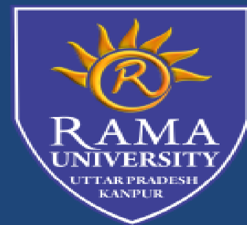

RAMA UNIVERSITY

www.ramauniversity.ac.in

FACULTY OF NURSING

ULCERATIVE COLITIS

BY:-

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Introduction

UC is a chronic inflammatory condition of the colon that is marked by remission and relapses.

It is a form of IBD.

Epidemiology

The annual incidence is 10.4-12 cases/100,000 people, and the prevalence rate is 35-100 cases/100,000 people. (US)

UC is 3 times more common than Crohn disease.

Women > men.

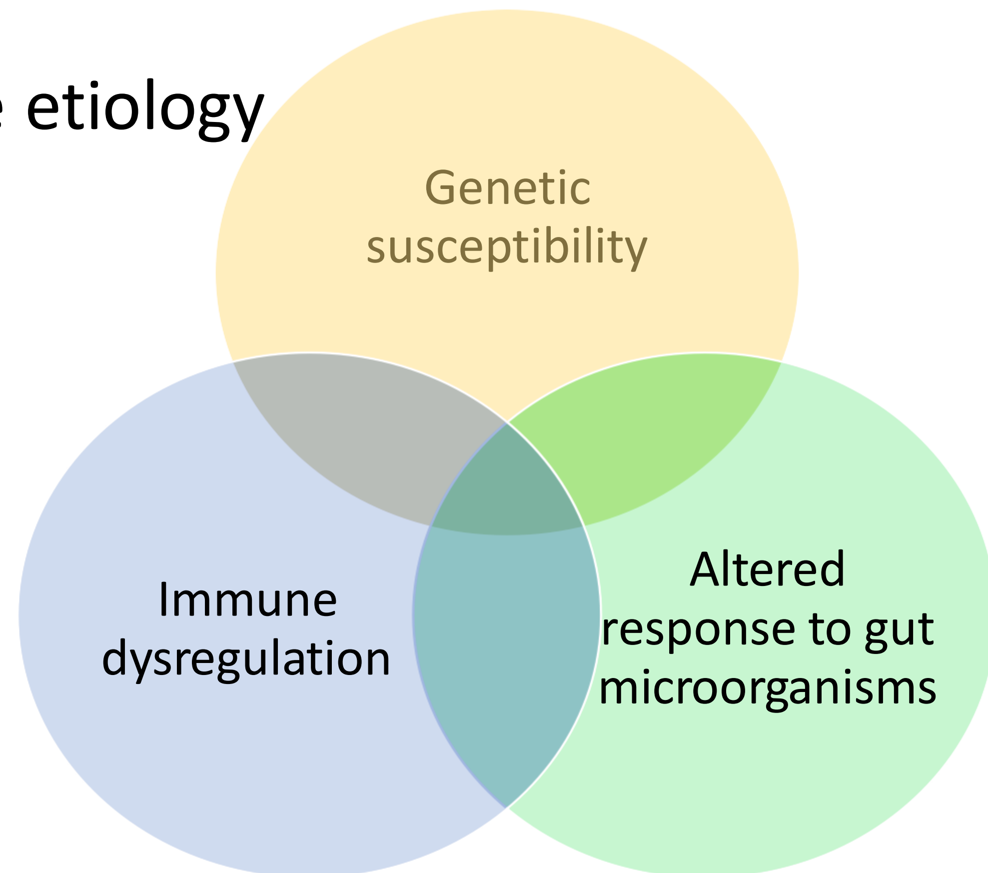
The age of onset follows a bimodal pattern

- With a peak at 15-25 years and a smaller one at 55-65 years
- Although the disease can occur in people of any age.

Etiology of UC

Exact cause of UC remains unclear

Three characteristics that define the etiology



Symptoms/ signs

Predominant symptoms are Rectal bleeding, with frequent stools and mucous discharge from the rectum

Others

- Tenesmus
- Nausea and weight loss
- In severe cases, purulent rectal discharge causes lower abdominal pain and severe dehydration.

Constipation may be the main symptom when the inflammation is limited to the rectum (proctitis).

Although UC can present acutely , symptoms have usually been present for weeks or months.

Signs

Pallor may be evident.

PR examination may disclose visible red blood.

Signs of malnutrition.

Severe abdominal tenderness, fever, or tachycardia suggests fulminant disease.

ing of disease

Mild

- Bleeding per rectum and
- <4 bowel motions/day

Moderate

- Bleeding per rectum with
- >4-6 bowel motions/day

Severe

- Bleeding per rectum,
- >6 bowel motions/day, and a systemic illness with hypoalbuminemia (<30g/l)

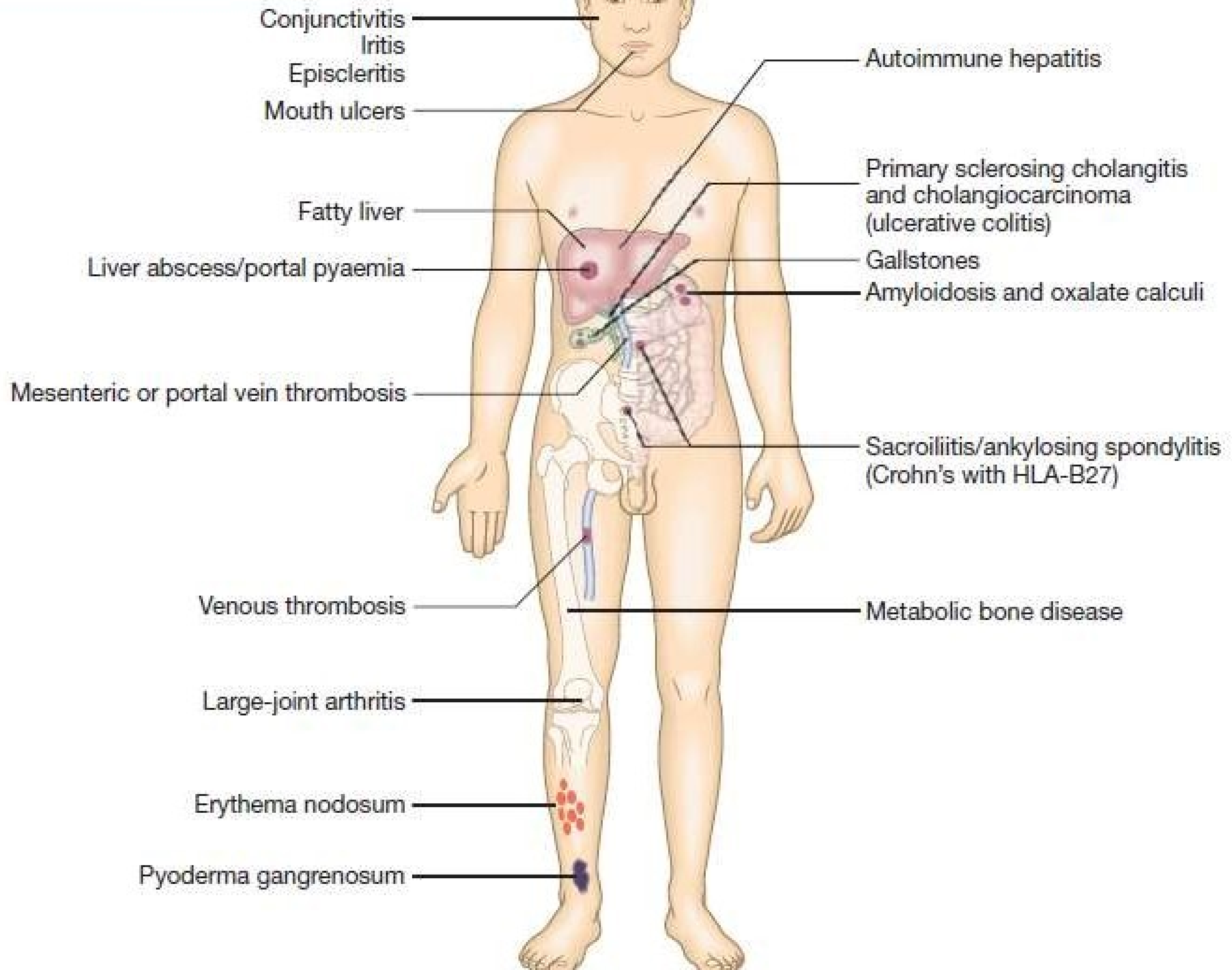
Extraintestinal manifestations

UC (IBD) is not restricted to GI tract, can involve almost any organ system

Upto 50% of patients can experience at least one EIM

UC is associated with various extracolonic manifestations

- Musculoskeletal conditions:- Peripheral or axial arthropathy
- Cutaneous conditions:- Erythema nodosum, pyoderma gangrenosum
- Ocular conditions:- Scleritis, episcleritis, uveitis
- Hepatobiliary conditions:- PSC


Occur during the active phase of inflammatory bowel disease
Unrelated to inflammatory bowel disease activity
Conjunctivitis
Iritis
Episcleritis
Mouth ulcers
Fatty liver
Liver abscess/portal pyaemia
Mesenteric or portal vein thrombosis
Venous thrombosis
Large-joint arthritis
Erythema nodosum
Pyoderma gangrenosum
Autoimmune hepatitis
Primary sclerosing cholangitis and cholangiocarcinoma (ulcerative colitis)
Gallstones
Amyloidosis and oxalate calculi
Sacroiliitis/ankylosing spondylitis (Crohn's with HLA-B27)
Metabolic bone disease

Complications of UC

Acute

- Toxic megacolon – potentially life threatening complication
- Perforation
- Haemorrhage

Chronic

- Cancer
- Extra-alimentary manifestations: skin lesions, eye problems and liver disease

Differential diagnosis

Other IBD

- Crohn’s disease

INFECTIVE

- Bacterial
  - Salmonella
  - Shigella
  - Compylobacter jejuni
  - Tubercuosis etc
- Viral – HSV, CMV
- Protozal - amoebiasis

NON INFEVTIVE

- Ischemic colitis
- Collagenous collitis
- NSAIDS
- Diverticulosis
- Radiation proctitis
- Behcet’s disease
- Colonic carcinoma

Diagnosis

Diagnosis relies on a combination of Compatible

- Clinical features
- Endoscopic appearances
- Histologic findings

Disease mimickers should be excluded

Laboratory studies

No single test allows the diagnosis of UC with acceptable sensitivity and specificity.

Useful principally for helping

- To exclude other diagnoses
- Assess the patient's nutritional status

CBC

CBC

CMP

nflammatory
narkers

tool assays

erological studies

- Leucocytosis
- Anaemia
- Thrombocytosis

CMP

- CBC
- CMP
- nflammatory markers
- tool assays
- erological studies

- Hypoalbuminemia (ie, albumin <3.5 g/dL)
- Hypokalemia (ie, potassium <3.5 mEq/L)
- Hypomagnesemia (ie, magnesium <1.5 mg/dL)
- Elevated ALP: >125 U/L suggests PSC (usually >3 times the upper limit of the reference range).

Infammatory markers

- CBC
- CMP
- Inflammatory markers
- Stool assays
- Serological studies

- ESR and CRP correlates with disease activity.
- Other inflammatory markers
  - Fecal calprotectin
    - Can also be used to determine mucosal healing 3-6 months after treatment initiation.
  - Fecal lactoferrin and alpha-1-antitrypsin studies are used to exclude intestinal inflammation

Stool assays

CBC

CMP

nflammatory
narkers

tool assays

erological studies

- Used to exclude other causes and to rule out infectious enterocolitis.
- Tests include
  - Evaluation of fecal blood or leukocytes
  - Ova and parasite studies
  - Viral studies
  - Culture for bacterial pathogens
  - *Clostridium difficile* titer

Serological studies

CBC

CMP

Inflammatory markers

Stool assays

Serological studies

P-ANCA

- M/c associated serologic marker.
- Positive in 60%-80% of patients
- Helpful in predicting disease activity.
- Associated with an earlier need for surgery

Colonoscopy/ Sigmoidoscopy

Essential at initial presentation

- To establish diagnosis
- Exclude alternate diagnosis like ischemic and infectious colitis
- Determine the extent and severity of disease.

It may also be useful at the time of subsequent attacks

- To determine recurrence
- For surveillance for dysplasia.

Multiple biopsies could be taken

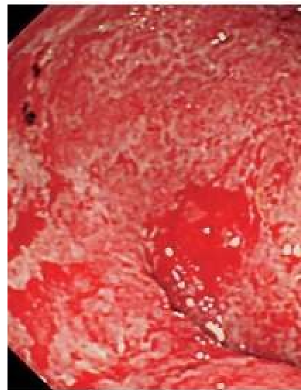
- Biopsy of the terminal ileum should be attempted to exclude the presence of Crohn's disease

Gross findings include:

Abnormal erythematous mucosa, with or without ulceration, extending continuously from the rectum to a part or all of the colon

Contact bleeding may also be observed, with mucus identified in the lumen of the bowel

Pseudopolyps in patients with long-standing disease.



Histologic finding of UC

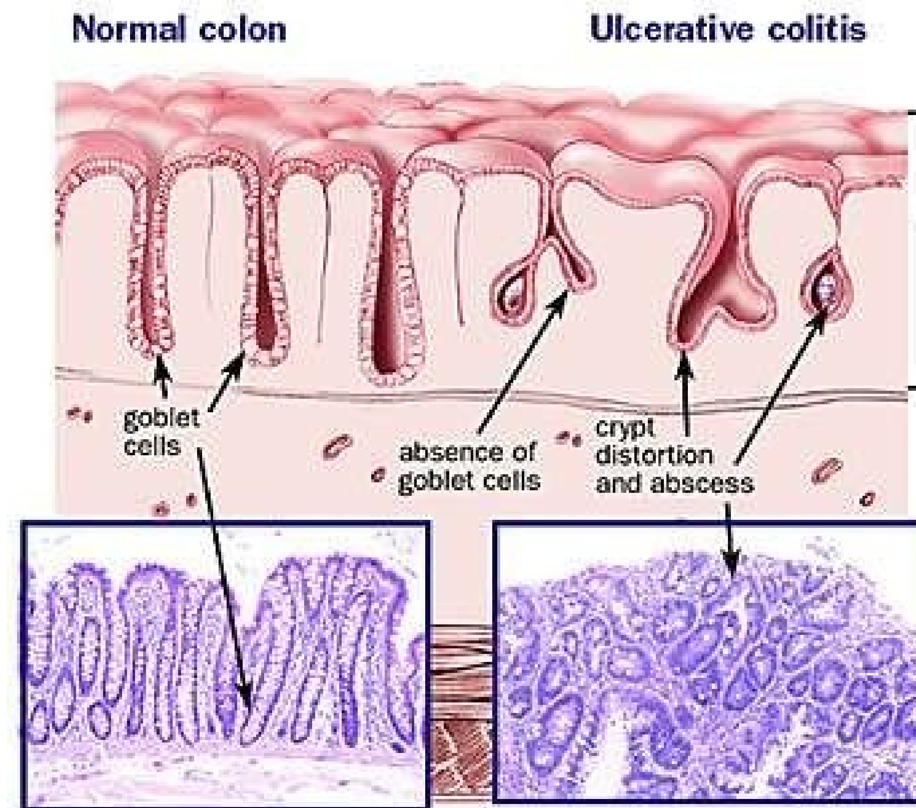
Surface ulceration

Inflammation confined to the mucosa with

Excess inflammatory cells in the lamina propria

Loss of goblet cells

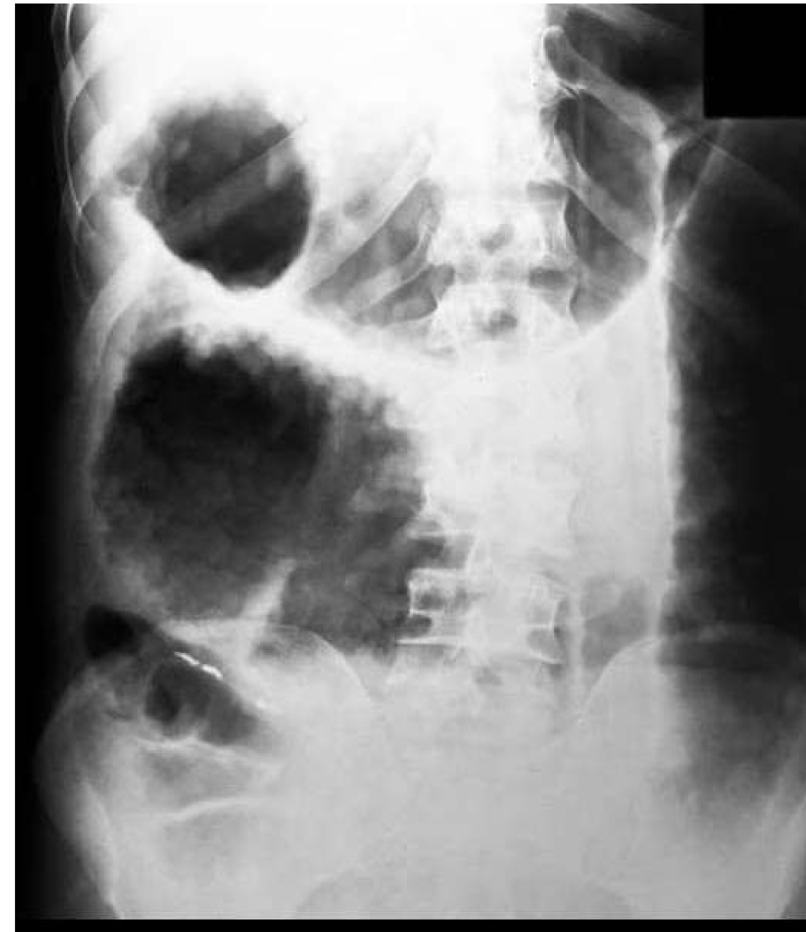
Presence of crypt abscess



Imaging Studies

Plain Abdominal X-ray:

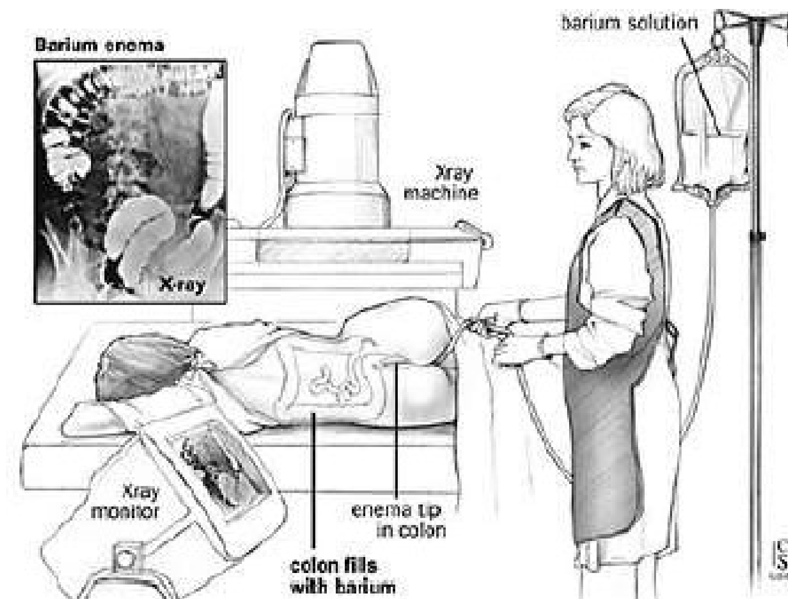
- Useful predominantly in patients with symptoms of severe or fulminant colitis.
- Images may show
  - colonic dilatation with loss of haustral markings , suggesting toxic megacolon
  - Evidence of perforation; obstruction; or ileus.



Barium Enema:

It can be useful for detecting active ulcerative disease, polyps, or masses.

The colon typically appears granular and shortened.

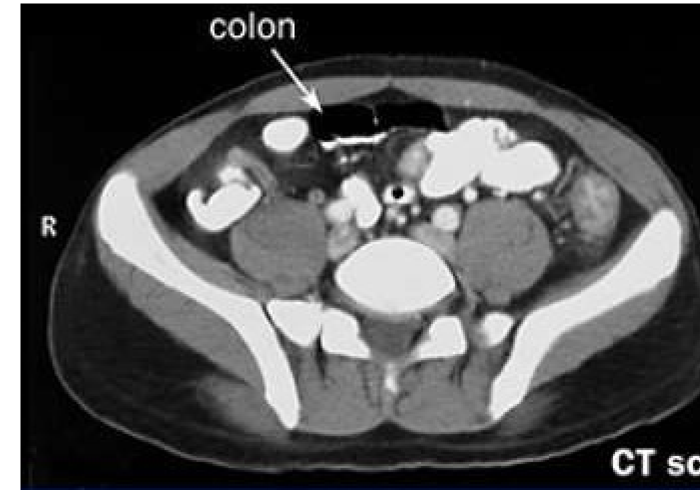


CT scan

Loss of haustra, especially in the distal colon

Pseudopolyps

Chronic cases - a narrow , featureless , shortened 'hosepipe' colon



Approach Considerations

The treatment of UC is made on the basis of

- Disease stage (active, remission),
- Extent (proctitis , distal colitis, left-sided colitis, pancolitis), and
- Severity (mild, moderate, severe).

Options

- Medical
- Surgical

Treatment goals

Induction of remission

Maintenance of remission.

Prevention of complications

- Therapy related- allergies/ intolerance, infections, lymphoma, steroid side effects
- Disease related- EIM’s, neoplasia, toxic megacolon

A) Medical Treatment

5ASA

Corticosteroids

Thiopurine

Cyclosporine

Biologics

1) 5-Aminosalicytes

- The mainstay of therapy for mild to moderate UC
- Preparations
  - Sulfasalazine
  - Mesalamine
- Effective at inducing and maintaining remission
- Topical mesalazine given by suppository is the preferred therapy for disease confined to the rectum
- Left-sided colonic disease is best treated with a combination of mesalazine suppository and an oral aminosalicylate.

Corticosteroids

- 5ASA
- Corticosteroids
- Thiopurine
- Cyclosporine
- Biologics

- Used in acute treatment of moderate to severe colitis.
- Preparations:
  - Oral Prednisone
  - Iv Methylprednisolone
  - Iv Hydrocortisone
- Budesonide - A new glucocorticoid
  - Released entirely in the colon
  - Has minimal to no systemic glucocorticoid side effects.
  - The dose is 9 mg/d for 8 weeks and no taper is required
- Rectally administered steroid enemas provide therapy for flares of distal UC.

Thiopurines

- 5ASA
- Corticosteroids
- Thiopurines
- Cyclosporine
- Biologics

- Effective for the maintenance of remission
- Not appropriate as solo induction agents for patients with severe disease due to their slow onset of action
- Preparations
  - Azathioprine 2 - 2.5 mg/kg/day.
  - 6-mercaptopurine 1 - 1.5 mg/kg/day.

Cyclosporine

- 5ASA
- Corticosteroids
- Thiopurines
- Cyclosporine
- Biologics

- Used to treat hospitalized patients with severe ulcerative colitis.
- Dose:
  - * 2-4 mg/kg/day given as a continuous infusion.
- Side effects:
  - Nephrotoxicity.
  - Opportunistic infections.
  - Seizures.

Biologics - antiTNF

5ASA

Corticosteroids

Thiopurines

Cyclosporine

Biologics

- Its an IgG monoclonal antibody directed against TNF.
- It is a less toxic alternative to cyclosporine for patients with severe ,steroid refractory disease
- Effective for both induction and maintenance of remission.
- Preparations - infliximab
  - Induction of remission: 5 mg/kg IV at weeks 0, 2, 6.
  - Maintenance: 5 mg/kg IV every 8 weeks.

Surgical Treatment

About 10% to 20% of patients with UC.

Indications:

1) Chronic intractable disease
    - Not controlled with medications or
    - Drug side effects are too severe.
2) Severe acute colitis requiring an urgent procedure.
3) Presence of dysplasia or cancer.
4) Colonic perforation

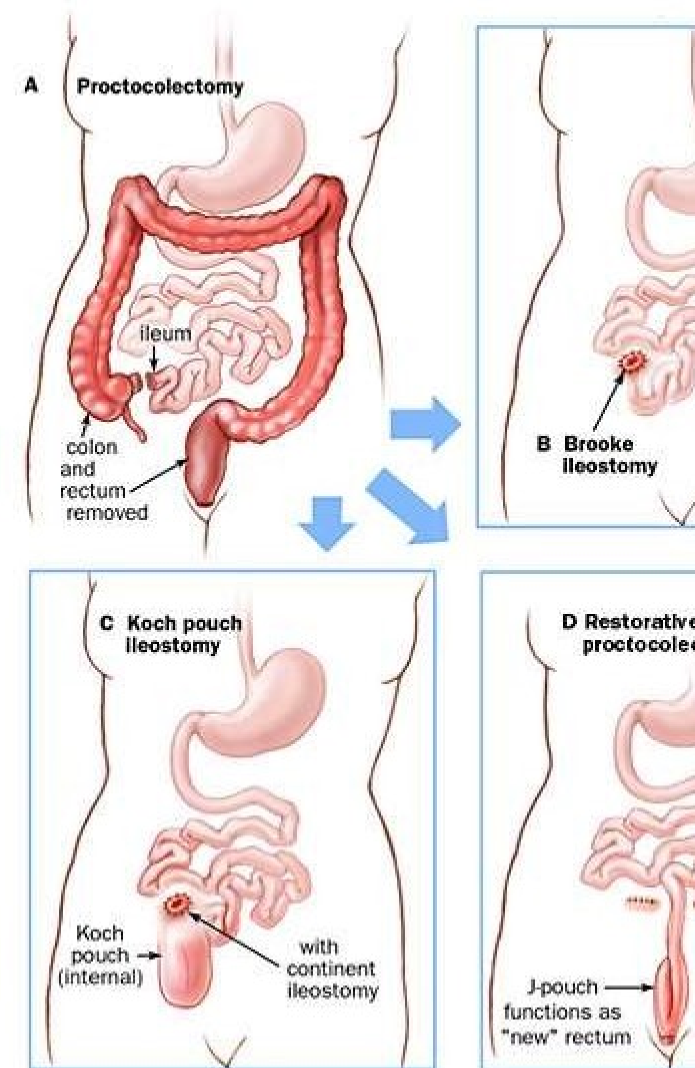
Surgery

- Proctocolectomy

options after proctocolectomy

- Permanent end iliostomy
- J pouch

echnically, proctocolectomy cures UC and preve



Take home message

UC is an idiopathic IBD that affects the colonic mucosa.

Hallmark of UC is bloody diarrhea often with prominent symptoms of rectal urgency and tenesmus.

The clinical course is marked by exacerbations and remissions.

The diagnosis of UC is suspected on clinical grounds and supported by the appropriate findings on

- Proctosigmoidoscopy or colonoscopy
- Biopsy
- By negative stool examination for infectious causes

THANK YOU