Approach to chronic diarrhea

Chronic diarrhea
Definition

- Increased *frequency* or *fluidity* of stool
- Normal ??
- Duration >4 weeks
- Cut off value of 4 weeks separates all but 4 causes of infective diarrhea
- HIV, TB, Whipples, Strongyloidosis

Chronic diarrhea

4 step approach

- Step 1: Exclude fecal incontinence and spurious diarrhea: clinical setting, rectal exam
- Step 2: Functional v/s organic diarrhea
- Step 3: Small v/s large bowel diarrhea
- Step 4: Luminal v/s pancreatic diarrhea

Separating functional diarrhea

Organic diarrhea

- Nocturnal frq
- Fever +
- Blood in stools +
- Wt loss/dehydration
- Anemia +

Functional diarrhea

- No nocturnal frq
- Fever -
- Blood in stools -
- Wt loss -
- Stress +

Large versus small bowel diarrhea

Not air tight compartments

Some ds can involve both segments eg Crohns,TB,Amyloid

- Stool volume : higher in small bowel
- Stool frequency : higher in large bowel
- Bloody diarrhea : **decisive (LB)**
- Tenesmus/urgency : **decisive (LB)**
- Vitamin deficiency : **decisive** (SB)

Small bowel v/s pancreatic diarrhea

Pancreatic

- Abd pain
- Marked steatorrhea
- No anemia
- Fat soluble vit def
- Diabetes +

Small bowel

- Usually painless
- Mild
- Significant anemia
- Non-selective vit def
- Diabetes –

Chronic diarrhea approach

- Numerous causes, diverse aetiologies
- No algorithm can possibly cover all causes
- Algorithmic v/s tier approach
- Referral to specialized centers

Chronic diarrhea approach

- Lab. Test - Extensive, invasive, costly
- Diagnosis - Governed by H/O & Exam
- Therapeutic trial – Often rewarding if Dx suggested by initial evaluation

In 60% causes unclear – Need further tests

Large bowel diarrhea

- Investigation of choice: *colonoscopy+biopsy*
- Mucosal diseases: Endoscopic Biopsy
- Transmural disease: CT & MRI are helpful

Large bowel diarrhea

- Barium studies: obsolete ?
- *Localize* the site; only rarely *diagnostic*
- TB: purse string sign/contracted caecum
- Strictures: TB, Crohn's, Malignancy

Large bowel diarrhea-diagnostic histology

- TB: granuloma or AFB
- Microscopic colitis:lymphocytic & collagenous
- Malignancy

Small bowel diarrhea: Clues on history & physical Ex

- Recurrent oral ulcers: Crohn's
- Fever: TB, HIV, Crohn's
- Ch diarrhea & hyperphagia: Celiac, thyrotoxicosis
- Childhood diarrhea: Celiac
- Recurrent sino-pulmonary inf: CVID
- Promiscuity: HIV
- Derm. Herpetiformis / Erythema Nodosum: IBD
- Flushing: carcinoid
- Lymphadenopathy: HIV, TB, lymphoma, whipples
- Abd mass: TB, lymphoma, malignancy

Chronic small bowel diarrhea
Basic investigations

- Hemogram
- Electrolytes
- AXR / CXR
- Serological tests for Celiac
- TFT
- Barium studies
- Faecal fat
- Small bowel biopsy
- CT Scan

Chronic diarrhea: investigations min cost with max gain

- *Eosinophilia*: eosinophilic GE, strongy
- *Hypochromic/microcytic* anemia: celiac
- *Megaloblastic* anemia: SIBO
- *Thrombocytosis*: celiac
- *Neutropenia*: lymphangiectasia
- *AXR*: Chronic pancreatitis

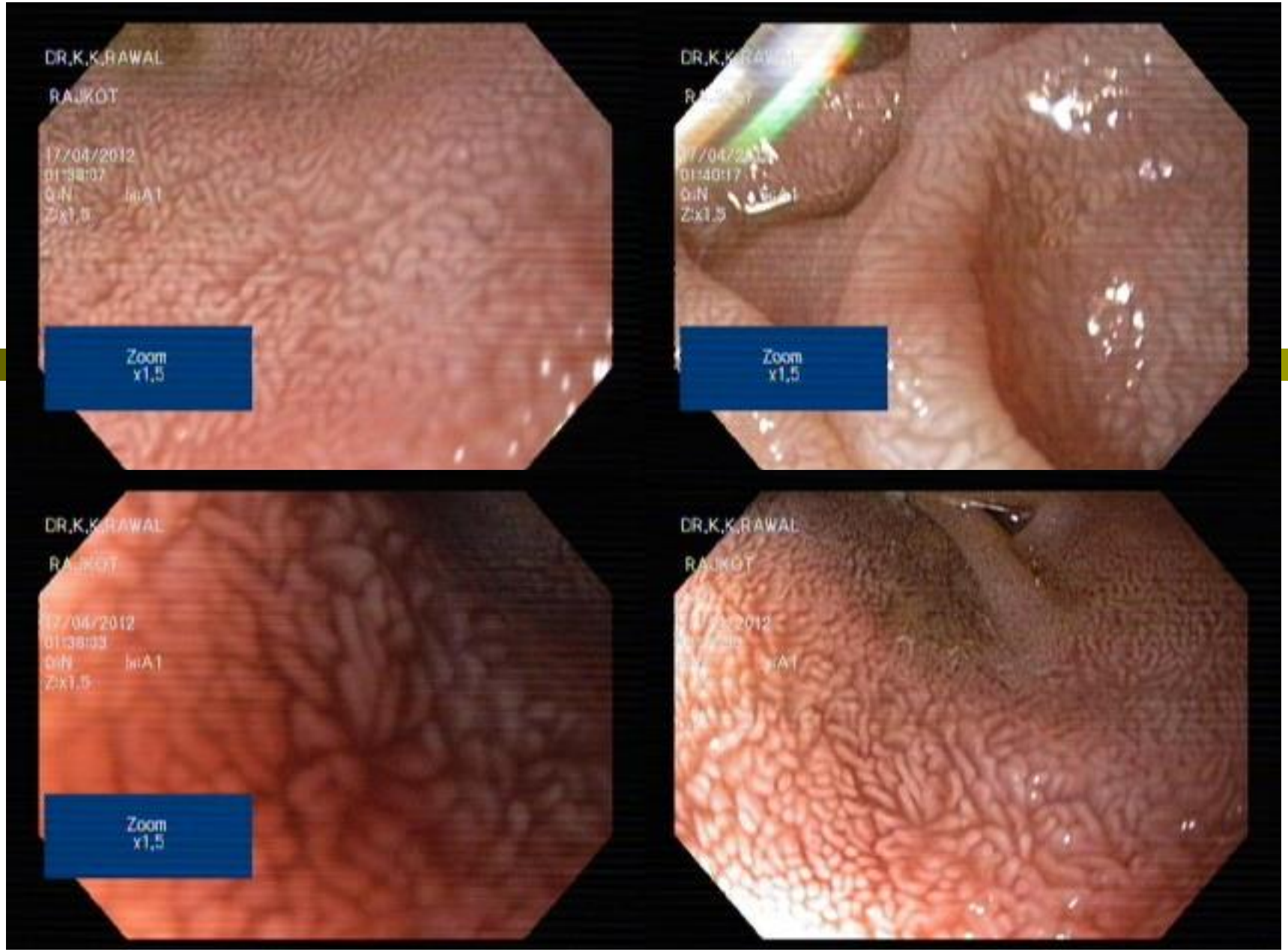
Small bowel histology: basics

- Deep duodenal bx is as good as jejunal bx
- Provides final dx in many diseases
- Patchy disease may warrant multiple biopsy samples

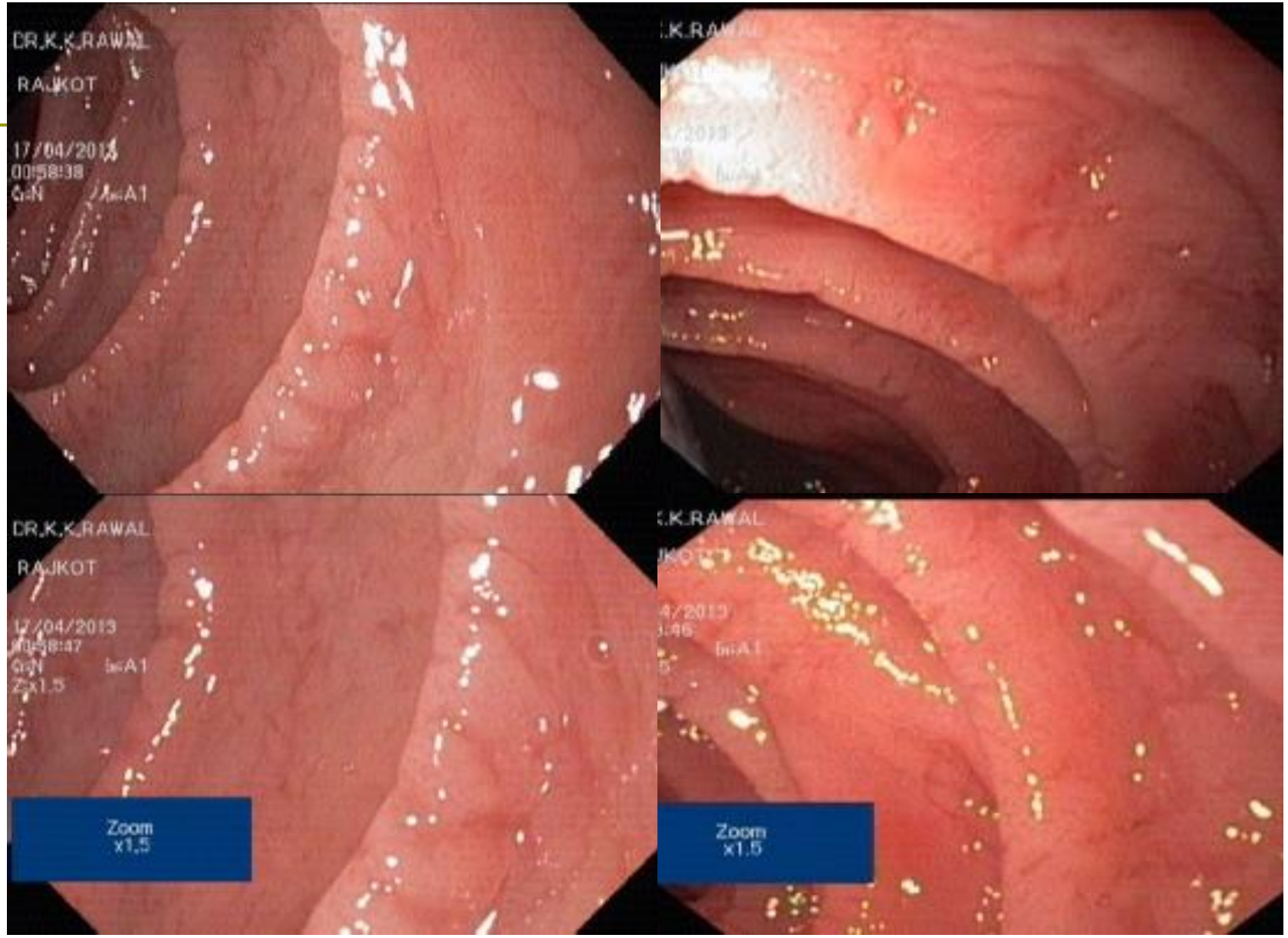
Small Bowel Histology definitive diagnosis

- Lymphangiectasia
- Abetalipoproteinemia
- Giardiasis/strongyloidosis
- Eosinophilic gastroenteritis
- IPSID
- Whipples disease
- Agammaglobulinemia

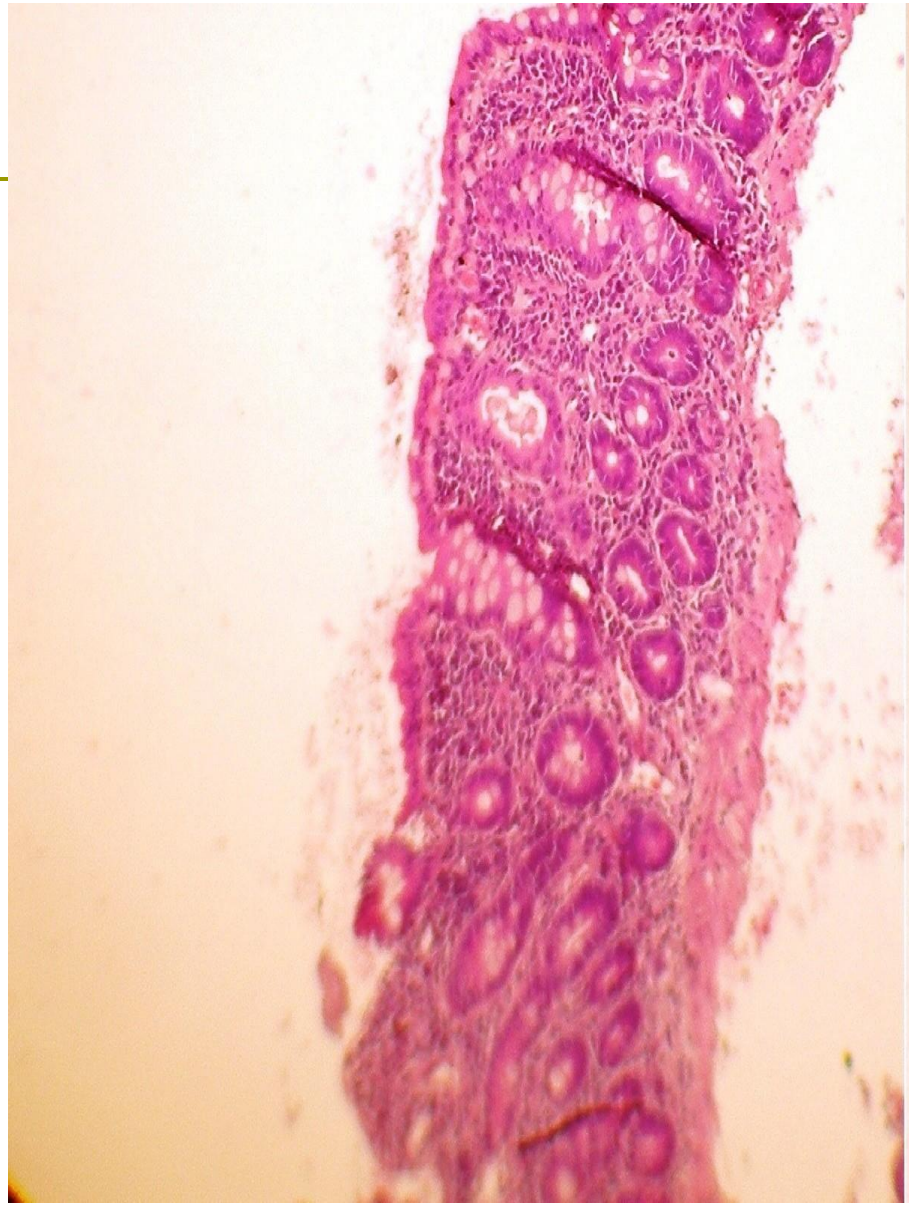
NORMAL DUODENAL MUCOSA



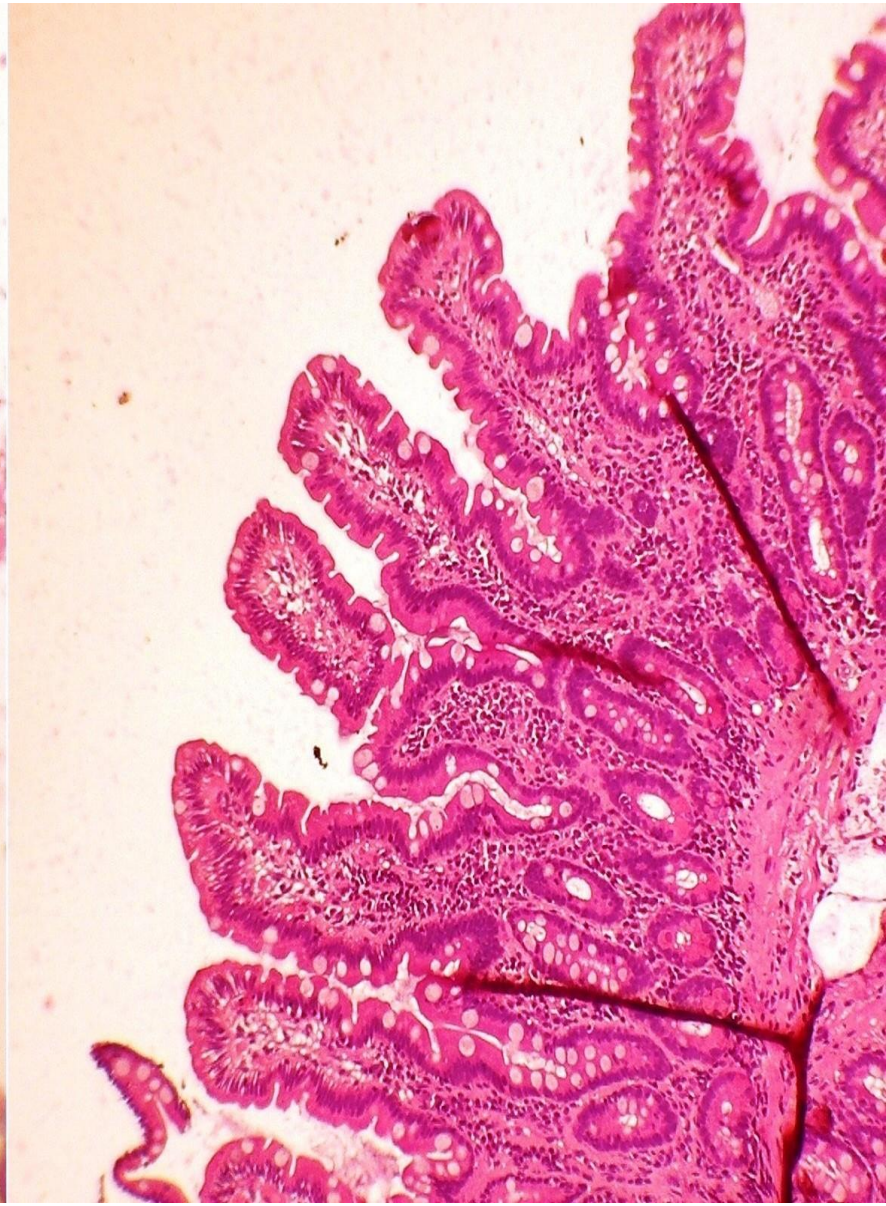
CELIAC DISEASE



celiac



normal



IRRITABLE BOWEL SYNDROME

Manning criteria (1978)

- Pain *relieved* with defection
- More *frequent* stools at the onset of pain
- *Looser* stools at the onset of pain
- Visible abdominal distention
- Passage of mucus
- Sensation of incomplete evacuation

Rome 3 criteria (2005)

Recurrent abdominal pain or discomfort at least *3 days* **per month in the last** *3 months* **associated with 2 or more of the following:**

- Improvement with defecation
- Onset associated with change in *frequency* of stool
- Onset associated with change in *form* (appearance) of stool

IBS

Alarm Symptoms

- Rectal bleeding
- Nocturnal or progressive course
- Weight loss
- < Hb, > ESR/CRP, Abnormal electrolytes

TB VERSUS CROHN'S

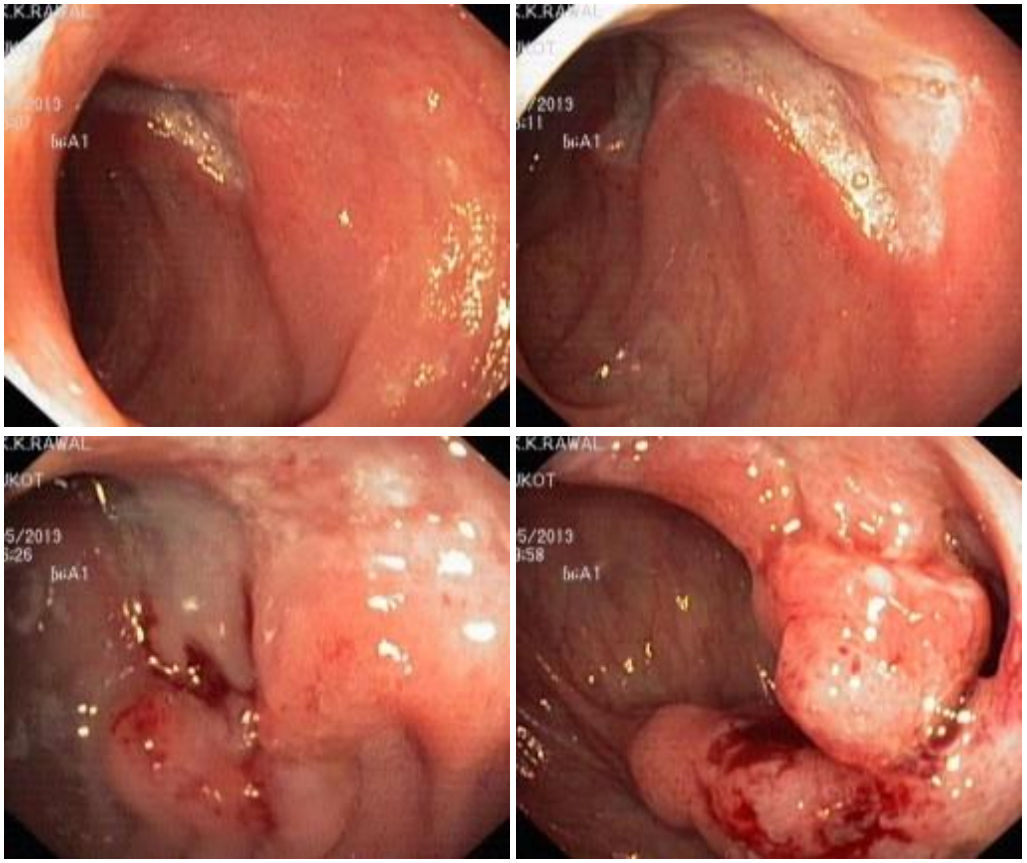
	TB	CD
Duration	<6 mth	>12 mth
S/S	Fever,ascietes	Diarrhea, bleed P/R
	TB at other site	*Perianal* ds, recurrent SAIO / Surgery
ASCA	Not useful (*makharia ,DDS 2007*)	
AFB	+ve (25-35%)	-ve
PCR	POOR –VE PREDICTIVE VALUE	

SEROLOGICAL TEST FOR TB BANNED NOW

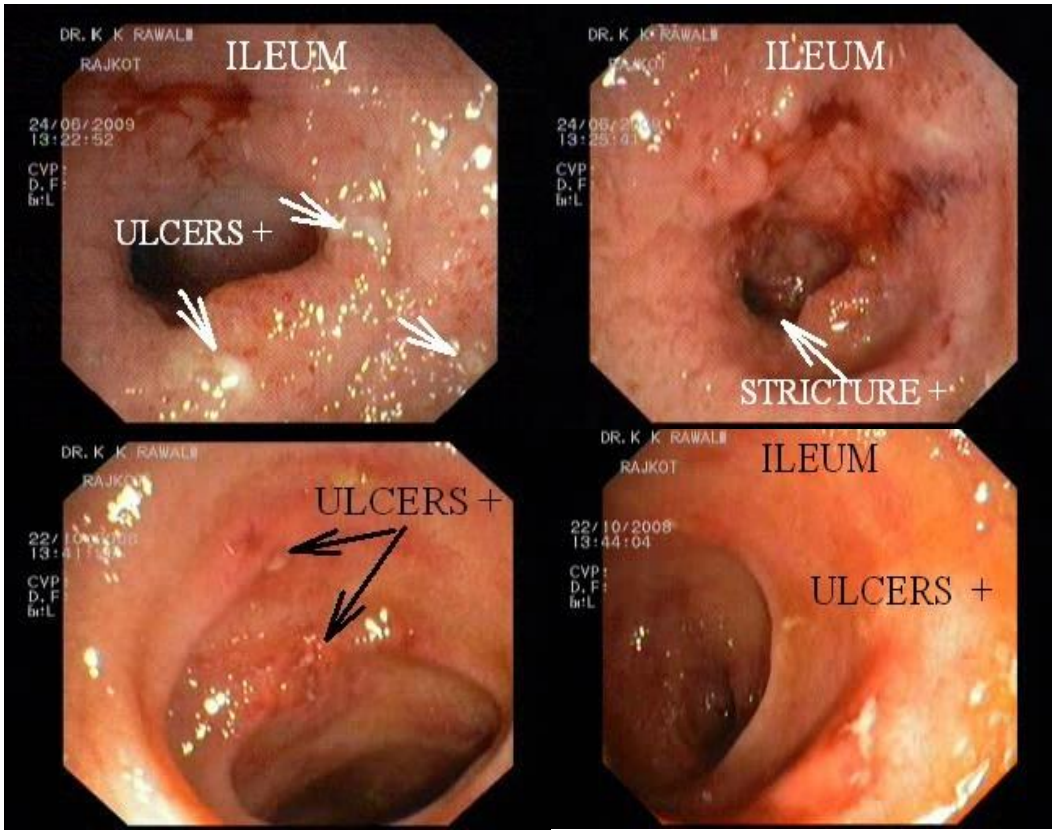
TB VERSUS CROHN'S

	TB	CD
SCOPY	Transverse ulcer nodularity mass lesion	Aphthoid/linear/deep cobble stone,skip lesion

TB VERSUS CROHN'S



TB VERSUS *CROHN'S*



TB VERSUS CROHN'S

	TB	CD
Capsule/ Enteroscopy	No benefit (*pasha clingastrhep2008*)	
BMFT	Short, concentric, I/C - prestenotic dilatation	Long, eccentric, no dilatation
BIOPSY	Caseating granuloma	Transmural involvement

TB VERSUS CROHN'S

CT SCAN	**TB**	**CD**
	Mural thickening without stratification	Mural thickening with stratification
	Strictures *concentric*	Strictures *eccentric*
	Fibrofatty proliferation of mesentery vary rare	*Fibrofatty* proliferation of mesentery
	Mesentric inflammation but no vascular engorgement	Hypervascular mesentery *(comb sign)*
	Hypodense lymph nodes with peripheral enhancement	Mild lymphadenopathy
	High density ascites	Abscesses

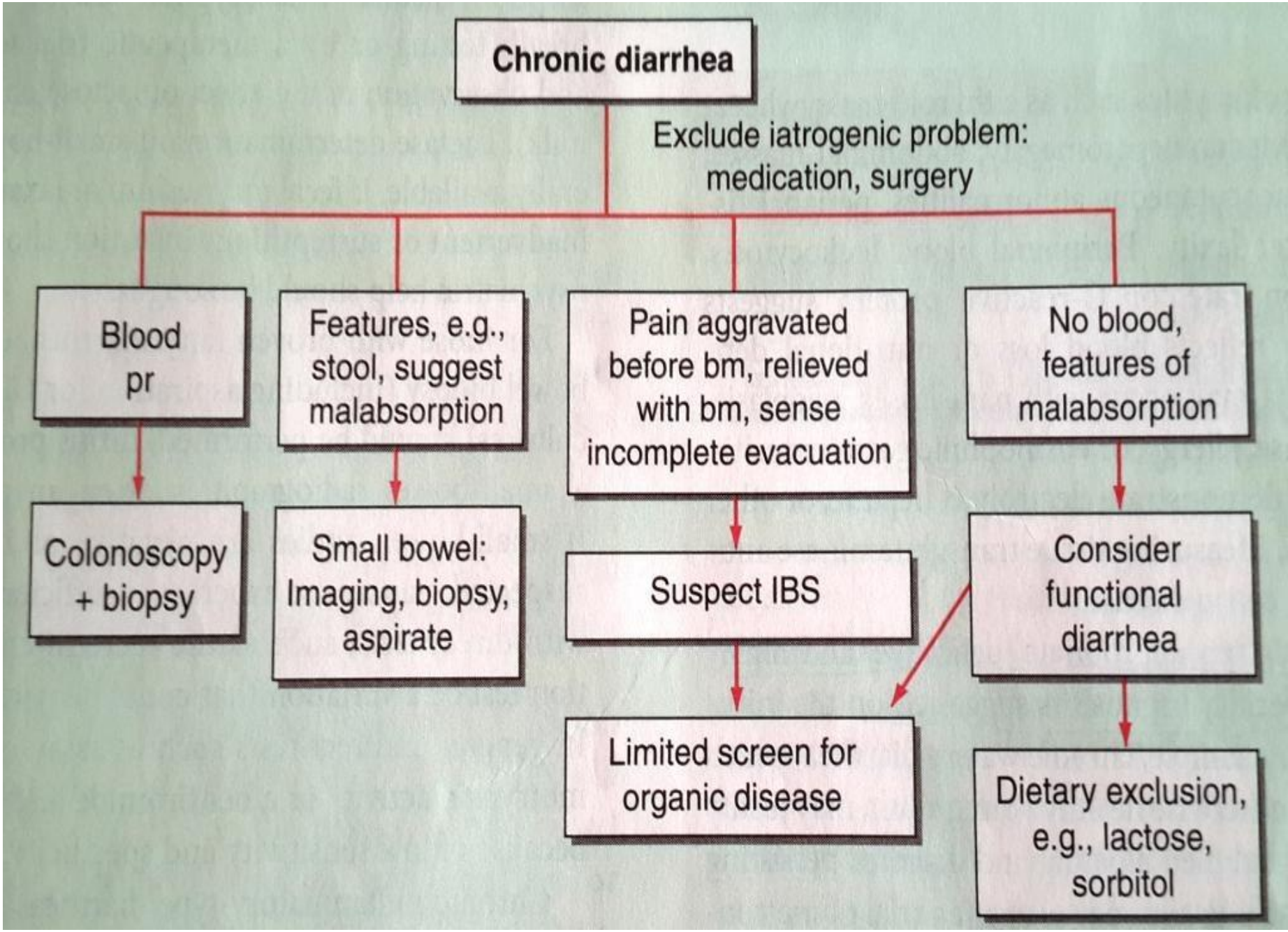
TB VERSUS CROHN'S

In 10-20% cases adequate course of *ATT* and long term *follow up* is needed to differentiate between TB and Crohn's.

(pulimood,amrapurkar,reddy DN wjg 2011)

Diarrhea in HIV/AIDS

- Increasingly being recognized: high index of suspicion
- Usually occurs with CD4 <250
- Can be caused by any common pathogens eg Salmonella, Shigella, C jejuni
- 3 Organisms peculiar to HIV: Cryptosporidiosis, Microsporiodis, Isospora
- HIV enteropathy


Chronic diarrhea
Exclude iatrogenic problem: medication, surgery
Blood pr
Features, e.g., stool, suggest malabsorption
Pain aggravated before bm, relieved with bm, sense incomplete evacuation
No blood, features of malabsorption
Colonoscopy + biopsy
Small bowel: Imaging, biopsy, aspirate
Suspect IBS
Consider functional diarrhea
Limited screen for organic disease
Dietary exclusion, e.g., lactose, sorbitol

THANKS