Irritable Bowel Syndrome

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- A functional bowel disorder in which abdominal pain is associated with defecation or change in bowel habit .
- 20% of general population fulfil the criteria of IBS.
- IBS is the most common cause of GI referral .
- Young females are affected 2-3 times more than men.

- **Coexisting conditions:**
- **Non-ulcer dyspepsia.**
- **Chronic fatigue syndrome.**
- **Dysmenorrhea.**
- **Fibromyalgia**

Pathophysiology

- **Behavioural &Psychosocial factors:**

Most patients have no psychological problem but 50% meet the diagnostic criteria of psychiatric diagnosis like:

-Depression

-Anxiety.

-Somatisation.

-Neurosis.

- **Acute psychological stress & overt psychiatric disease are known to alter visceral perception & GI motility in both IB patients & healthy people.**

- **There is an increased prevalence of abnormal illness behavior with frequent consultation for minor symptoms.**

- **These factors contribute to but do not cause IBS.**

Physiological factors

- **IBS is serotoninergic (5HT) disorder, increased 5HT in D-IBS & decreased in C-IBS.**
- **5-HT3 receptors antagonists are effective in D-IBS ,while 5-HT4 agonists improve bowel function in C-IBS.**
- **IBS represent state of low grade gut inflammation or immune activation not detected by tests, with raised no. of mucosal mast cells which sensitize enteric neurons by releasing histamine & tryptase.**
- **Some patients respond to ketotifen (Mast cell stabilizer).**
- **Immune activation may be associated with altered CNS processing of visceral pain signals. This is more common in women & in D-IBS , may be triggered by GE with salmonella or Campylobacter species.**

Luminal factors

- **Both quantitative & qualitative alterations in intestinal bacterial contents (The gut microbiota) has been reported in IBS.**
- **SIBO may be present in some patients & lead to symptoms.**
- **This Gut Dysbiosis explain the response to probiotics or non absorbable antibiotic rifaximin in some patients.**

Luminal factors.

- Other may be chemical food intolerances(not allergy) to poorly absorbed ,short chain carbohydrates(lactose ,fructose & sorbitol & among others) collectively known as FODMAPs(Fermentable, Oligo , Di & Monosaccharide & Polyols) .
- Non coeliac gluten sensitivity seems to be present in some patients with IBS.
- Some patients are intolerant to chemicals like salicylates & benzoates present in certain foods.

Altered GI motility.

Predominantly constipation:

They have decreased orocaecal transit

Reduced number of high-amplitude, propagated colonic contraction waves, but there is no consistent evidence of abnormal motility.

Predominantly diarrhea.

There is rapid jeujenal contraction waves.

Rapid intestinal transit .

Increased number of fast & propagated colonic contractions

Abnormal visceral perception.

- **IBS is associated with increased sensitivity to intestinal distension induced by inflation of balloons in the ileum , colon and rectum ,a consequence of altered CNS processing of visceral sensation.**

- **This is more common in women & in diarrhea - predominant IBS.**

Clinical features

- **The most common presentation is that of recurrent abdominal pain.**
- **Abdominal bloating worsens through out the day.**
- **Altered bowel habits.**
- **Passage of mucus is common but rectal bleeding does not occur.**
- **No weight loss.**
- **Physical examination is generally unremarkable with exception of some abdominal tenderness.**

Rome 3 criteria for diagnosis of IBS

- **Recurrent abdominal pain or discomfort at least 3ds/m in the last 3ms with 2 or more of the following:**
- **Improvement with defecation.**
- **Onset associated with a change in frequency of stool.**
- **Onset associated with a change in form (appearance) of stool.**

Features of IBS:

- Colicky abdominal pain.
- Altered bowel habit.
- Abdominal distension.
- Rectal mucus.
- Feeling of incomplete defecation.

Supporting diagnostic features in IBS

- **Symptoms > 6months.**
- **Frequent consultation for non-GI problems.**
- **Previous medically unexplained symptoms.**
- **Stress worsen symptoms.**

Alarm features in IBS

- **Age > 50 years, male gender.**
- **Weight loss.**
- **Nocturnal symptoms.**
- **Family history of colon cancer.**
- **Anemia.**
- **Rectal bleeding.**

- Examination is negative .
- Only abdominal distension & some tenderness.
- Full blood count , ESR , Faecal calprotectine with or without Sigmoidoscopy are usually done & are normal.
- Colonoscopy for older patients & all patients with Diarrhea , those with rectal bleeding .
- D-IBS should investigate to exclude Coeliac disease , microscopic colitis , Lactose intolerance , bile acid malabsorption , thyrotoxicosis& parasitic infection

Management

- Reassurance.

Wheat free , Lactose exclusion & Low FODMAP diet

- Resistant cases:

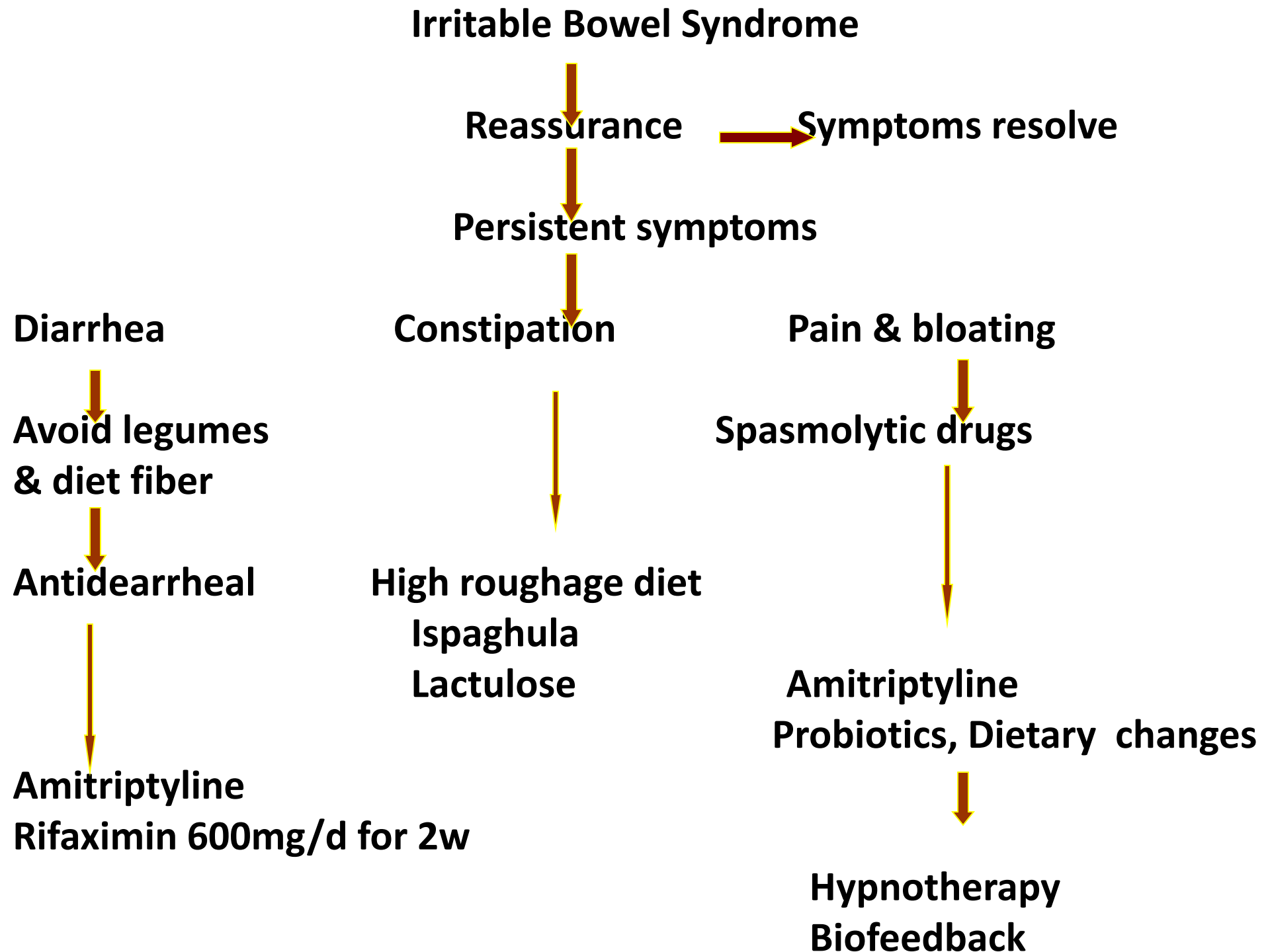
Amitriptyline 10-25 mg at night.

5-HT4 agonist prucalopride, chloride channel activators as Lubiprostone are effective in C-IBS.

Trial with Rifaximin , mesalazine & Ketotifen may be considered in some patients.

Foe most difficult cases: Psychological intervention such as Cognitive Behavioural therapy, Relaxation & Gut-directed Hypnotherapy.

Most patients have a relapsing & remitting course.


Irritable Bowel Syndrome
Reassurance
Symptoms resolve
Persistent symptoms
Diarrhea
Constipation
Pain & bloating
Avoid legumes
& diet fiber
Spasmolytic drugs
Antidearrheal
High roughage diet
Ispaghula
Lactulose
Amitriptyline
Probiotics, Dietary changes
Amitriptyline
Rifaximin 600mg/d for 2w
Hypnotherapy
Biofeedback

Complementary & alternative therapies for IBS

- **Manipulative & body-based.**

Massage, chiropractic.

- **Mind-body interventions**

Meditation,hypnosis,cognitive therapy

- **Biologically based**

Herbal products, dietary additives,probiotics.

- **Energy healing**

Biofield therapies,bioelectromagnetic field therapies

- **Alternative medical systems**

Ayurvedic,homeopathy,traditional Chinese medicine

Constipation

Is infrequent passage of hard stool.

Causes

GI disorders:

Dietary: Lack of fiber&/or fluid intake.

Structural: Colonic carcinoma , Benign stricture.

Motility: Slow transit constipation ex.IBS ,drugs

Defecation: Anorectal disease.

Non-GI disorders

Drugs: Opiates, Anticholinergic, Calcium antagonist, Iron supplement , Aluminum containing anti-acid.

Metabolic/Endocrine: DM , Hypercalcemia.

Hypothyroidism , Pregnancy.

Neurological: Multiple Sclerosis, Spinal cord lesions CVA, Parkinsonism.

Others: Any serious illness.

History

- Onset of illness:
- Presence of symptoms:

Examination:

- General:
- Abdominal:
- Neurological:
- Perianal inspection & rectal examination:

Simple Constipation

Very common

No underlying organic diseases.

Usually respond to dietary fiber or use of bulking agents & adequate fluid intake.

Severe Idiopathic Constipation

- Occur almost exclusively in young female.
- Often benign.
- In childhood or adolescence cause?
- Slow transit.
- Obstructed defecation.
- Usually resistant to treatment (Prokinetic agents) Glycerol suppositories.
- Rarely subtotal Colectomy.

Laxatives

Class	Example
-Bulk forming	Methylcellulose
-Stimulants	Bisacodyl, Senna
	Dantron
-Faecal softener	Decusate
-Osmotic laxative	Lactulose, Mg –salt
-Others	Polyethanolglycol,
	Phosphate enema.

Initial visit

- PR-Proctoscopy & Sigmoidoscopy
- S.Ca
- TFTs.
- Blood count

One month trial of dietary fiber &/or laxatives.

Next visit

If symptoms persist: Barium enema or colonoscopy.

Further investigations

- Slow transit or obstructed defecation.
- Then use intestinal marker studies
- Scintigraphy , Ano-rectal manometry
- Electrophysiological studies
- Defecating Protography

Diverticulosis

- Acquired.
- Most common in Sigmoid & Descending colon.

Pathophysiology

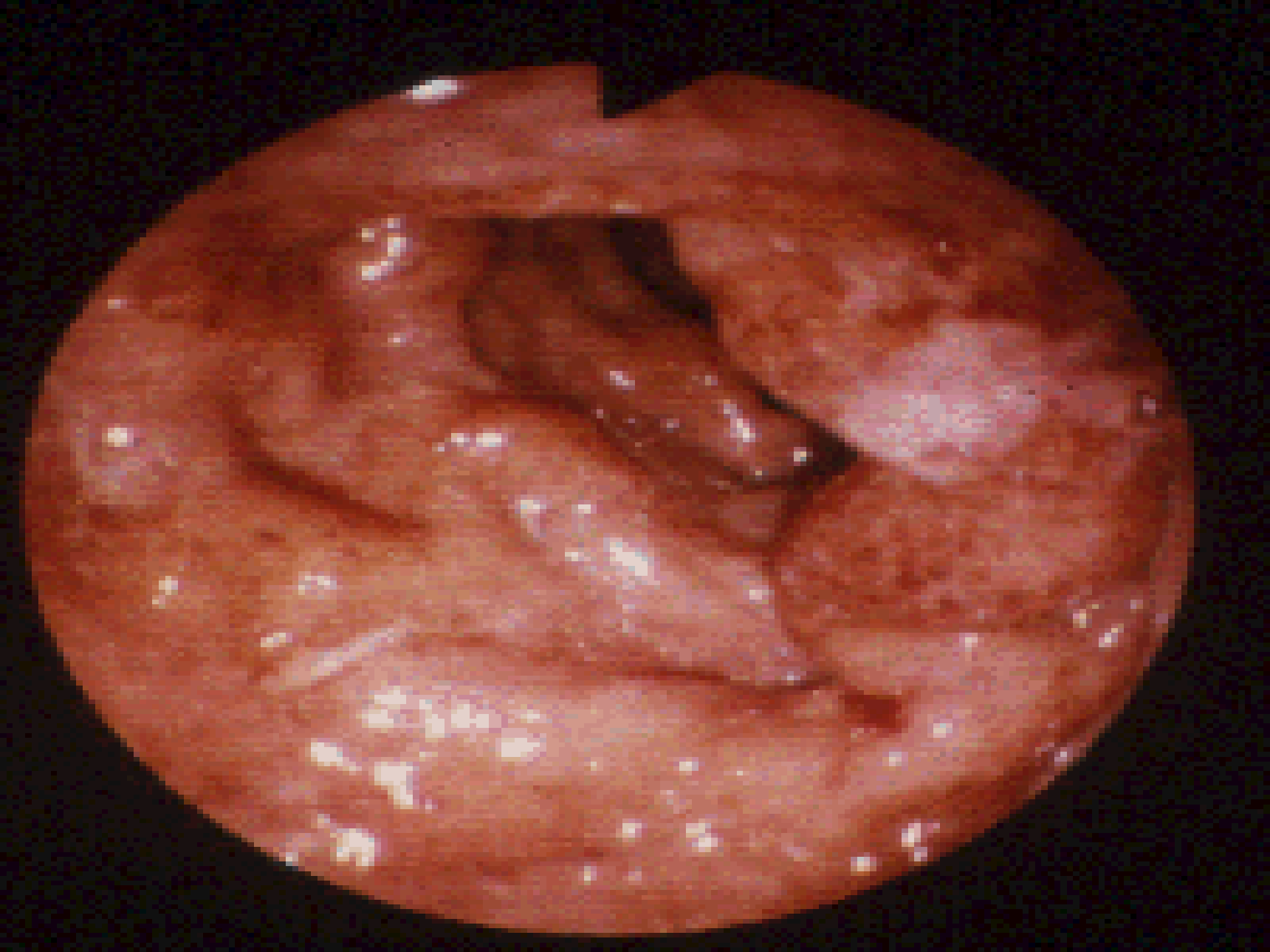
Refined diet & Decrease fiber.

Pathology

- Protrusion of mucosa covered by peritoneum.
- Hypertrophy of the circular muscle.
- Inflammation result from impaction of fecolith.

Clinical features

- Usually asymptomatic.
- Symptoms due to constipation.
- Colicky abdominal pain.
- Symptoms due to diverticulitis.
- Rectal bleeding some time diarrhea, fever.



On examination

- Palpable Descending colon in diverticulitis.
- + local tenderness.

Differential Diagnosis

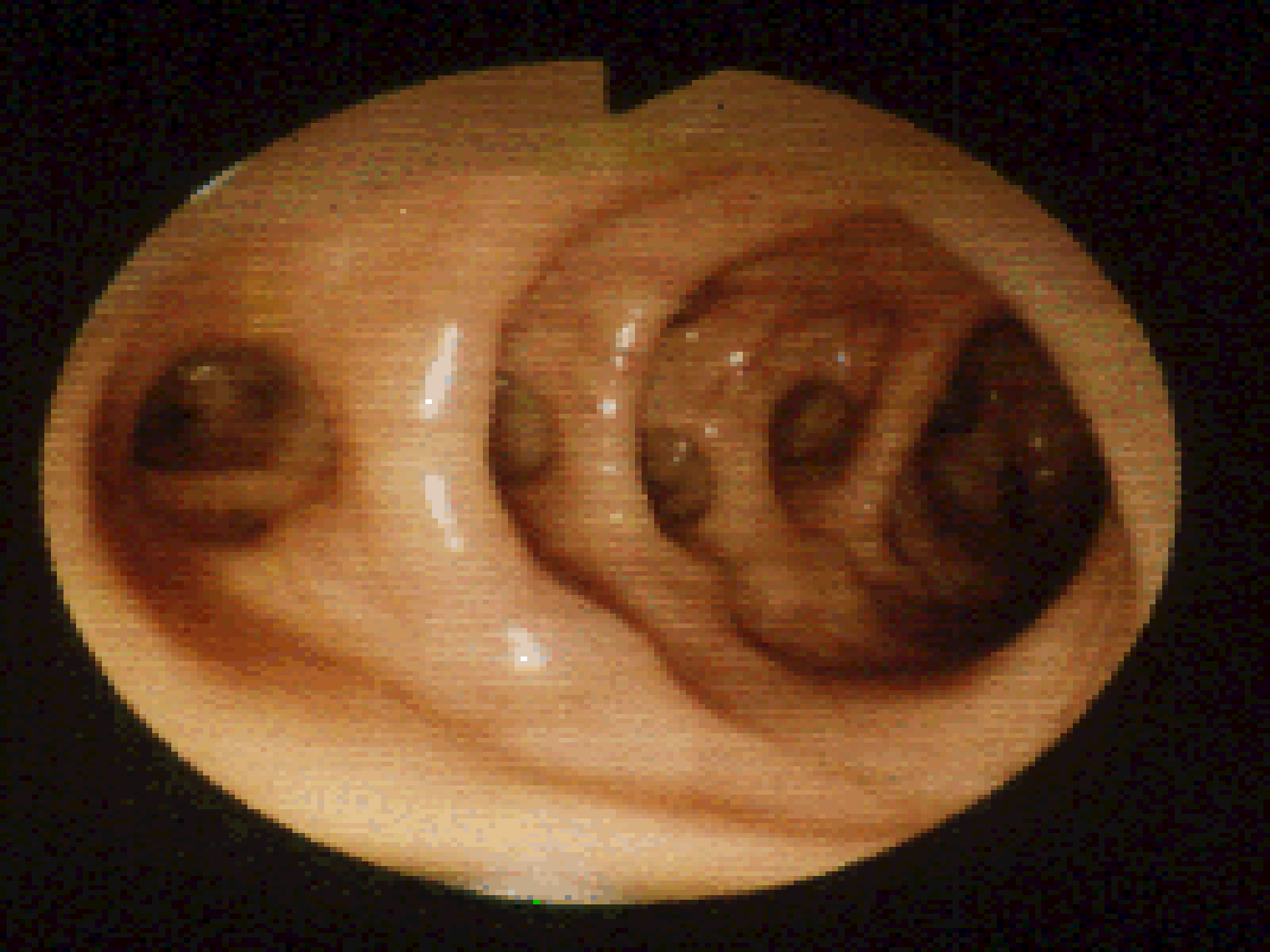
- Ca colon
- Ischemic colitis
- IBD
- Infection

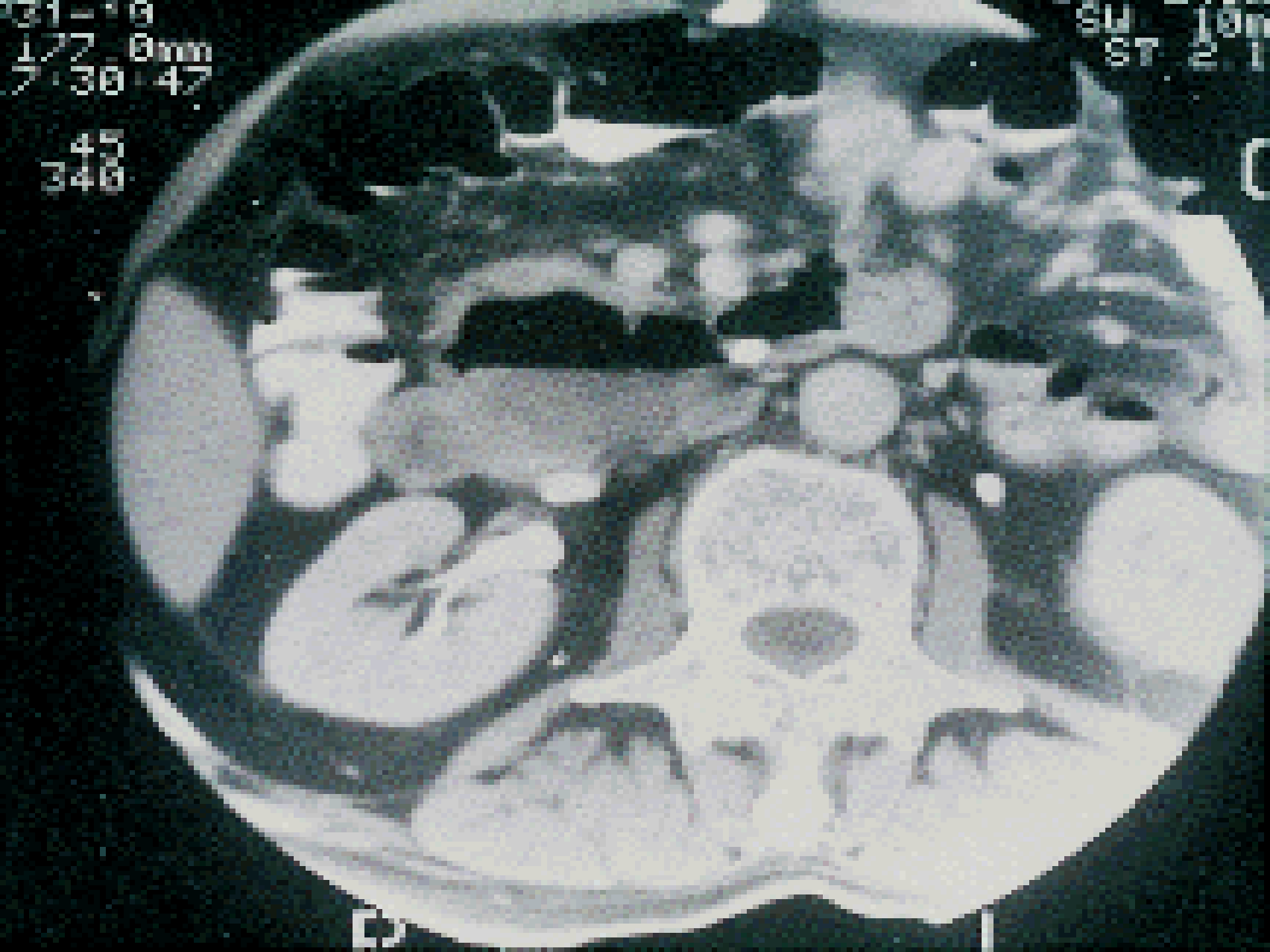
Complications

- Perforation
- Pericolic abscess
- Acute rectal bleeding s.t in NSAIDs & Aspirin users.

Investigations

- Barium Enema.
- Flexible Sigmoidoscopy.
- CT scan of the abdomen.
- Colonoscopy





Management

- Asymptomatic: No treatment.
- Constipation: Fiber diet +/- bulking laxative
- Treatment of Diverticulitis:
- Surgery for severe hemorrhage or perforation or elective