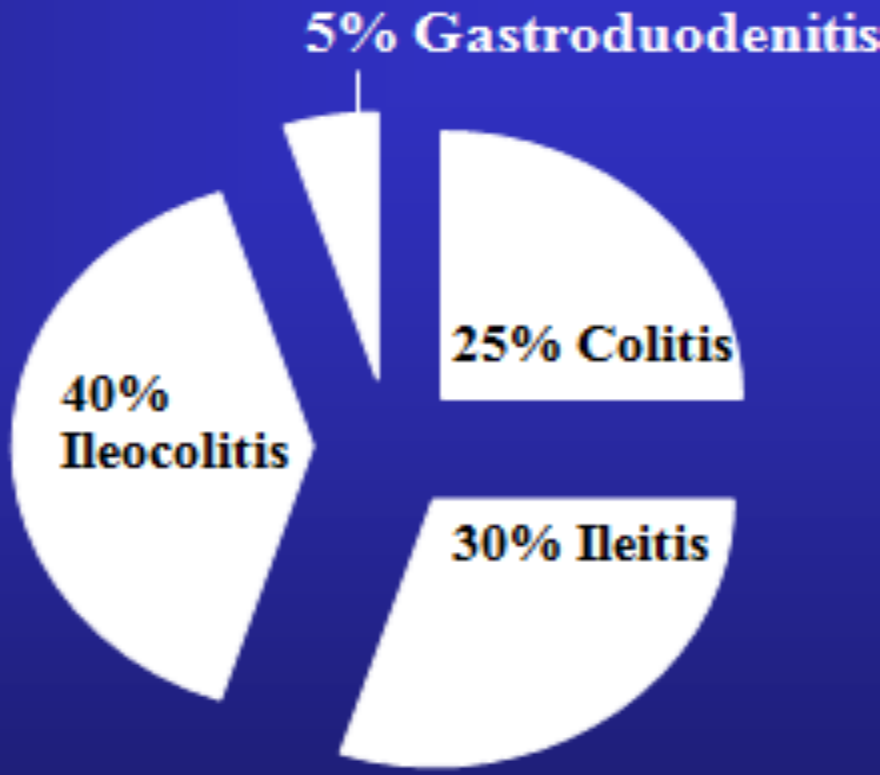
Freq of involvement

Most — Least

IBD: Location and Extent



Ulcerative Colitis

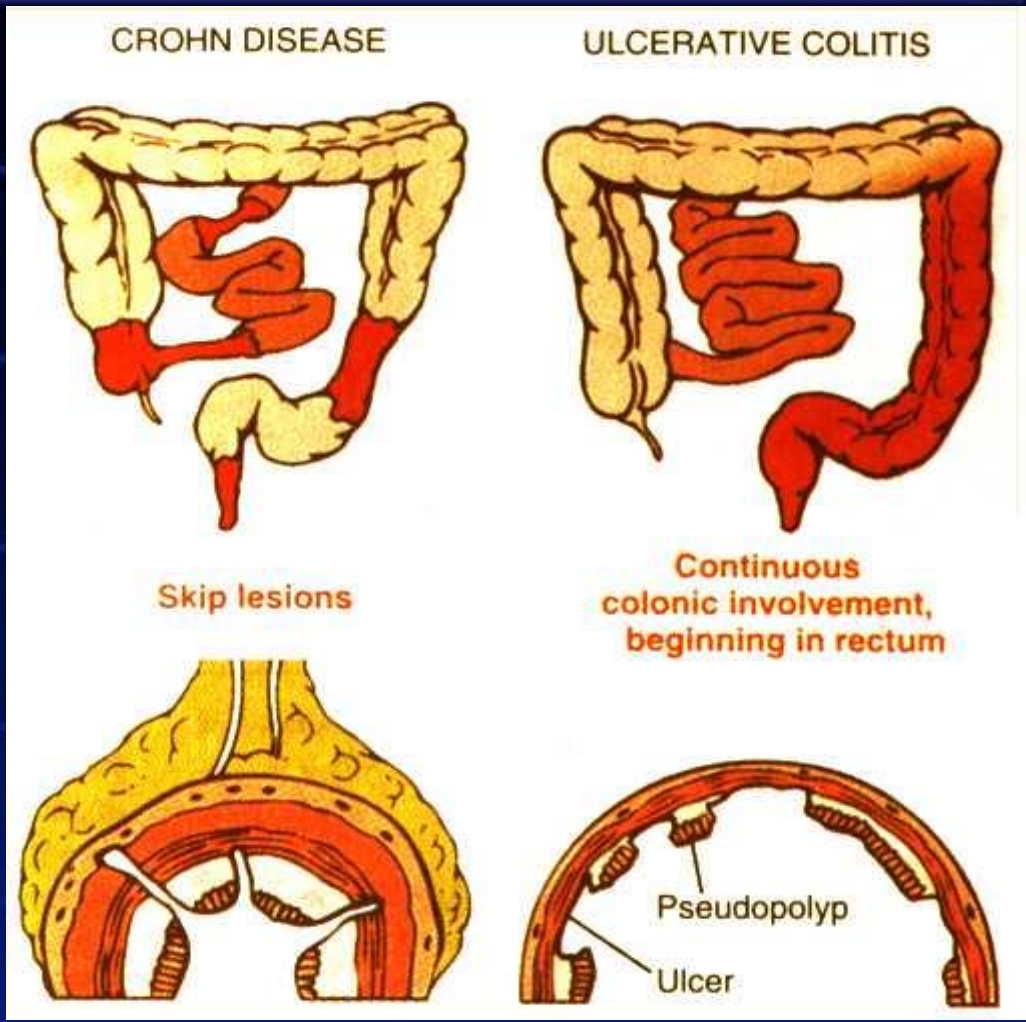


Crohn's Disease

Crohn's & Ulcerative Colitis

- Small and large Intestine
- Skip Lesions.
- Full thickness.
- *Narrow lumen.*
- Granulomatous infl.

- Large Intestine.
- Continuous, Mucosal.
- Thin wall .
- *Dilatation.*



#18 y/o pt has RIF pain indicate → appendix
Fat wrapping which indicate CD...

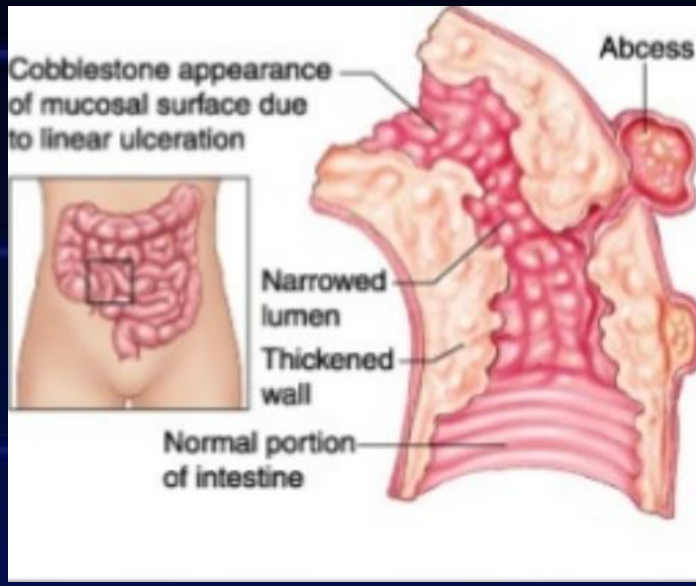
Macroscopic appearance

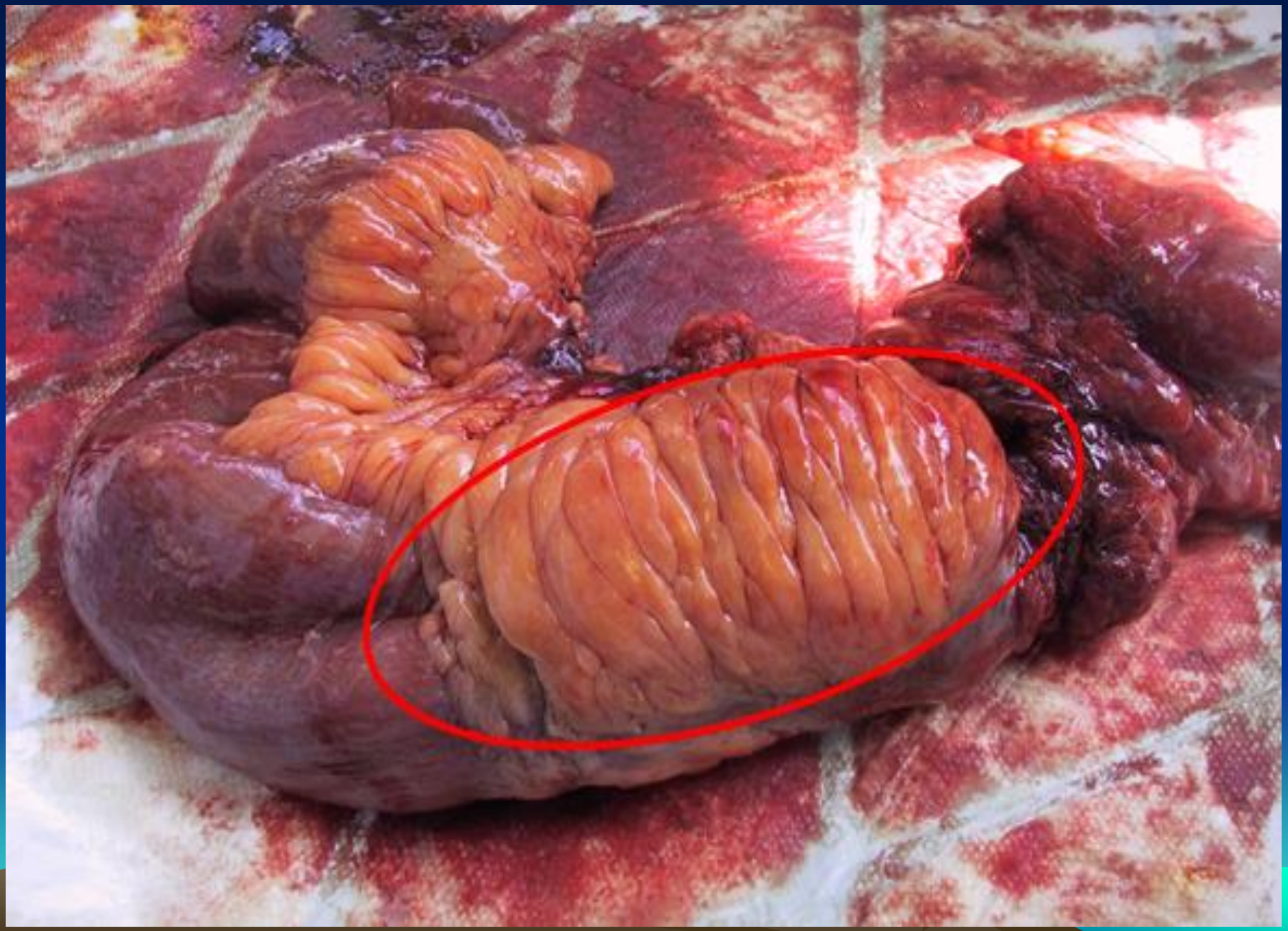


the mesentry become above the anti mesentric part of the intestine.

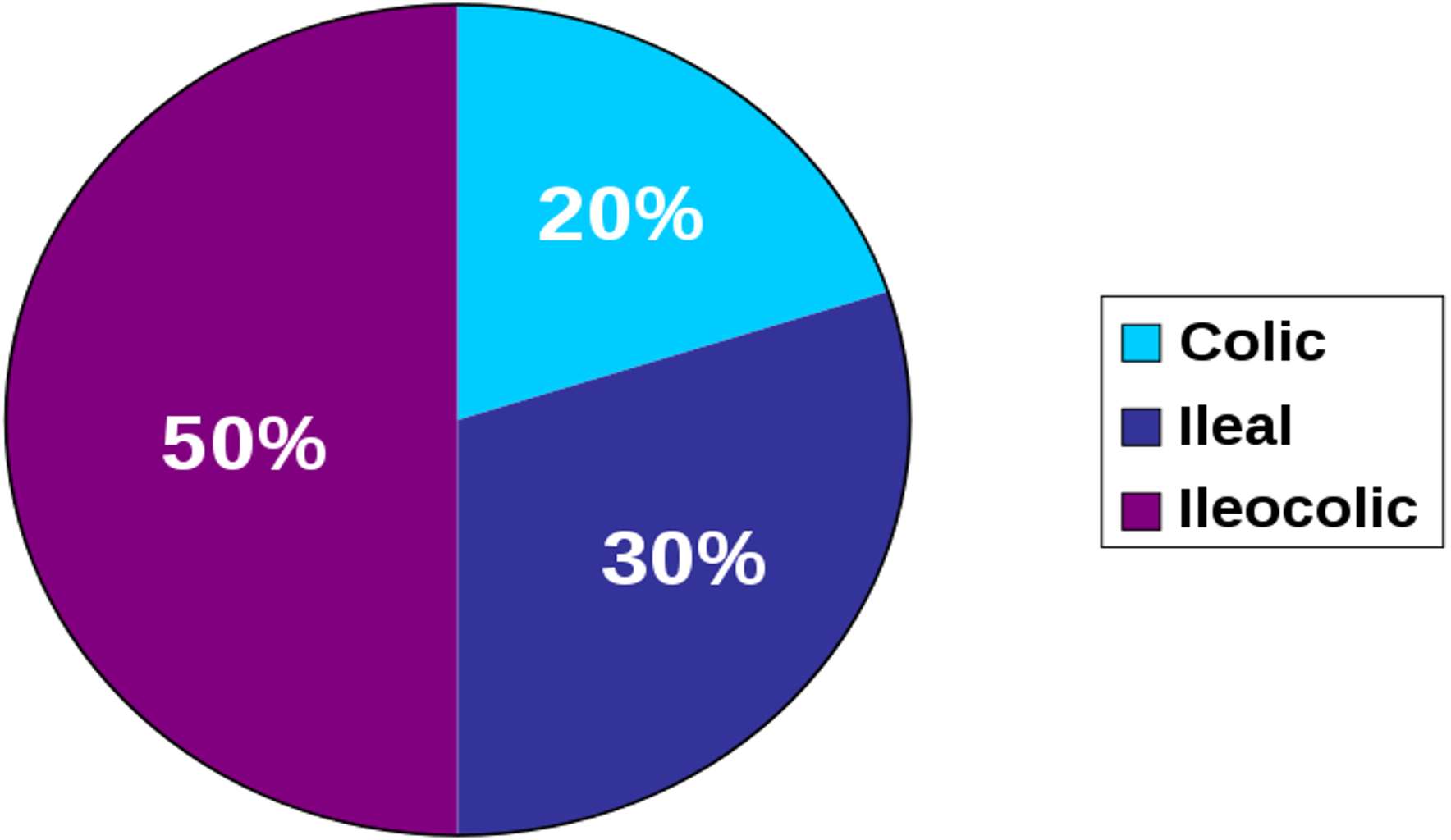
Charachtarstic for the CD...

- Stiff thick-walled bowel with fat wrapping.
- Creeping extension of mesenteric fat .
- Thick wall mesentery.
- Full thickness inflammation.
- Segmental disease.
- Strictures 1-30 cm in length.
- Inflammatory polyps in colon.
- Cobblestone appearance of mucosa.
- Deep fissures , fistulae , aphthous ulcers.





Crohn's (Am GI Asso)



Cobblestone appearance of mucosa.

- Le there is longtudinal deep fissure [depression] + edema around it [elevation]
- DDx :- CD - infectious diarrhea - Ischemic colitis...





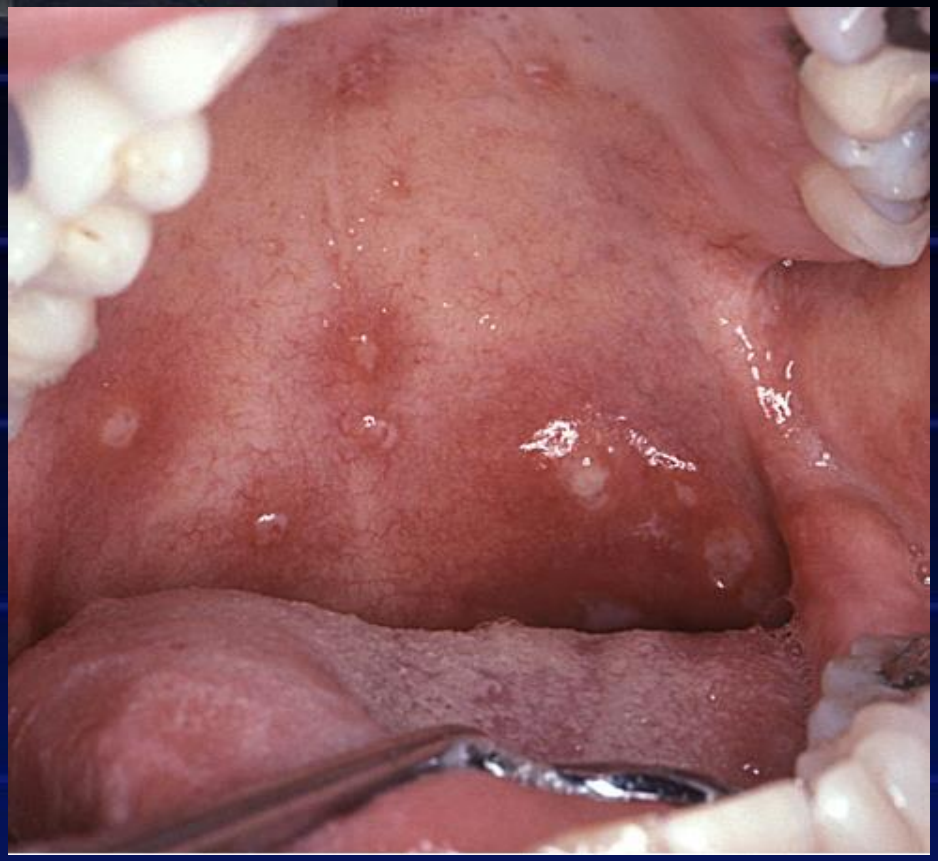




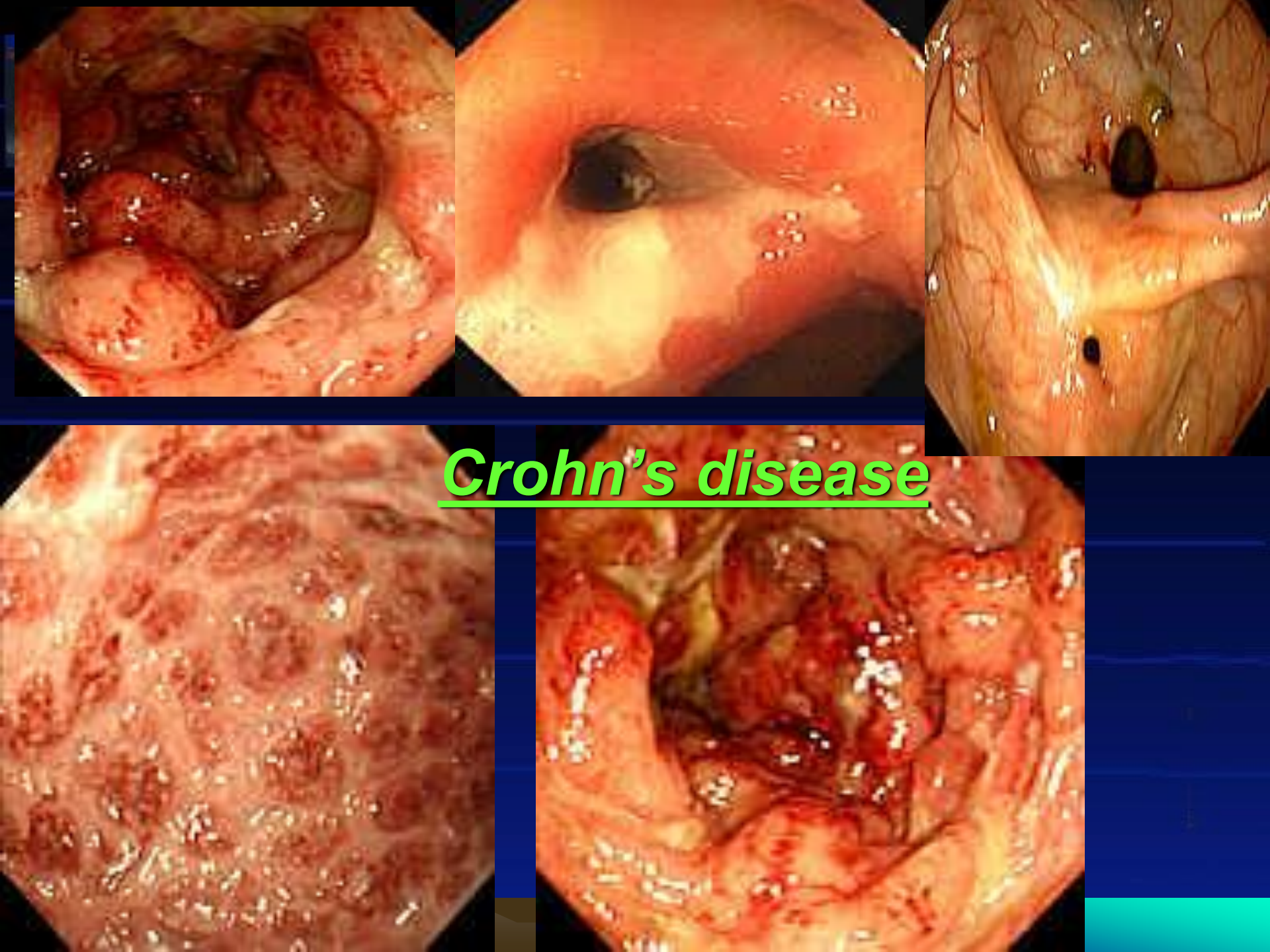
Aphthous Ulcers

in tounge - lips.

→ more common in CD than UC...






Crohn's disease

Crohn's - U. Colitis:

- Fibrous, Granulomatous
- Thick wall, narrow lumen.
- Transmural – full thick.
- Skip Lesions common

- Acute inflammation
- Mainly mucosal.
- Ulceration, Dilated lumen.
- Continuous lesion.

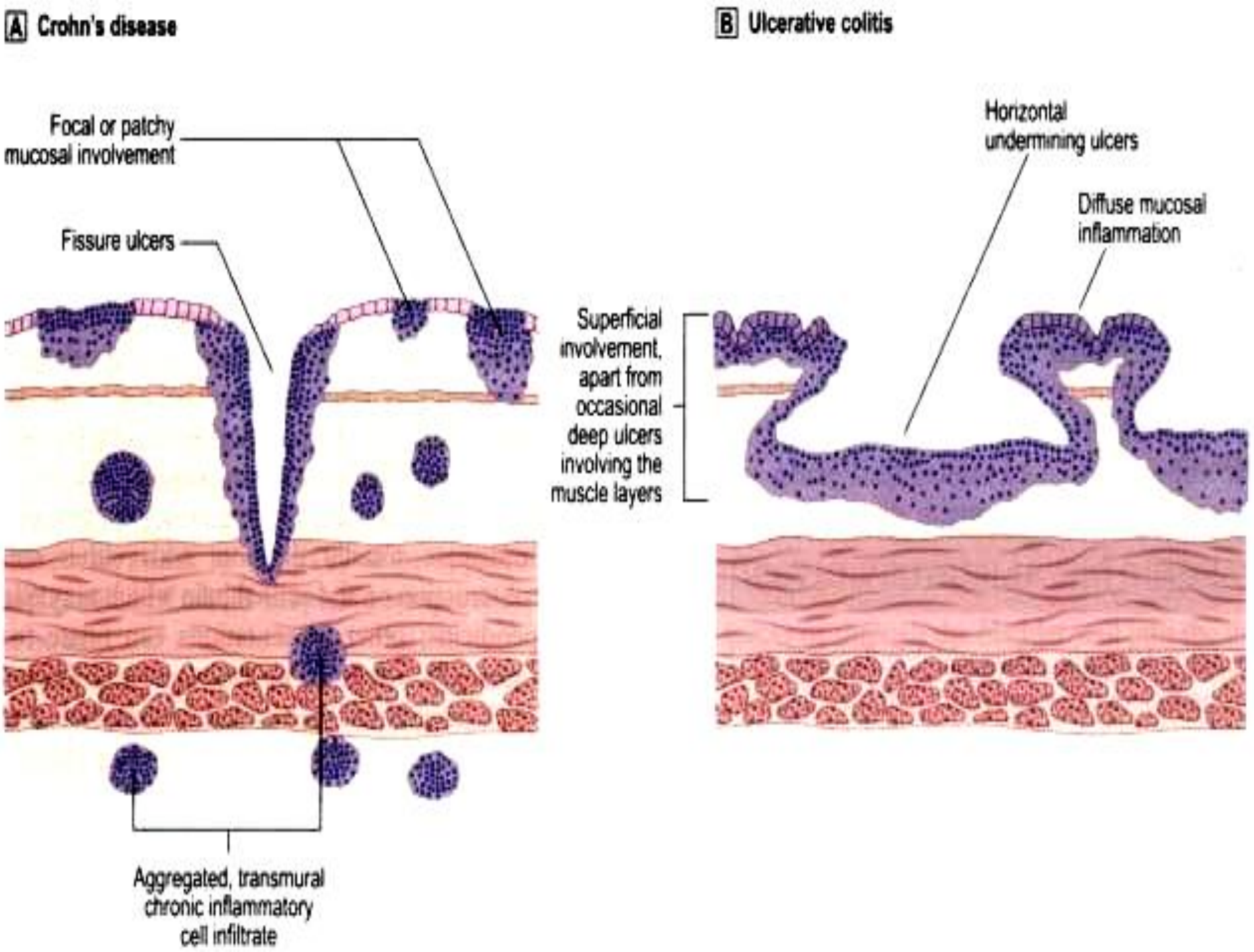






Microscopy

- Full thickness inflammation.
- *Preservation of goblet cell mucin.*
- Submucosal fibrosis, muscle layer fibrosis.
- Deep non- caseating granulomas+ Giant cells.
- Intralymphatic granuloma.
- Granulomatous vasculitis.


A Crohn's disease
Focal or patchy mucosal involvement
Fissure ulcers
Aggregated, transmural chronic inflammatory cell infiltrate
B Ulcerative colitis
Horizontal undermining ulcers
Diffuse mucosal inflammation
Superficial involvement, apart from occasional deep ulcers involving the muscle layers



Infections

- Mycobacterium Para tuberculosis.
- Granulomatous vasculitis.
- Genetic, siblings of patients with Crohn's disease ,have17-35 times risk.
- Number of genes involved.

Pitfalls of differentiating Crohn's Colitis from Ulcerative Colitis.



- ***Indeterminate Colitis 5-10%.***

NB differentiation is difficult in acute phase

- Fat wrapping in Crohn's only.
- Skip lesions in Crohn's.
- Thick inflamed segments.
- Patchy Trans-mural inflammation in Crohn's.
- Perineal disease in Crohn's.
- Lymphoid follicles in Crohn's.
- Preservation goblet cell mucin in Crohn's.
- Deep granuloma in Crohn's.
- Cobble stone appearance.

Patterns of behavior of CD...



1. Stricturing [stenotic]
   - need surgical ttt...
2. Penetrating or fistulating
   - respond to Biological ttt
3. Inflammatory(non Stri- Non Penet)

- Vienna Classification of CD
- (Age, Location , Behavior)
- Guiding therapy.
- Predicting complications.

→ Benefit of classification ...

* we can't diff. between Colonic CD and acute stage of UC called indeterminate colitis → 5-10% of IBD



نتابع مريض UC وفي chronic stage ثم يتم Biopsy

Vienna Classification of Crohn's Disease

Consensus of the International Working Party for the World Congresses of Gastroenterology 1998

one choice each category

A Age at Diagnosis

1 < 40 years
2 ≥ 40 years

L Location

1 Terminal Ileum
2 Colon
3 Ileocolon
4 Upper GI

B Behavior

1 Non-stricturing, non-penetrating
2 Stricturing
3 Penetrating

Further data to be collected

Sex: female / male
Ethnicity: caucasian / black / asian / other
Jewish: yes / no / partly
Family history of IBD: 1st degree relatives / other / none
Extraintestinal manifestation: yes / no

Vienna Classification of Crohn's Disease

Goal: To establish an international classification of patient subgroups based on objective biological variables in order to improve:
- homogeneity of study populations in clinical trials
- linkage of genetic or serological markers to specific phenotypes

Definitions:

A

The age when diagnosis of CD was first definitively established by radiology, endoscopy, pathology or surgery.

L

The maximum extent of disease involvement at any time before the first resection. Minimum involvement for a location is defined as any aphthous lesions or ulceration. Mucosal erythema and edema are insufficient. For classification at least both a small bowel and a large bowel examination are required.

1 Disease limited to the lower third of the small bowel with or without spill over into cecum.
2 Any colonic location between cecum and rectum with no small bowel or upper GI involvement.
3 Disease of the terminal ileum and any location between ascending colon and rectum.
4 Any disease location proximal to the terminal ileum regardless to additional involvement of terminal ileum or colon.

B

1 Inflammatory disease which never has been complicated at any time in the course of disease.
2 Stricturing disease is defined as the occurrence of constant luminal narrowing demonstrated by radiologic, endoscopic or surgical-pathologic methods with prestenotic dilatation or obstructive signs/symptoms without presence of penetrating disease at any time in the course of disease.
3 Penetrating disease is defined as the occurrence of intra-abdominal or perianal fistulas, inflammatory masses and/or abscesses at any time in the course of disease. Perianal ulcers are also included. Excluded are postoperative intra-abdominal complications and perianal skintags.

Chair: C. Gasche, J. Scholmerich
Members: J. Brynskov, G. D'Haens, S. B. Hanauer, E. J. Irvine, D. P. Jewell, D. Rachmilewitz, D. B. Sachar, W. J. Sandborn, L. R. Sutherland

Gastrointestinal symptoms



- Acute first presentation is not common.
- **Diarrhea 70-90%.(steatorrhoea).** MCQ — due to:- ① Terminal ileum involvment.. ② distruption of enterohepatic circulation.. ③ Stasis + over growth of Bacteria.. ④ Fistula formation... ⑤ fat malabsorption- — Commonest symptom of CD
- **Abdominal pain 50%.**
- **Rectal bleeding 30%.**
- Perianal disease 50%. — fissure - skin tag - fistula - papilla — 30-50%

* The fissure which happen due to CD:- lateral fissure
* The usuall fissure:- 90% mid line post. in M and 10% mid line ant.
But 70% mid line post. in female and 30% mid line ant.

* DDx of lateral fissures:- IBD - homosexuall - HIV--

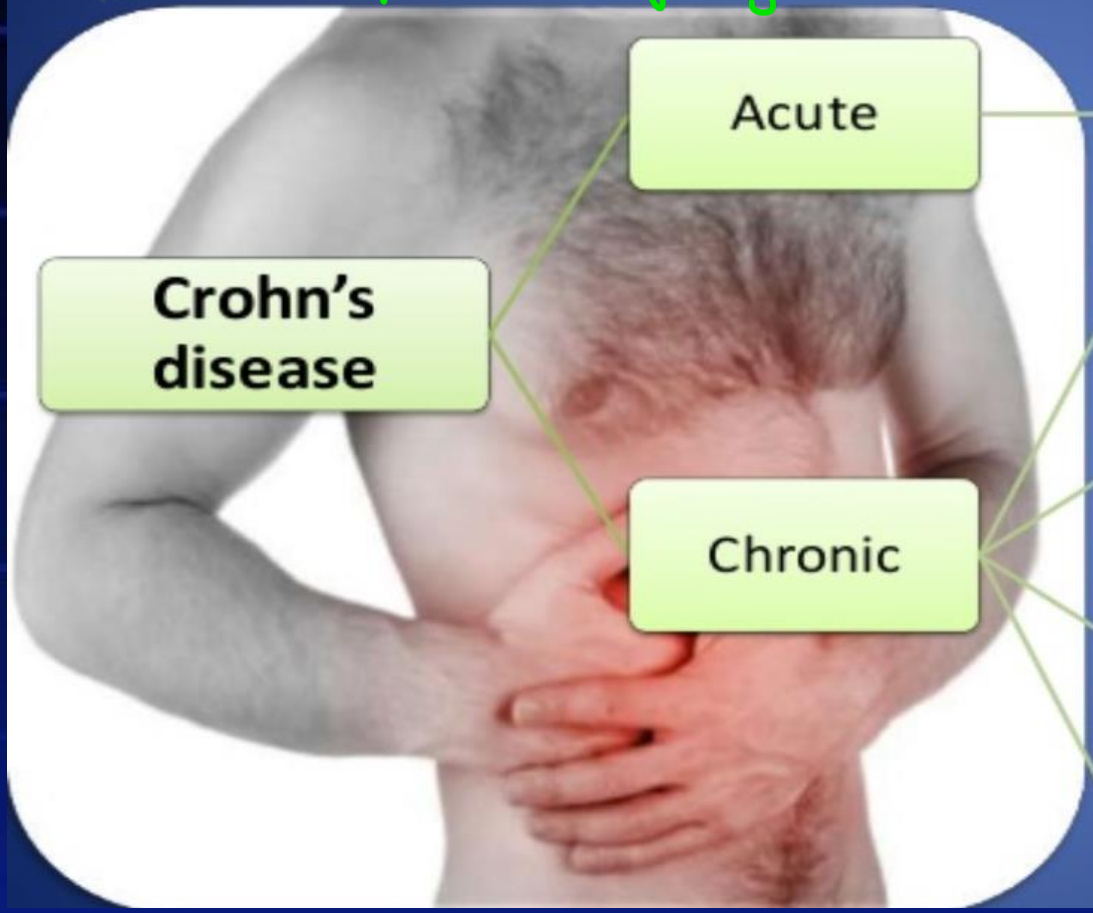
Gastrointestinal symptoms



* Reccurance rate of CD after surgery is 50% espically if it is SI and may lead to Short Bowel syndrome...

CLINICAL FEATURES

*50 % of CD pt will end by surgical ttt...





Systemic symptoms

- ***Weight loss 70% of cases.***

- Low grade fever in 35 %.

- Poor absorption of fat soluble vitamins ADEK.

- Anaemia iron deficency, B12 deficiency.



Pregnancy and Crohn's

CD لـ وقاية

لـ pregnancy لأنه يقلل احتمالية

- Fertility rates are reduced.
  - with CD
- Pregnancy does not affect the disease.
- Aminosalicylates, steroids ,azathioprine are safe in pregnancy.

But if the pt stop them in pregnancy this lead to CD attack and may lead to Abortion...

Crohn's in pediatric age group



- Systemic manifestation more important
  - ↳ begin befor GI manifestation in children...
- Extra-intestinal manifestation precede GIT symptoms.
- Diagnosis is delayed. in children.

Diagnosis



Radiology

- Small bowel enema or follow through.
- Double contrast barium enema.
- CT scan, ultrasound.
- MRI for complicated perianal sepsis.
- Video capsule endoscopy.

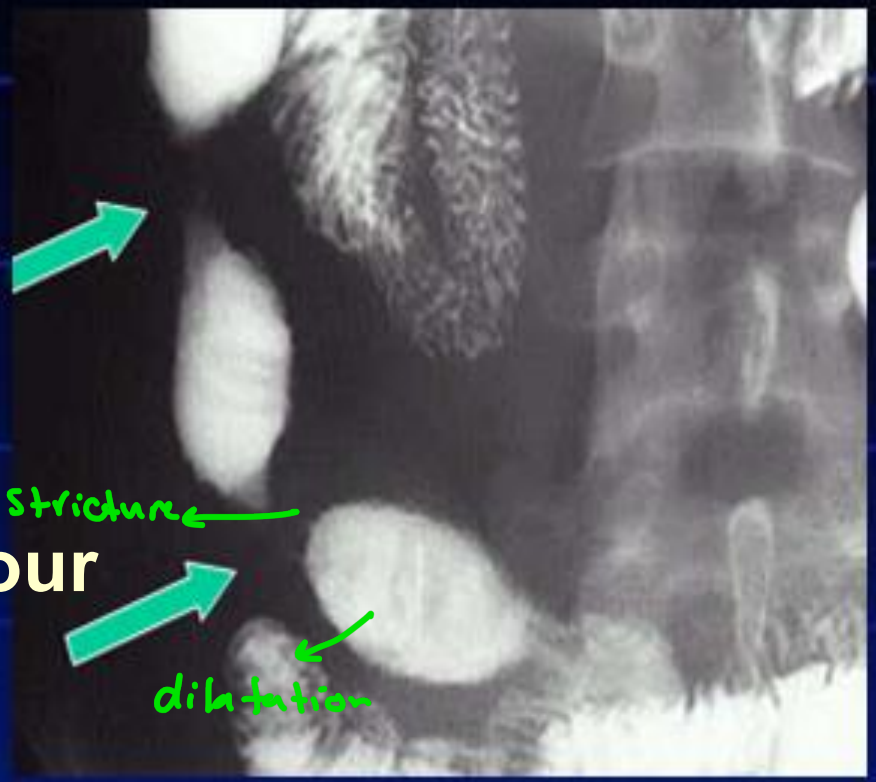
Endoscopy

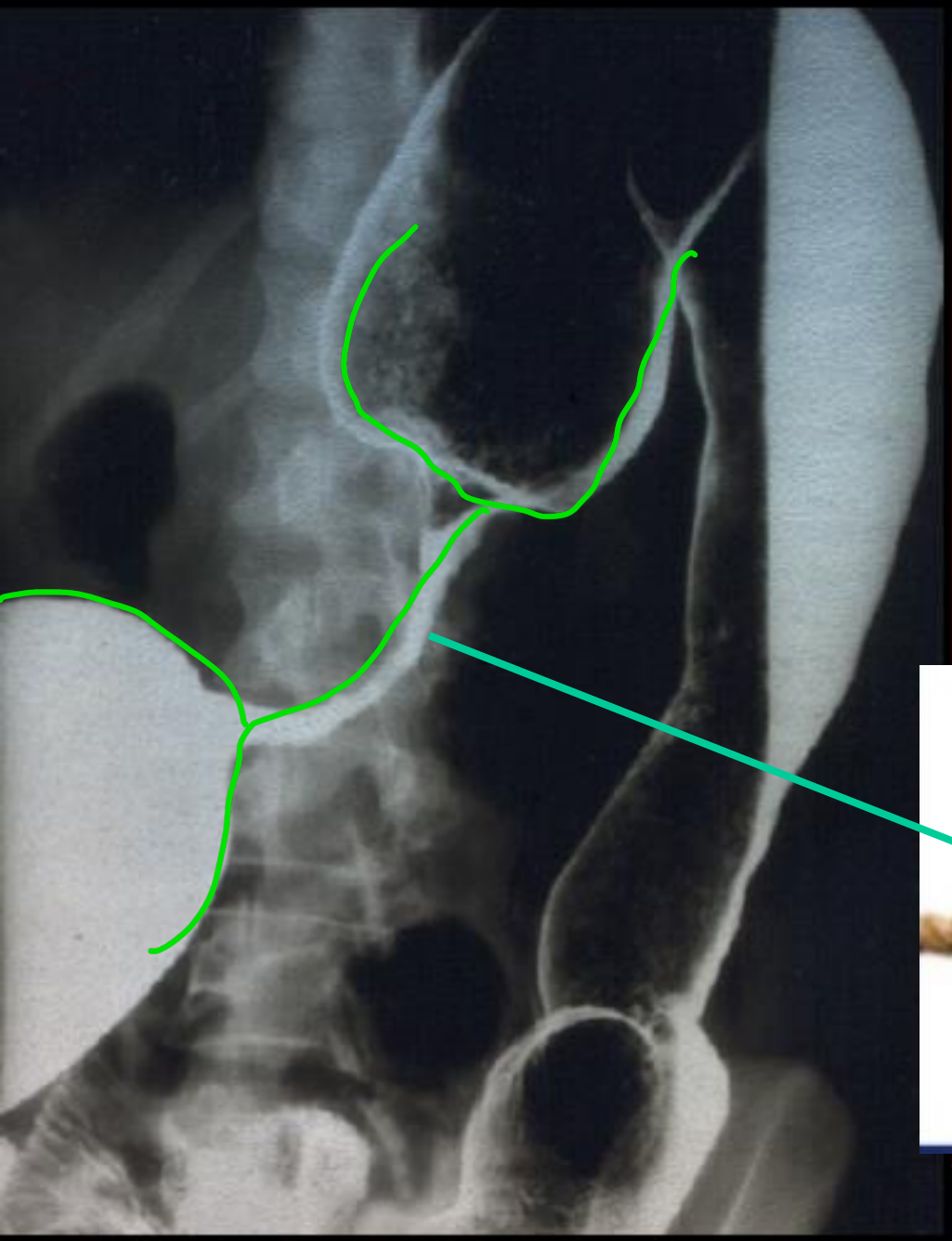
Colonoscopy Gastroscopy

Crohn's Disease: Morphology

Click to add text

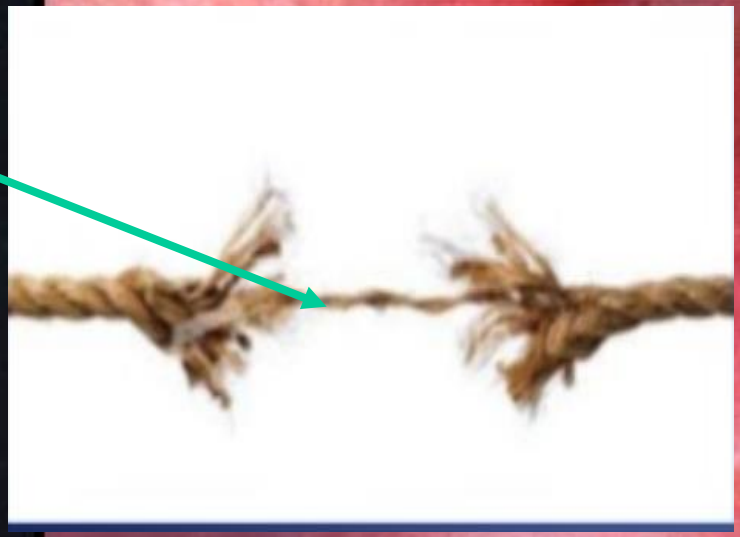
Small Intestine common, 30%
Rubbery thick walled with narrow lumen.
String sign – X-Ray of contour



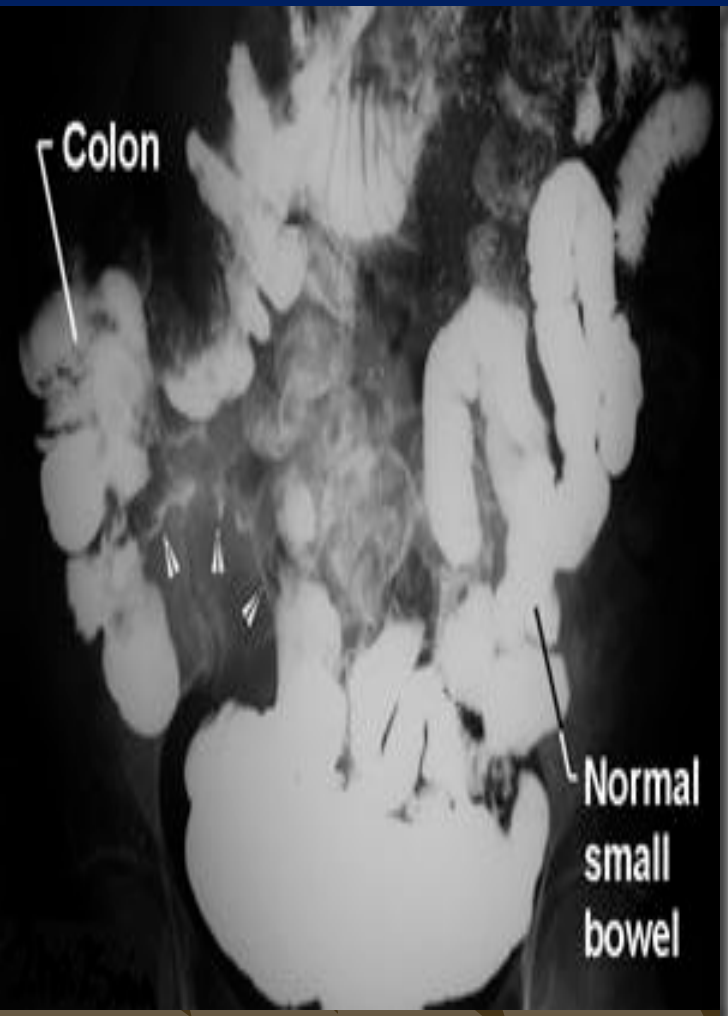


String Sign of Kantor

↳ dilated bowel + stricture in the middle



Crohn's Disease – Radiologic Dx





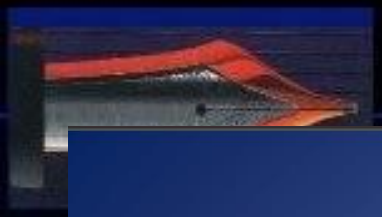
Crohn's Disease – Radiologic Dx

CT





Complication



Complications

Intestinal complications

- Stricture
- Fistula
- Perforation
- Abscess
- Neoplasm

(in CD less than UC by 2 times...)

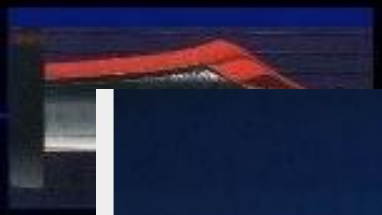
Systemic complications

- Athritis
  (+ osteoporosis...)
- Ankylosing spondylitis
- Sclerosing episcleritis
- Uveiitis
- Sclerosing cholangitis
- Oxalate stones (Renal)
- Erythema nodosum
- Pyoderma gangrenosum

Postoperative complications

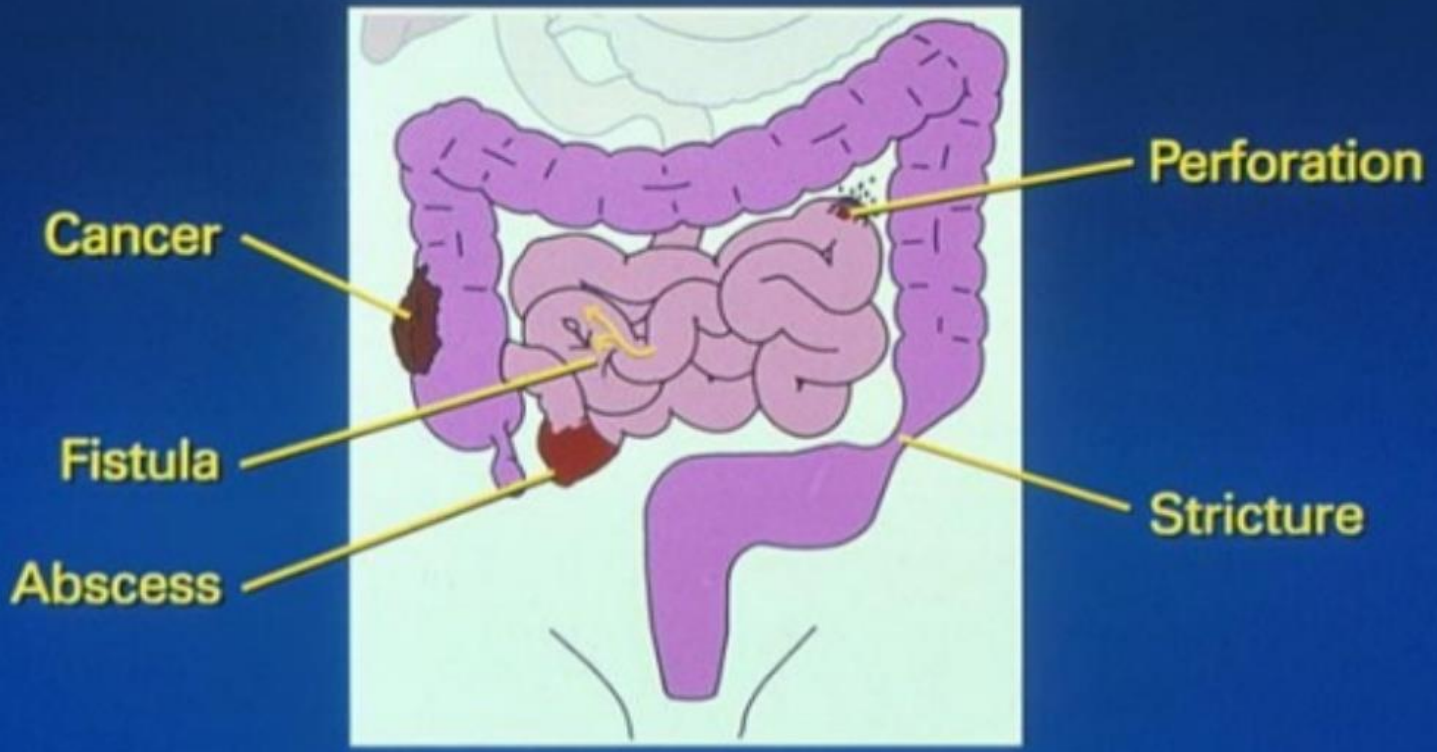
- Anastomotic recurrence
- Anastomotic fibrostenosis
- Adhesional obstruction

Complication



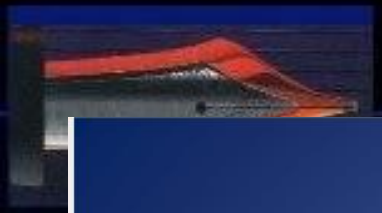
Crohn's Disease

Intestinal Complications



CCEA

Complication



Clip slide

Fistula

- GIT Fistulas
  - Internal fistula
    - Intestinal fistulas
      - Entero-enteric fistula
      - Entero-colic fistual
    - Extra-intestinal fistulas
      - Entero-vesical fistula
      - Recto-vaginal fistula
  - External fistula
    - Entero-cutaneous fistula

Aminnosalicylates



- Sulphasalazine (mild disease)
- sulphapyridine+5ASA.(salazopyrine).
- 5ASAmesalasine(pentasa),osalazine(dipentum
- Mesalasine suppository, enemas.

New 5ASA depend on PH and time dependant Protective coating



STEROIDS

- **Induction of remission**
- **Systemic 20-80mg daily oral or IV.**
- **Rectal hydrocrtisone,prednisolone enemas.**
- **Budesonides (entocort ,budeson).oral, rectal.**

Nutrition for therapy

- **TPN cause remission in 80%.**
- **TEN, polymeric, elemental diets, same.**



Medical treatment

Antibiotics

- Metronidazole,long term use is contraindicated due to peripheral neuropathy.
- Ciprofloxacin.
- Immunomodulatry therapy
- Azathioprine takes 3-6 month to work

  3-10% develop pancreatitis.
- Methotrexate,cyclocporin.

Other drugs

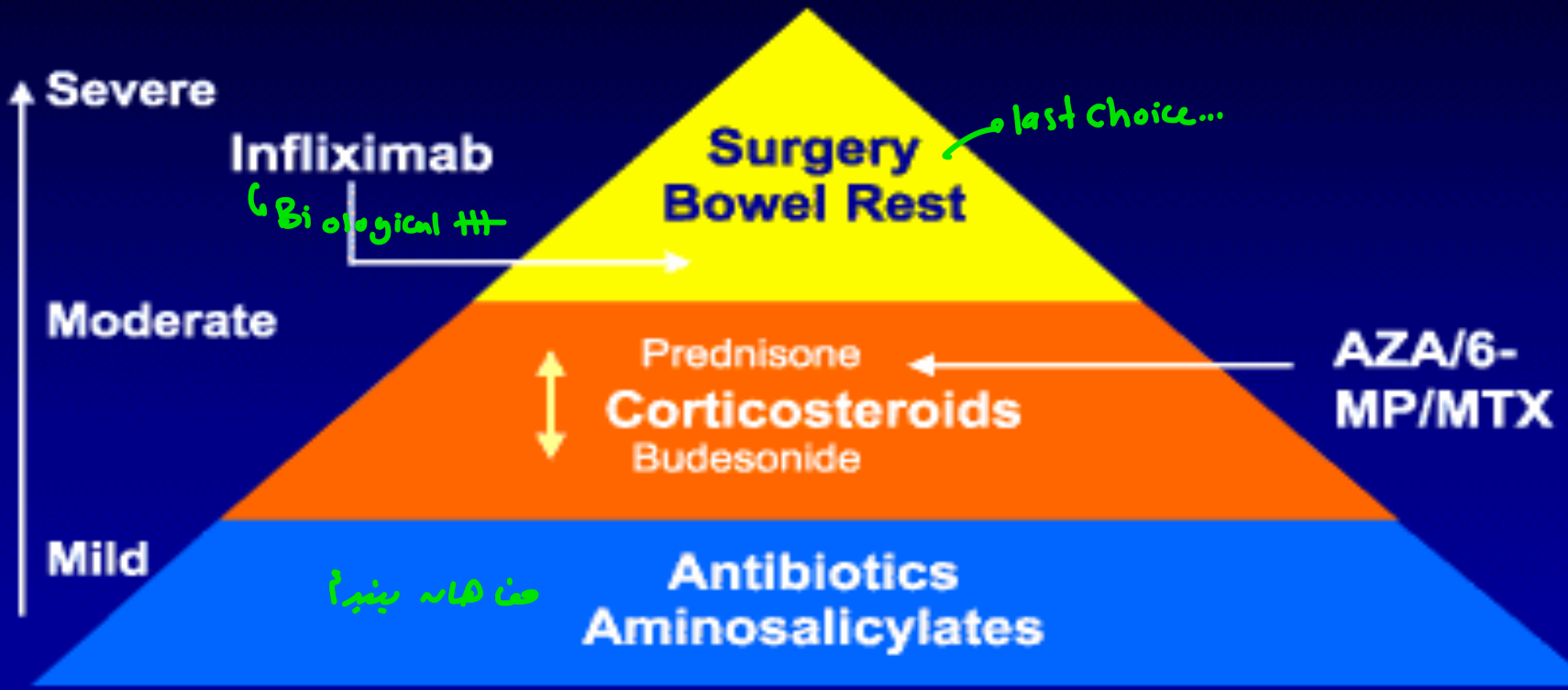


- Antidiarrhoeal,anticholinergic drugs.
- Cholesteramine.
- Monoclonal antibody Infliximab.
  5mg/kg I.V over 2 hours,0-2-6 weeks.
  In fistulating,severe Crohn's disease.
- NSAID should be avoided make disease worse.

"Bottoms-Up" Approach to Crohn's Disease Treatment



Current "Bottom-Up" Approach to Crohn's Disease Therapy

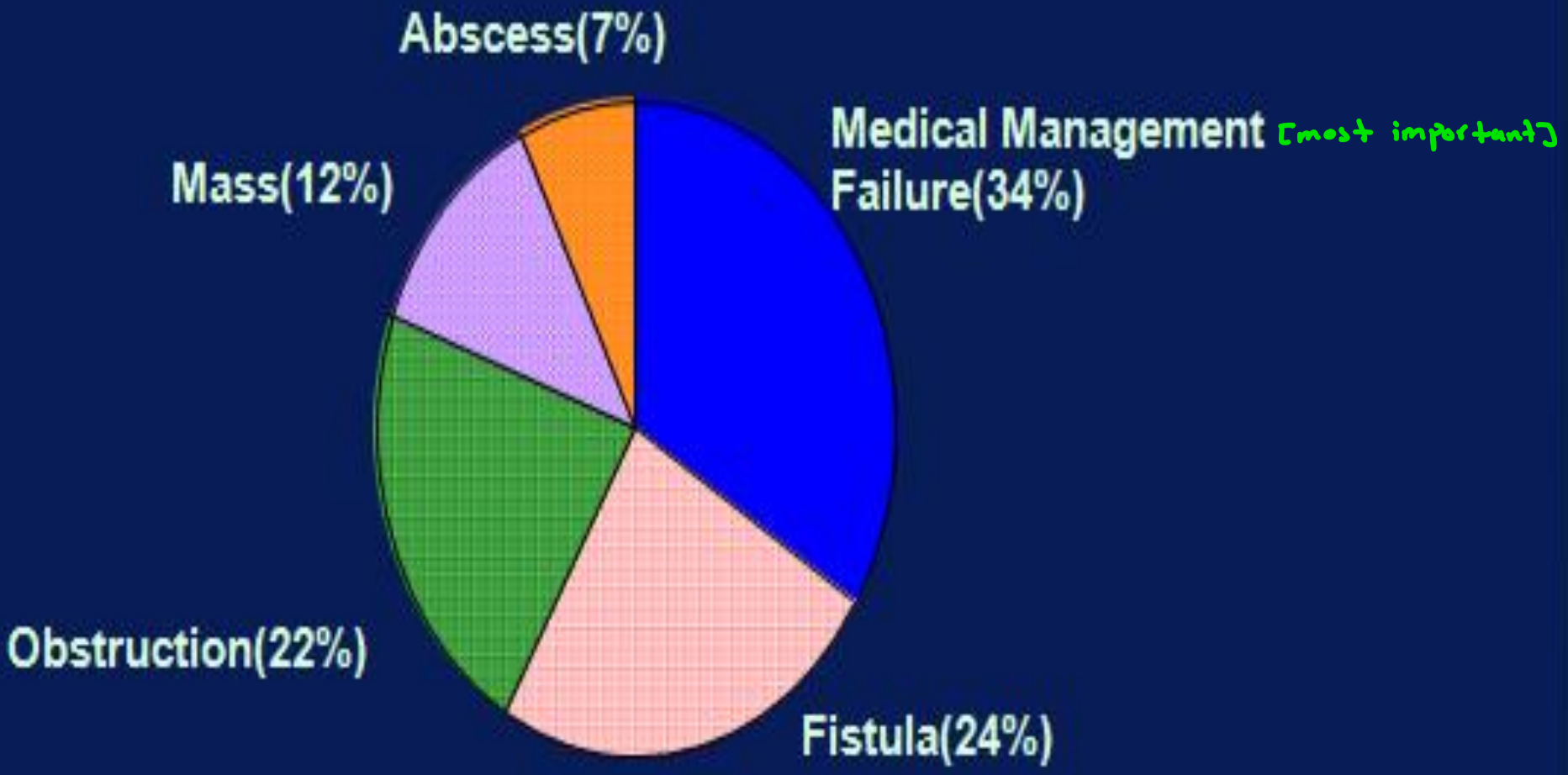


Principles of surgery for Crohn's

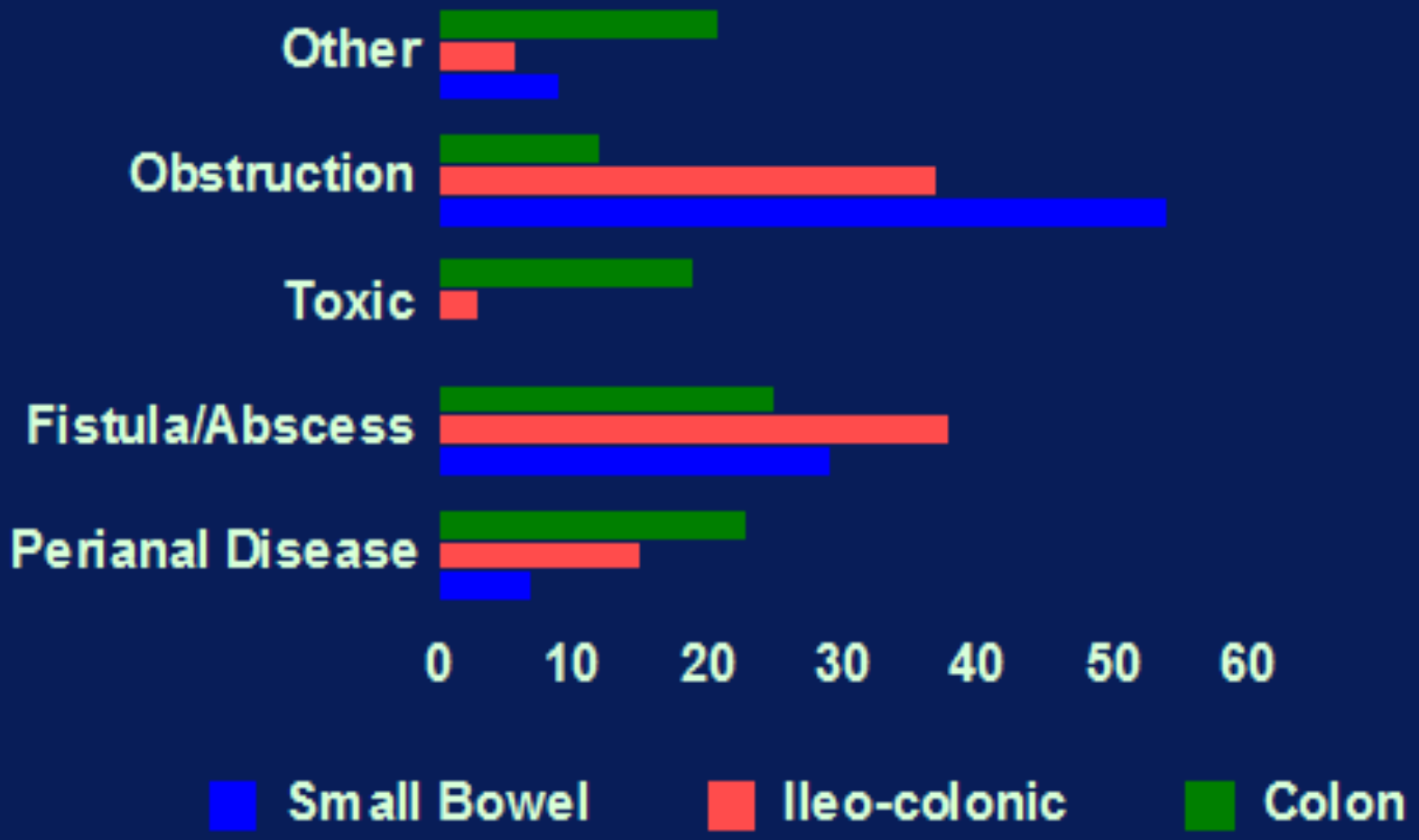


- 80% of patients will require surgery within 13 year of diagnosis.
- 90% of patient with ileocolic disease end in surgery.
- Remove appendix during first surgery.
- Reoperation rate is 50% . (due to recurrance...)
- Surgery for small bowel is for complication .
- Surgery for colon for intractable disease .

Indications for Surgery



Indications for Surgery



Surgery for small bowel and ileorectal disease

- Stenosis causing obstructive symptoms.



- Enterocutaneous or intra-abdominal fistula
- Draining abdominal or retroperitoneal abscess.
- Controlling acute or chronic bleeding.
- Free perforation.

Small bowel fistula



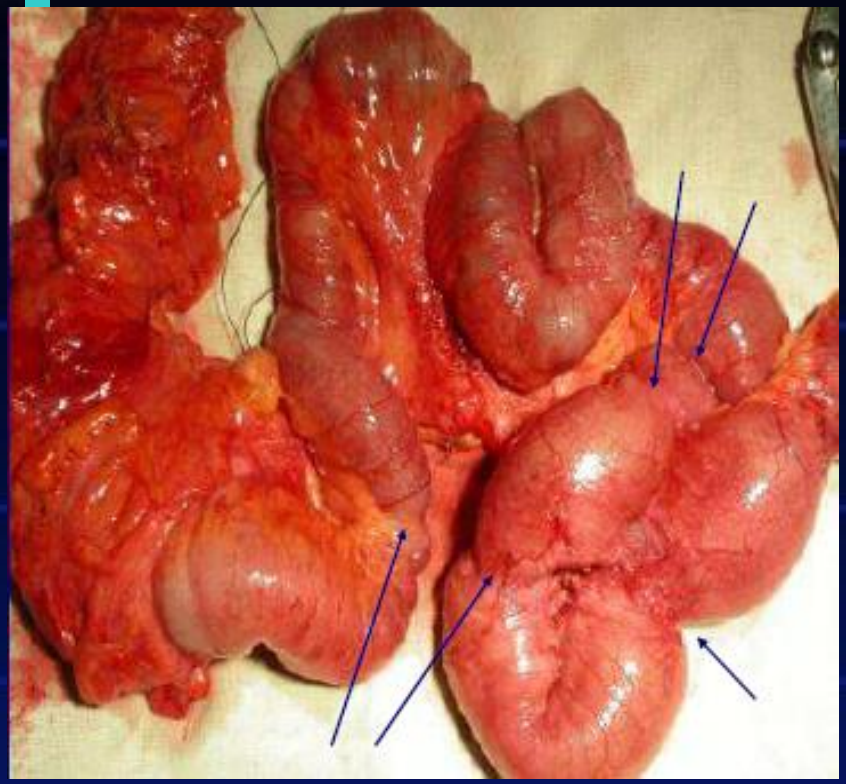


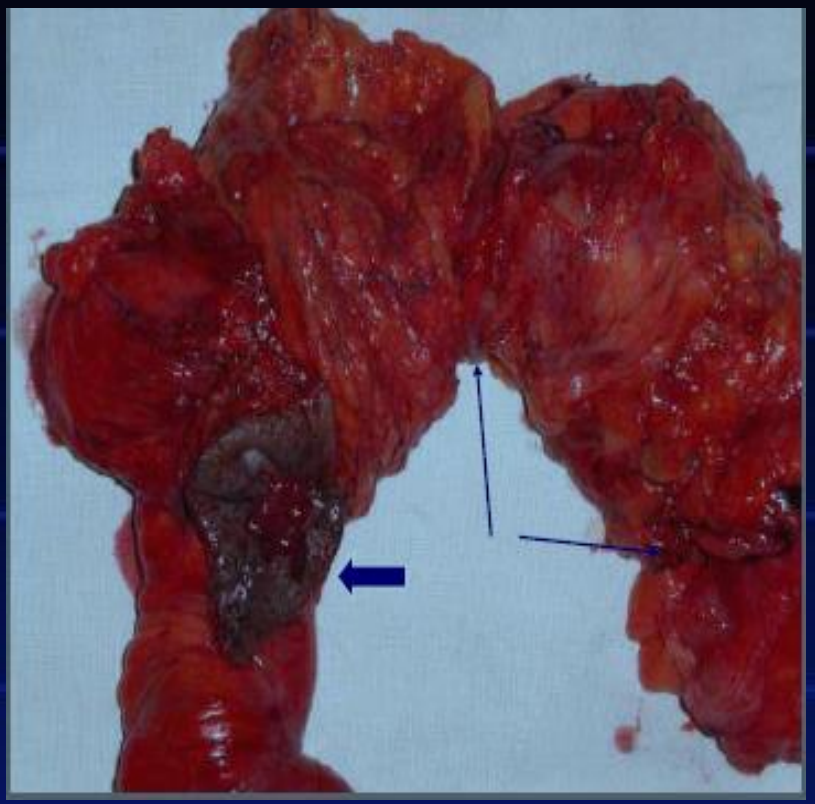






Strictures in CD





Strictureplasty in CD









Strictureplasty in CD



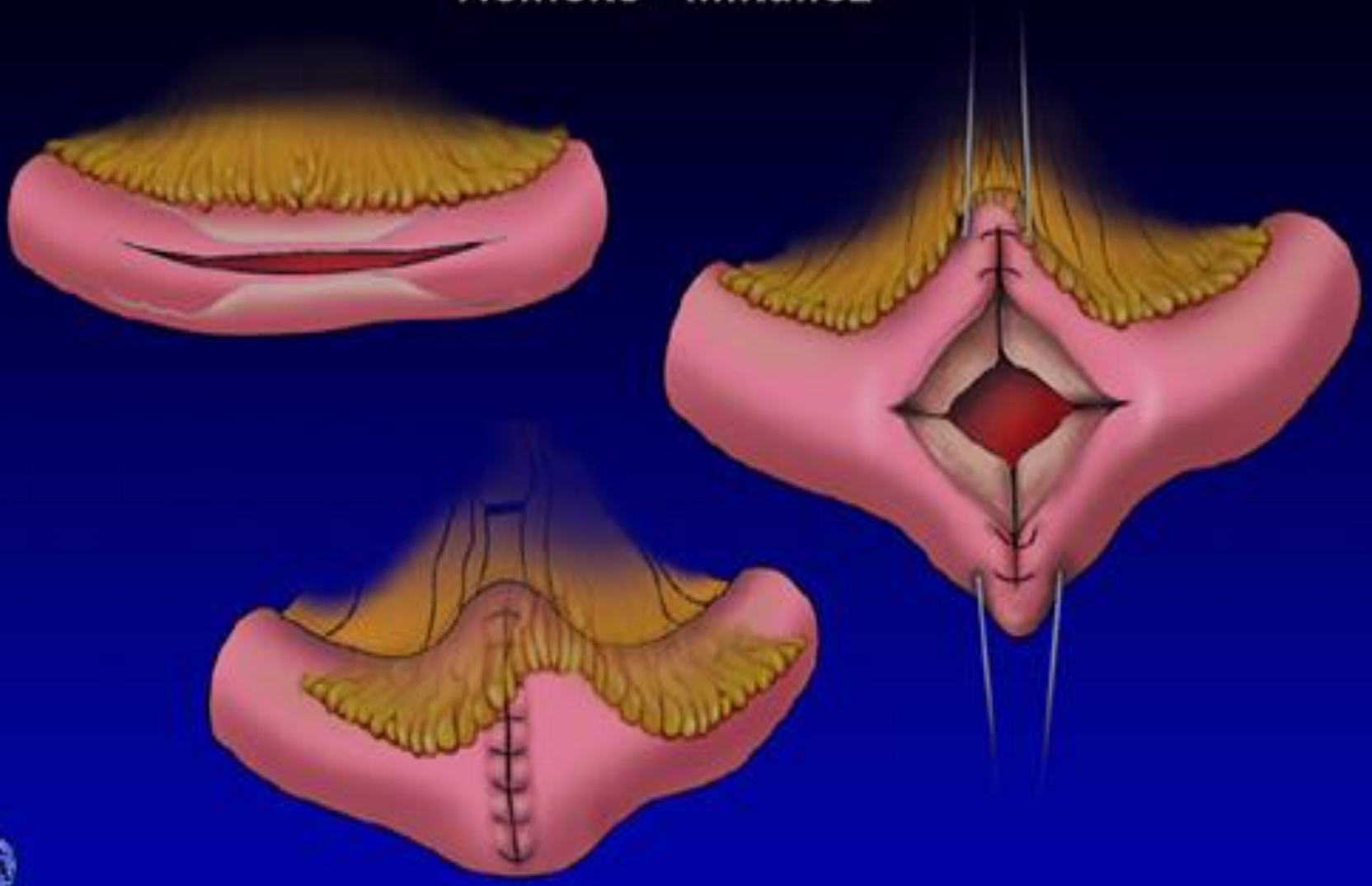






Strictureplasty

Heineke - Mikulicz





Indications

- Gastroduodenal *gasrrojejunostomy.*
- ileocolic limited *Rt hemicolectomy*.
- ileal and jejunal disease *strictureplasty*,or limited resection and end to end anastomosis.
- Fistulae conservative up to12 week, infliximab,TPN,*resection*.

Guide lines for operative management



- Determine length of healthy bowel
- Resect only segment causing complication
- Resection or stricturoplasty
- Macroscopic free margin
- In high risk protect the anastomosis with diversion
- By pass only in fear of short bowel syndrome

Surgery for colonic and rectal Crohn's disease



- ***Emergency colectomy***

Total colectomy ileostomy and mucous fistula of rectal stump.

- ***Elective colectomy***

- Segmental resection.
- Total colectomy and ileorectal anastomosis.
- Total colectomy and ileostomy.
- Panproctocolectomy

Perianal disease



- Anal fissure, asymptomatic conservative Symptomatic lateral anal sphinctrotomy.
- Abscesses drainage.
- Anal fistulae low fistulotomy,high seton drainage, and advancement rectal flap.
- Rectovaginal fistula vaginal advancement flap.

Perianal crohn's







Perianal fistula in CD

