



NEET-PG

PART-B

VOLUME-II
Pathology

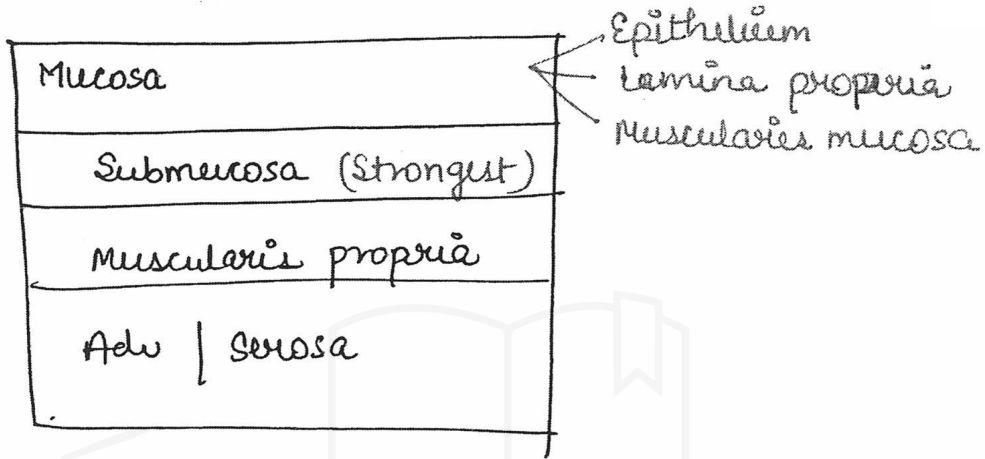


PATHOLOGY

1. Cellular Adaption	1-15
2. Inflammation	16-31
3. Genetics	32-51
4. Immunology	52-71
5. Amyloidosis	72-75
6. Neoplasia	76-95
7. Bleeding Disorder	96-106
8. Blood Banking	107-111
9. Anaemia	112-132
10. WBC	133-151
11. Plasma Cell Tumor	152-156
12. Systemic Renal Theory	157-171
13. CNS Neuropathology	172-189

14. Lung	190-205
15. CVS	206-220
16. GIT	221-232
17. Liver	233-236

G.I.T.



Esophageal Trauma

Mallorey weiss tear

↓
 forced vomiting
 ↓
 against
 delayed relaxation of cardia
 (Stomach)

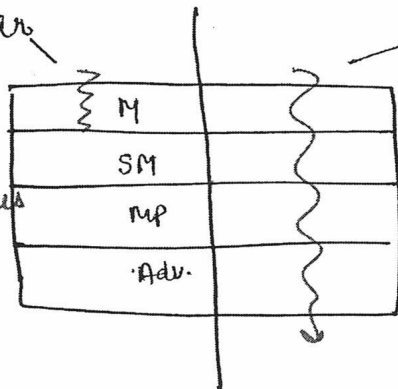
↓
only mucosal tear

Boerhaav trauma

↓
 forceful vomiting
 ↓
 against
 closed glottis
 ↓
 all 4 layers teared.

• MC site =

cardia of stomach > esophagus



Lower 1/3rd of esophagus

↓
(lt) posteriolateral side

cat of Feline Esophagus :

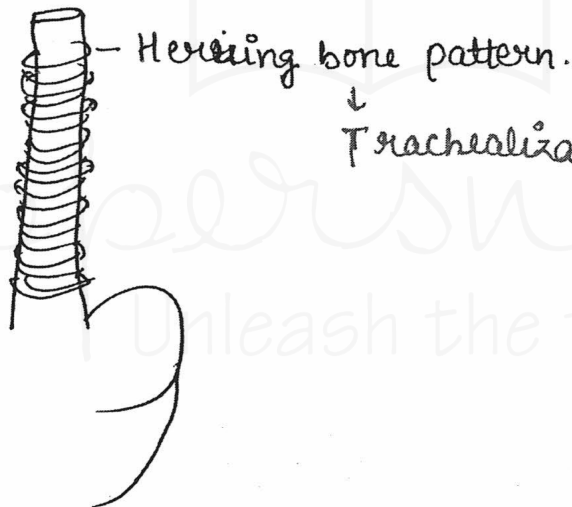
- MC a/w GERD <<< E°-Esophagitis (allergic ")

\xrightarrow{PA} >15 eosinophil / HPF
 \downarrow
 Confirmed the dx.

• Endoscopy ;



• double contrast Esophagogram :



\downarrow
Trachealization of esophagus.

MC Esophageal tumor

Benign tumor



leiomyoma

Malignant tumor

India } Squamous cell Ca \Rightarrow Adeno Ca
 World }

\downarrow
MC - sili

\downarrow
middle $\frac{1}{3}$ rd of esophagus

MC paraneoplastic synd for esophagus - $\uparrow\uparrow Ca^{+2}$

Stomach

Gastritis

Inflammation ⊕ ↑↑↑

Gastropathis

- Hyperplasia & Hypertrophy
+
Inflammation absent or minimal.

eg: Menetrier's disease;

↑ TGFα

↓

↑ Hyperplasia

↓

of Rugal folds → loss of protein
(serrated form) "protein losing
gastropathy"

- Risk factor for - Carcinoma Transform

◦ Bx:

- Follicular cell Hyperplasia +
No / scanty inflammation.

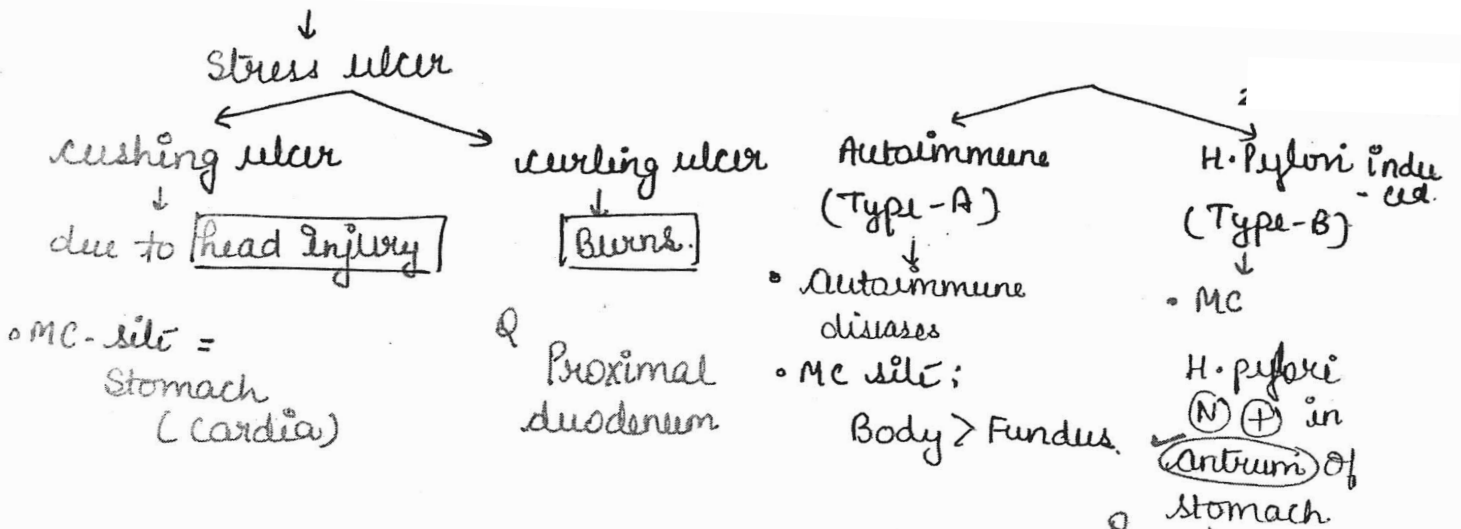
Gastritis

Acute ←

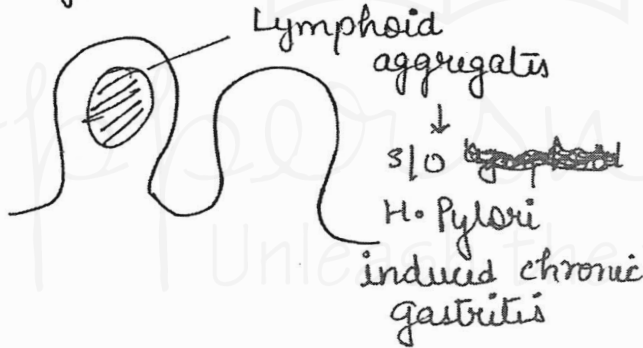
- Neutrophilic infiltration
- No mucosal atrophy.
- Causes:
 - NSAIDs
 - Stress

→ Chronic

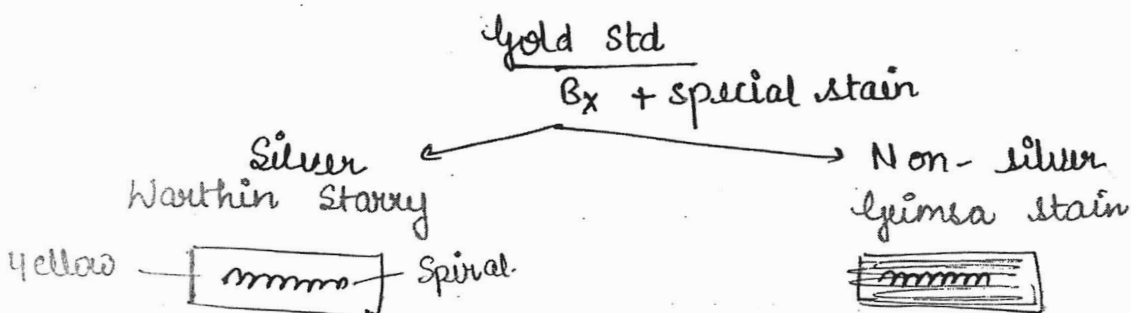
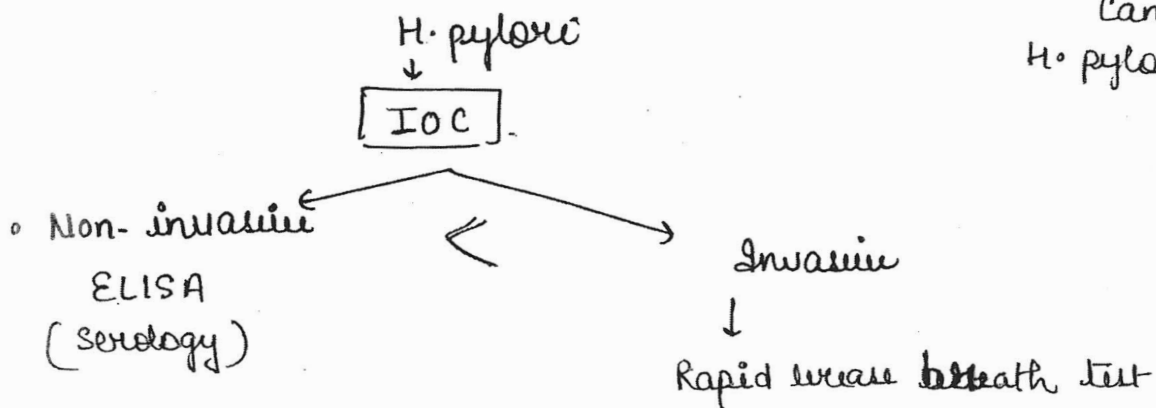
- Lymphocytic infiltration.
↓
Mucosal Atrophy.
- cause:
 - Autoimmunity
 - H. pylori - (MC)



Bx: **H. Pylori**



- ① **Ureases** Buffer the acid
↓
NH₃
 - ② **cag-A gene**: cytotoxic
 - ③ **Bab-A = Adhesions**
↓
MC in 'O' - B. gp
↓
↑ Risk of ulcers
- MC site = **Antrum**
↓
also for Cancer alt H. pylori.



Peptic Ulcer disease

Gastric ulcer

1. MC-site = Antrum

↓
lesser curvature

2. Pain = Relieved by vomiting

3. Malignant transformation ↑↑

duodenal ulcer - MC

◦ Proximal duodenum
(̄ in 2.5 cm)

◦ Pain - Relieved by food intake.

◦ ⊖

◦ MC complication of Peptic ulcer = Bleeding

◦ MCC of death in peptic ulcers = Perforation

STOMACH CA



MC

Benign ←

↓
Adenoma

→ Malignant

1. MC - Epithelial tumor

↓
◦ Gastric adenoca.

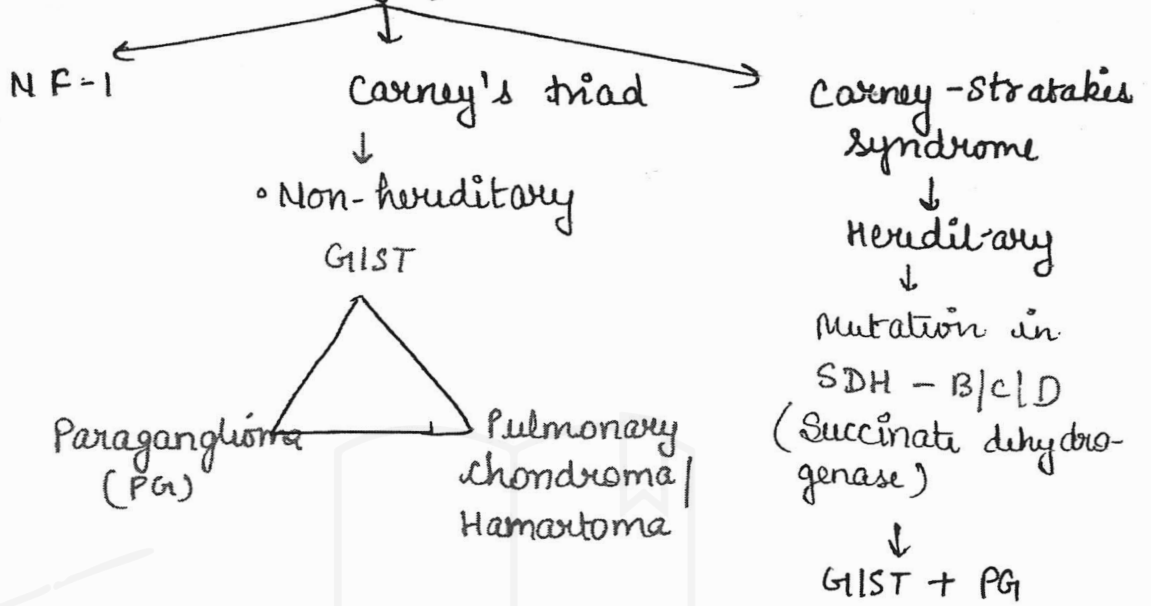
2. ◦ NHL (Maltoma)

3. ◦ GIST (gastrointestinal stromal tumor)

↓
◦ MC-site = Stomach > SI

◦ MC - Mesenchymal tumor = GIST

Etiology of GIST : also



Pediatric - GIST :

a/w SDH - B mutatⁿ.
 ↓
 No → CKIT mutatⁿ
 NO → PDGFR- α gene mutation.

Adult GIST

CKIT gene (80%)
 PDGFR- α -gene (15-20%) } Monoclonal Ab

At 13/14/17

DOG1-1

Most special
Best IHC

For metastatic GIST

Best also.

Malignant GIST : Dx :

- ↓
- > 10 mitotic figures / HPF
- > 5 cm size
- lobulated contour & Necrosis
- liver metastasis | peritoneal metastasis

Malabsorption Syndrome

MC sign = Steatorrhoea

↓
↑ Fecal Fat

↓
Bulky and Malodour

Infective ←

① Tropical sprue;

- E. coli infection

↓
MC site = Ileum. (Megaloblastic Anaemia)

Bx: Non diagnostic

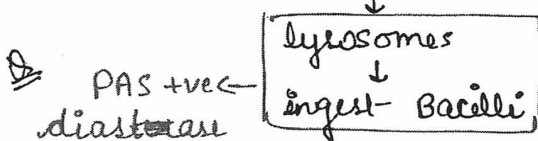
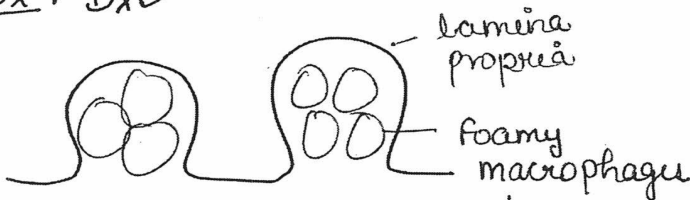
- PCR - Confirm the Dx

② Whipple's disease :

- MC site - Small Intestine

- Tropheryma whipplei (Gr +ve)

Bx: Dx ✓

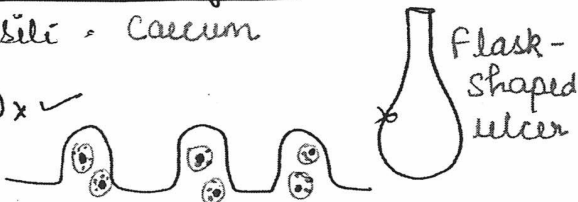


↓
Magenta colour bacilli

③ Entamoeba histolytica :

- MC site - Caecum

Bx: Dx ✓



Non-infective ↓

① Celiac disease

- gluten sensitive enteropathy
- Immune mediated malabsorption syndrome

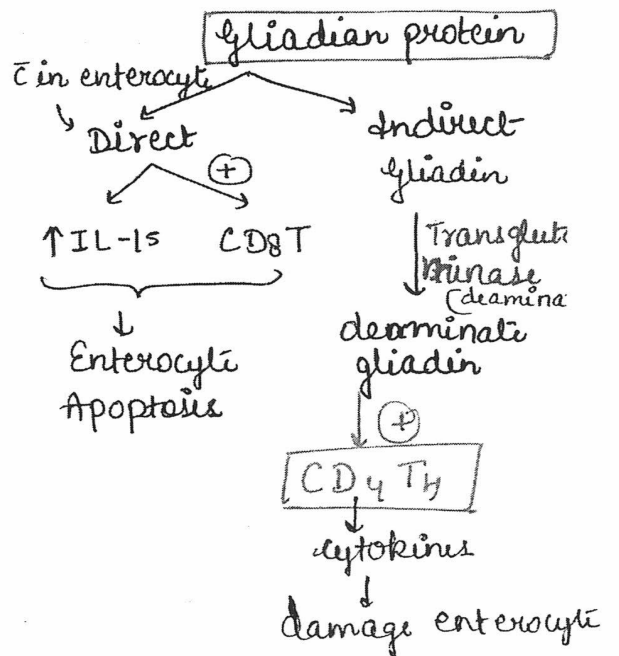
• gluten = gliadin protein
↓
cereals

B = Barley

R = Rye

O = oat

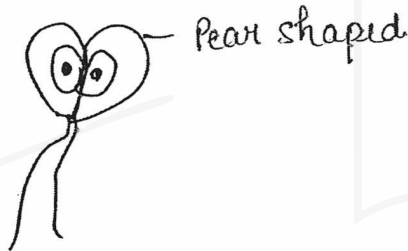
W = wheat



1. Macrophage like organism.
2. Central prominent Nucleoli
3. Erythrophagocytosis.

(4) giardiasis:

- MC parasite infection causing malabsorption
- MC-site = Small intestine

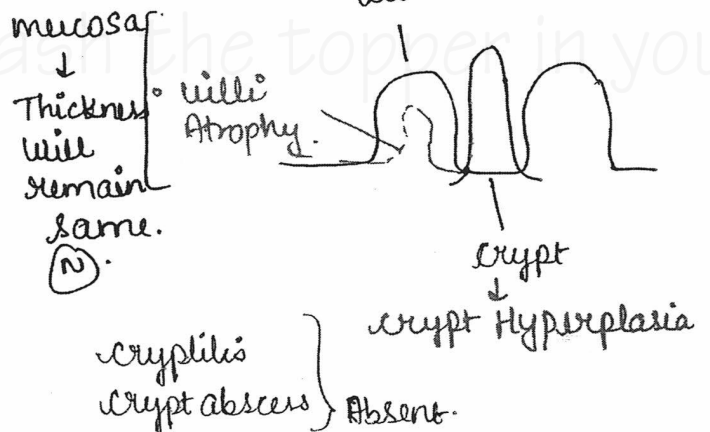
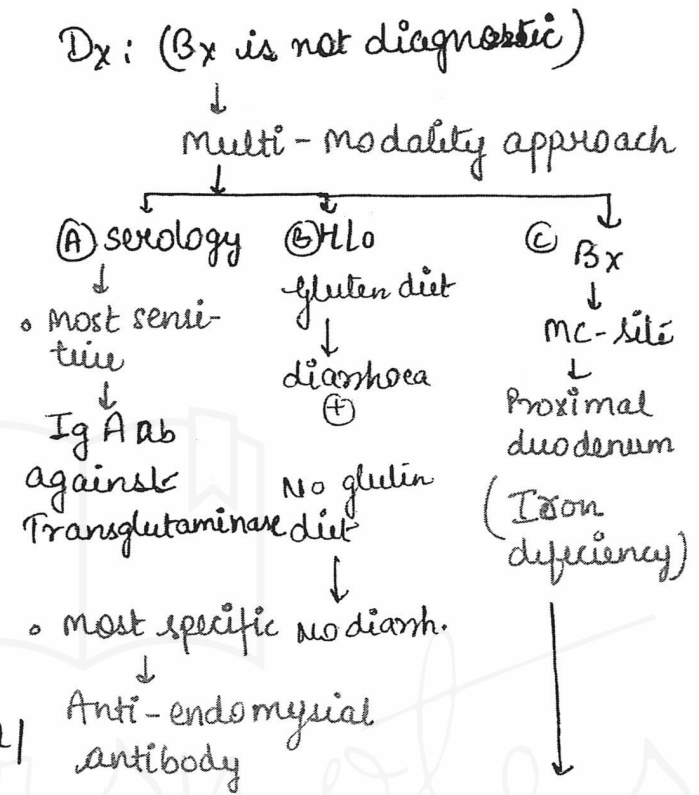


Bx:

Pear shape (front view)

comma shaped / sickle " (side view)

- Immuno deficient person.
 - Recurrent diarrhoea d/t giardia
- ↓
(Common variable of immunodeficient disorder)



★ In GIT - MC = Enteropathy associated in colic ds. T-cell lymphoma.

Inflammatory Bowel ds

^{P2} Hygiene Hypothesis

↓
Refrigerator ⇒ Bact. ↓↓
food

↓
↓ Mucosal immunity (gut)

- Intermittent Mucosal & Bloody diarrhoea.

Crohn's disease

- MC site = Ileum
- Rectum = spared

a/w { HLA-DR1
 CD4 T_{H1}
 ↓
 Granuloma ⊕

◦ Earliest manifestatⁿ = Aphthous ulcer (AIT) of IBD.

Ulcerative colitis :

- Rectosigmoid colon - MC-site

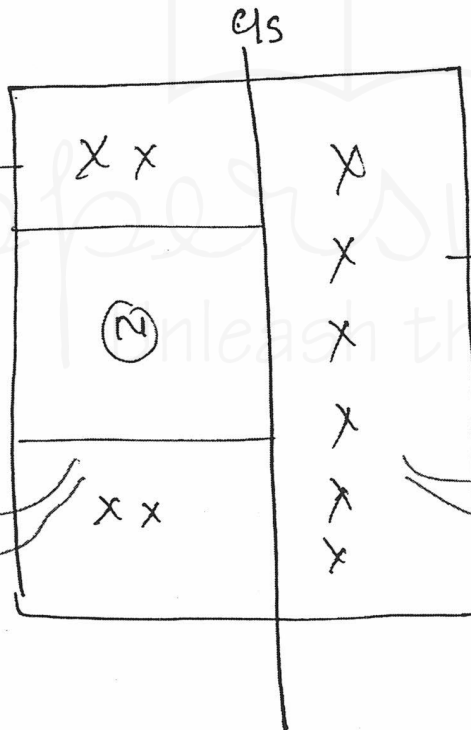
◦ DR2
 ◦ CD4 T_{H2}
 ↓

◦ Mast cell & Eosinophils

Gross :

①

Skip lesions

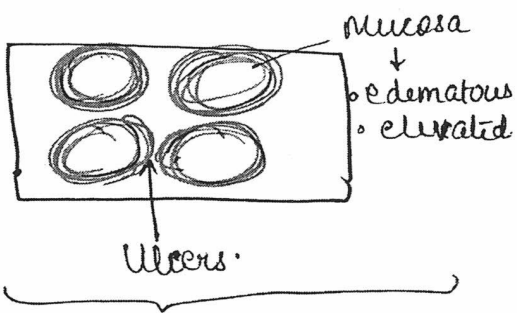


② Pseudopolyp (Patchy distributⁿ)

Pseudopolyp. (diffuse distributⁿ)

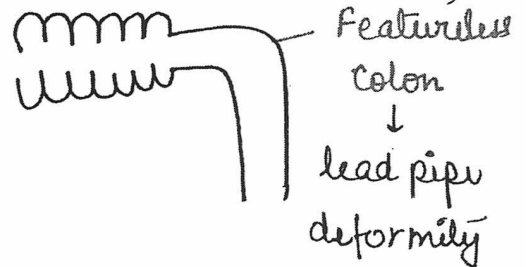
↓
 (Not a risk for any malignant Transformⁿ)

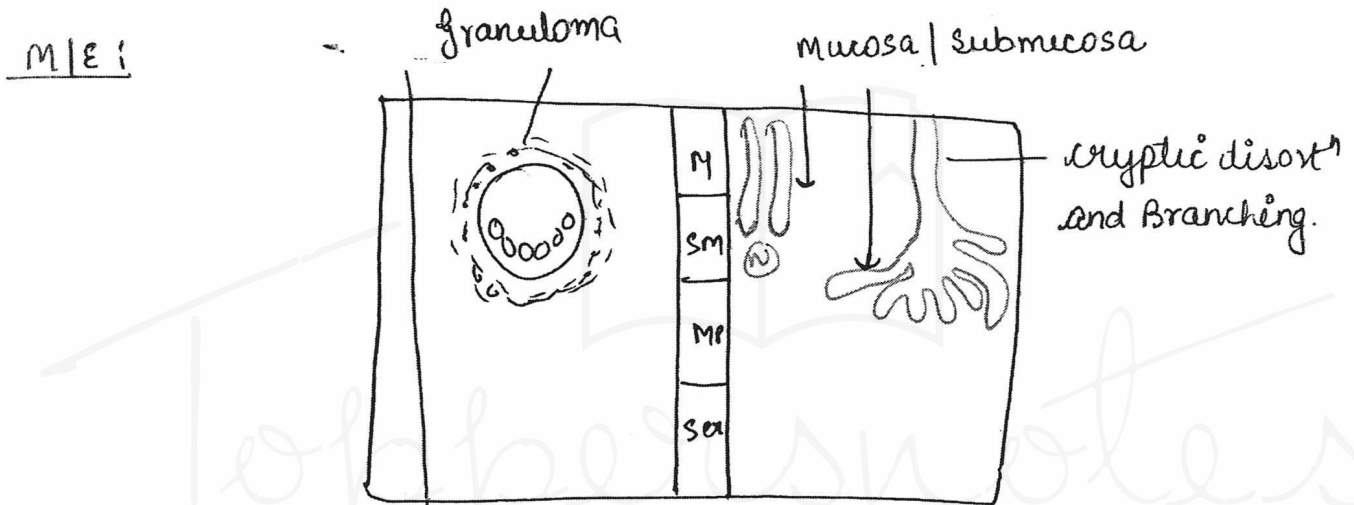
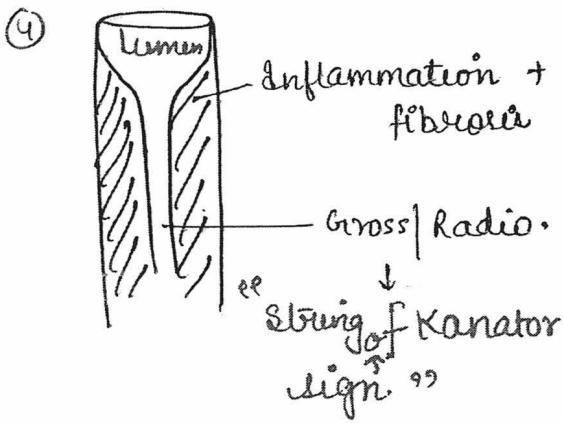
③



cobble stone appearance

• Chronic UC (loss of haustrations)





← cryptitis / crypt Abscess. →

• MCC of death in IBC = Peritonitis < Malignancy

↓
Crohn's << UC

Small Intestine

MC Benign
↓
Adenoma

MC 1° Malignancy
Adeno Ca > Carcinoid.

POLYP

Non-neoplastic

① Juvenile polyp;

- MC-mutatⁿ = SMAD-4
- No risk = Malignancy

② Juvenile polyposis syndr.

- >100 polyp.
- ↑ Risk = Colon Ca

WKE

③ Petz-Jegher-Polyp;

- a/w LKB-1 | STK-11 gene mutation

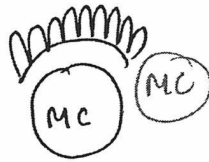
- Hyperpigmented macules ↓ Pigmented lesion lips | anal | perinasal area

+

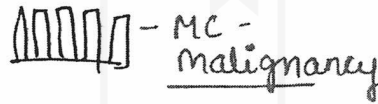
- GI Polyp.

Neoplastic

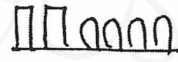
① Tubular;



② Villous



③ Tubulovilli



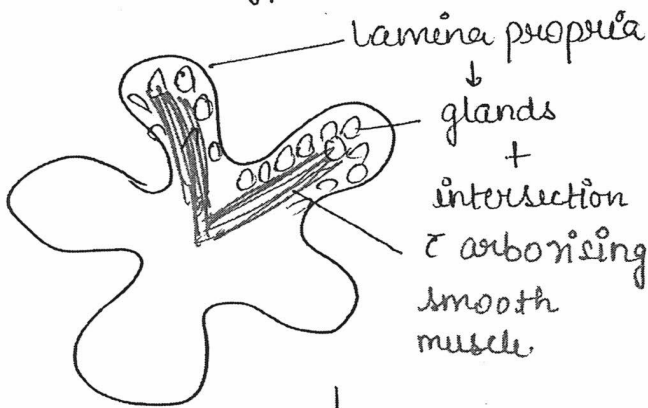
Familial

① Gardner Syndrome

- ↓ GI polyp
- skin polyp
- Abⁿ - dentition

② Turcot synd.

- GI-polyp + Medulloblastoma of Brain

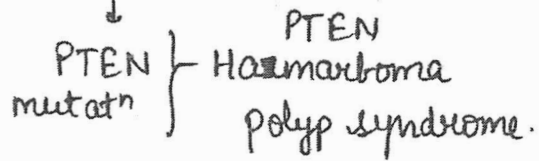


↑ Risk for

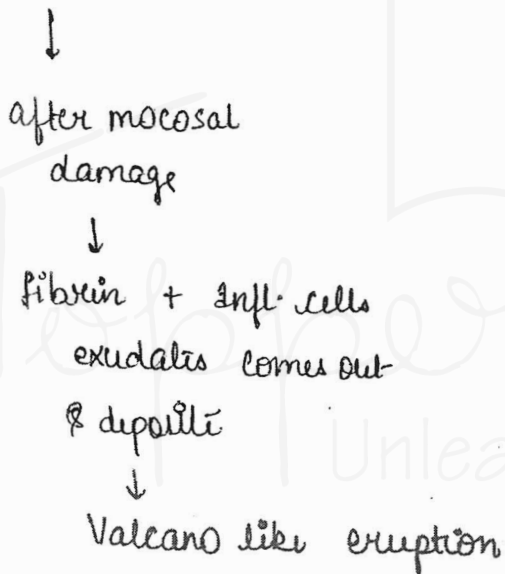
- Breast Ca
- Pancreas Ca
- Colon Ca
- Thyroid Ca

- Gross-bossellated surface.

⑤ Bannayan Rwal Caba / Cowden Syndrome



* Pseudomembranous polyp : (Ab) against cephalosporins.

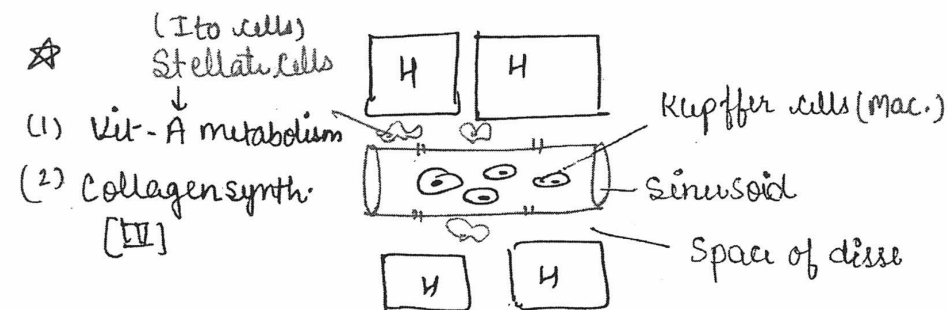
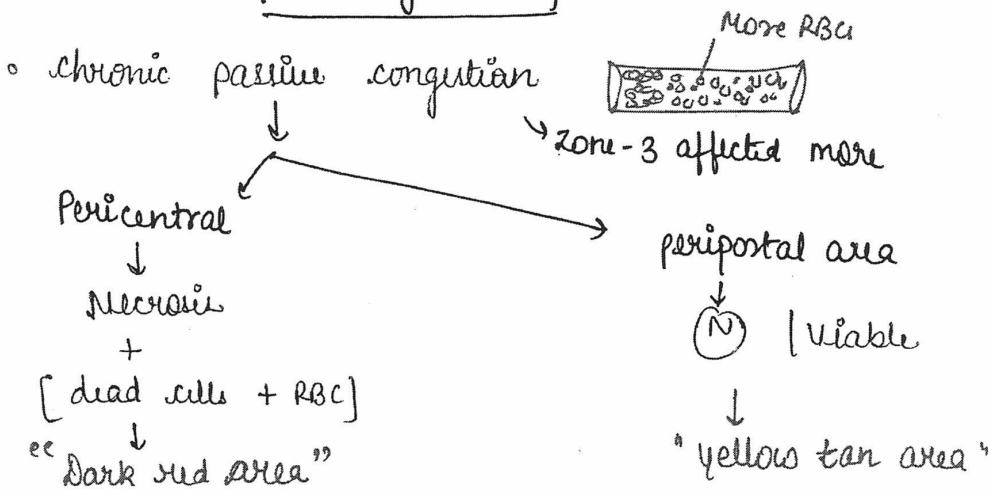
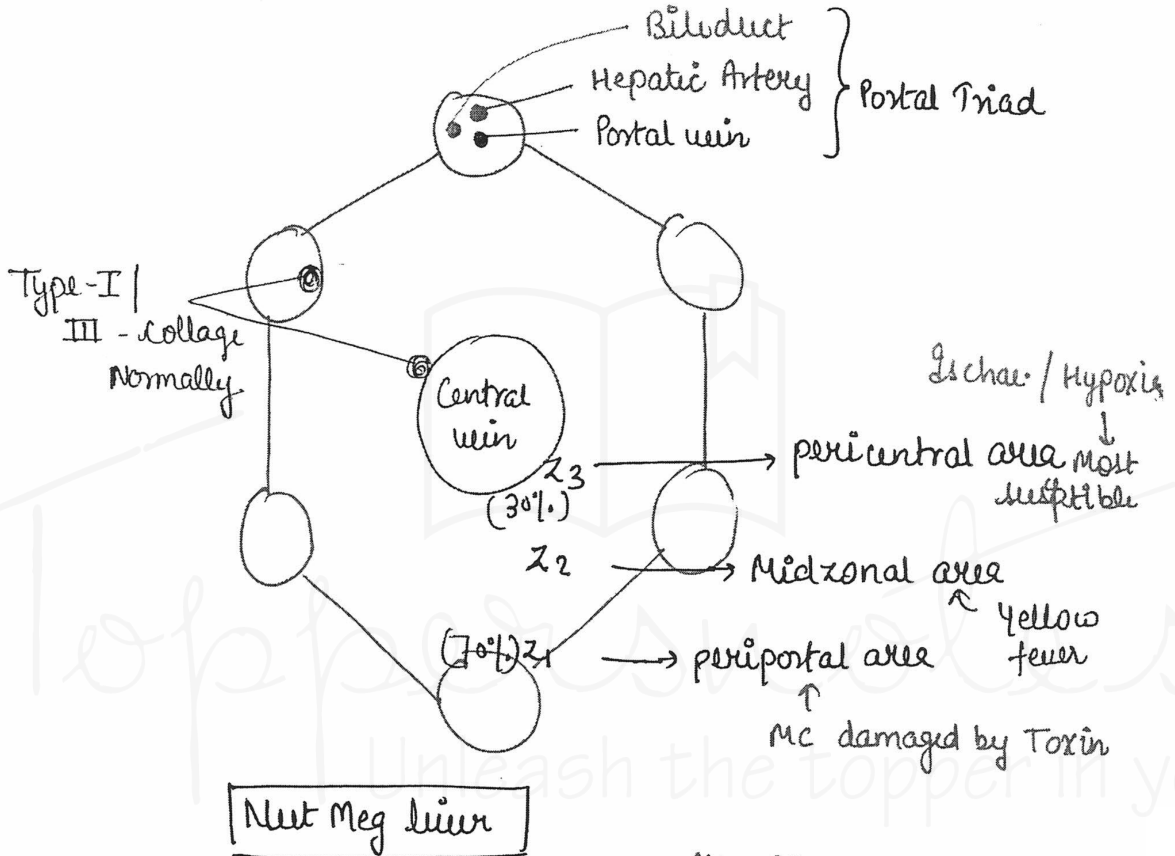


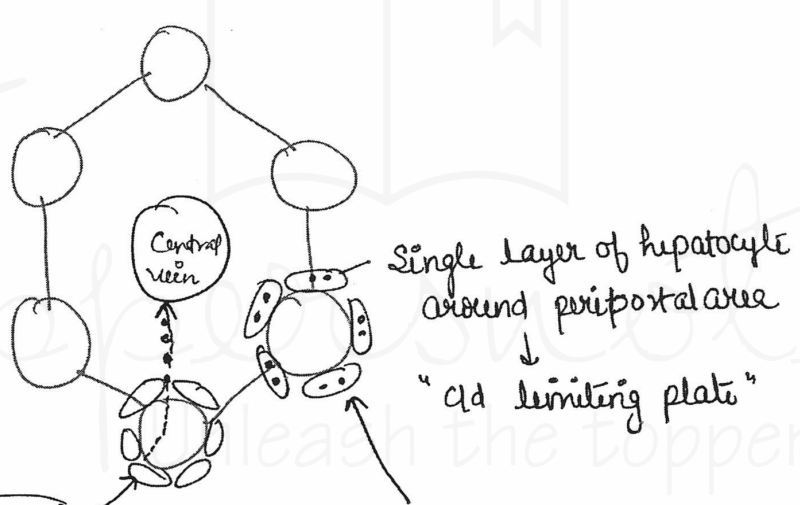
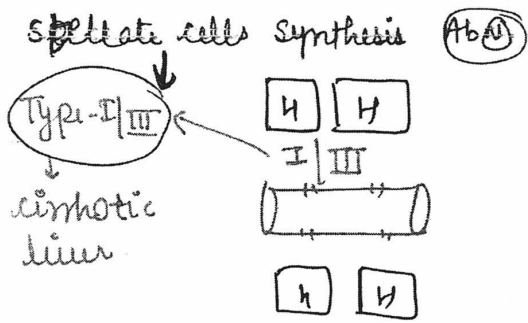
• Clostridium difficile

↓
Toxin

- Staph
- Shigella
- Baccharia

Liver





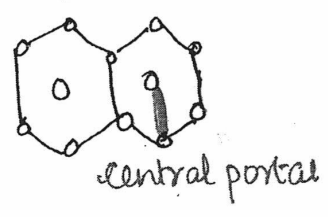
UPSE #1 14
Chronic **Active** Hepatitis
limiting plate damaged

Chronic **Persist** Hepatitis
• Limiting plate - intact

Hepatitis

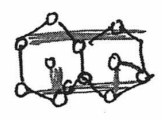
Acute Hepatitis

- (1) Ballooning degeneration
- (2) Apoptotic bodies | Councilman Bodies
- (3) Bridging necrosis



Chronic hepatitis

- ground glass hepatocytes
- Piecemeal Necrosis
(limiting plate → damaging the periportal area.)
- Bridging Necrosis all type & fibrosis - (MC)



• fatty change

liver cell damage

