Disease of the esophagus :-

انتبهي على الامراض المتكرر في كل مرض

1- obstruction

machenical

Congenital

- Atresia: Thin, non colonized Cord
  - near oral the tracheal birfurcation
  - +/- Fistula: abnormal Passage between 2 hollow
- Clinical: regurgitation
- rejoin
- Complication (with Fistula)
  - Aspiration
  - suffocation
  - Pneumonia
  - fluid imbalance

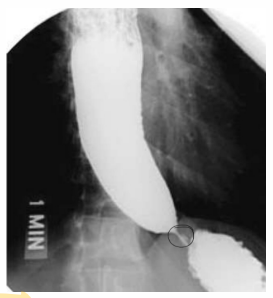
Acquired

- Stenosis: fibrous thicking of submucosa + atrophy of muscularis propria
- Causes: GRED, Irradiation, Caustic agents
- Clinical: dysphagia, difficulty eating Solids → Liquids

Functional

- discoordinated Peristalsis or Spasm

Achalasia



Traid
- incomplete LES relaxation
- increased LES tone
- aperistalsis

primary most common

- failure of distal esophageal inhibitory neurons
- Idiopathic

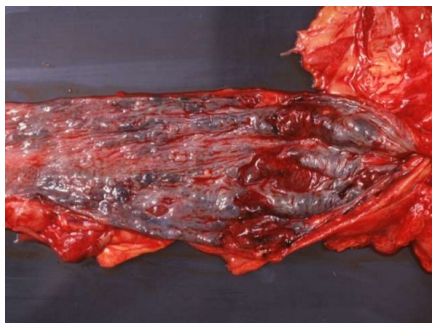
Secondary

- degenerative in neural innervation
  - Intrinsic
  - Vagus nerve
- Chagas disease

- Clinical: x swallowing
  - Regurgitation
  - Chest Pain

2- Vascular (Varices)

- dilated veins within the Submucosa of distal esophagus and proximal stomach
- Diagnosis: endoscopy or angiography



- Portal hypertension
- Cause: -Cirrhosis, Alcoholic live, hepatic Schistosomiasis 2nd

Clinical: often asymptomatic
- massive hematemesis and death

3- Esophagitis:-

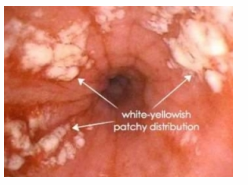
1) Lacerations: Tear from Vomiting — linear, Cross GEJ superficial, heal Quickly

2) Chemical: damage by irritants

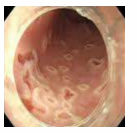
Clinical: odynophagia, hemorrhage

3- Infectious:

- Candidiasis: Adherent, Gray-white Pseudomembranes



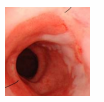
- Herpes: -Punched-out ulcers
  - Multinucleated + giant cells



- CMV: Shallower ulcerations

most common

4- Reflux: Lower esophagus ← decreased sphincter tone, ↑ abdominal pressure → heartburn, dysphagia



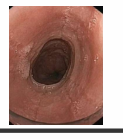
Eosinophils → neutrophils → basal zone → elongation

Complications: melena, strictures

Tx: PPI

5- Eosinophilic: Chronic immune mediated disorder.
- upper and mid esophagus
- ↑ eosinophils

Tx: diet, Corticosteroids, xPPIs



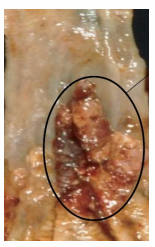
4- Esophageal Tumors

Adenocarcinoma

- background (Barret esophagus)

Male >>

- genatic and epigenetic
- chromosomal abnormalities and Tp53 mutation
- Distal third
  - early: Flat
  - later: mass

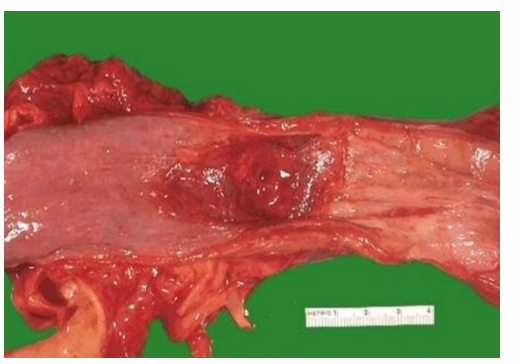


clinical: Pain, weight loss vomiting

5y
- early 80%
- advanced 25%

Squamous cell Carcinoma

- Male >> Alcohol, Tobacco
- Morphology:
  - Polypoid, ulcerated or infiltrative
- wall thickening, lumen narrowing
- invade surrounding structure



Clinical:-
- dysphagia
- odyophagia
- weight loss

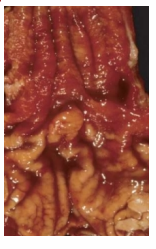
5y <9%.

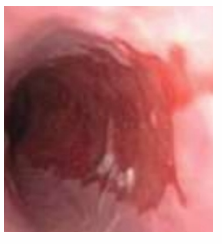
- lymph node metastases:
  - upper 1/3 : Cervical
  - Middle 1/3 : mediastinal paratracheal + tracheobronchial
  - Lower 1/3 : gastric + Celiac

- Barrett Esophagus:

Complication of Chronic GERD

- metaplasia >> dysplasia >> adenocarcinomer
- Red tongues upward GEJ
- goblet cells





*pathology of stomach :-

A- inflammatory conditions

Gastropathy:
no inflammation

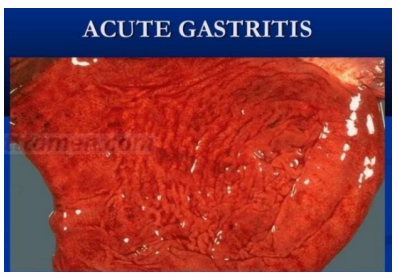
1- Acute gastritis :-

- mucosal injury
- Asymptomatic or epigastric Pain, nausea
- Vomiting
- imbalance bt protection and damage

main causes: Chemotherapy, NSAIDs, Alcoholic, H Pylori, uremic P, elders, Hypoxia

- PGE1 + 12

Stimulate all defense mechanisms.



Morphology:
- Hyperemia
- Edema + Vascular Congestion
- intact surface
- neutrophils ...

2- acute gastric ulcers:

- physiological stress

Stress ulcers due to local ischemia: hypotension, Systemic V.C, acidosis

Curling ulcers
- Burn
- duodenum

Cushing ulcers
intracranial disease
- stomach, duodenum, esophagus

Morphology:
- anywhere is stomach
- shallow to deep
- normal adjacent
- no scarring

Clinical: - Melena
- Coffee-ground hematemesis

Tx: PPI

- out comes depend on underlying cause

3- Chronic Gastritis

- Clinical Features: upper-abdominal discomfort

- Causes: ① H. pylori (-ve) 75%
- underlying cause → duodenal ulcers

- non-invasive

Pathogenesis: Flagella, Urease, Adhesins (Porcelarcells), Toxins CagA

Diagnosis → Serologic Test, Stool urea
→ gastric antral biopsy, bacterial Culture, PCR

Tx: 2 antibiotics + PPI

② Autoimmune atrophic 10%

Antibodies - Unimportant

intrinsic factors → ↓ B12 → Pernicious anemia + megaloblastic anemia

parietal cells → ↓ HCl → Hypoacidity → ↑ G cells (hypergastrinemia) → ↓ pepsin

Feature	*H. pylori*–Associated	Autoimmune
Location	Antrum	Body
Inflammatory infiltrate	Neutrophils, subepithelial plasma cells	Lymphocytes, macrophages
Acid production	Increased to slightly decreased (Hyperacidity)	Decreased (hypoacidity)
Gastrin	Normal to markedly increased	Markedly increased
Other lesions	Hyperplastic/inflammatory polyps	Neuroendocrine hyperplasia
Serology	Antibodies to *H. pylori*	Antibodies to parietal cells (H^+,K^+-ATPase, intrinsic factor)
Sequelae	Peptic ulcer, adenocarcinoma, lymphoma	Atrophy, pernicious anemia, adenocarcinoma, carcinoid tumor
Associations	Low socioeconomic status, poverty, residence in rural areas (adenocarcinoma MALToma)	Autoimmune disease; thyroiditis, diabetes mellitus, Graves disease (adenocarcinoma / neuroendocrine tumor)

4-Peptic ulcer disease :-

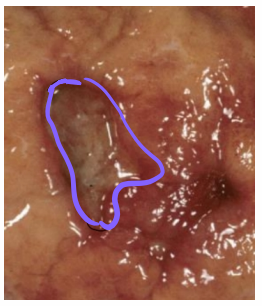
Any portion exposed to acidic gastric

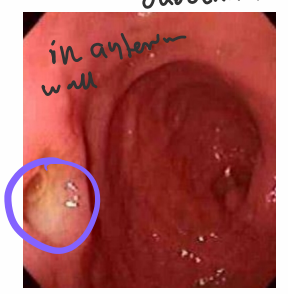
- H.pylori + NSAID

-imbalance between mucosal defenses and damaging forces

4 duodenum : 1 stomach

- clean base, punched out defect





Cause of hypeacidity:
- H.pylori
- Parietal cell hyperplasia
- Excessive secretion
  - Zollinger-Ellison Syndrom → Hypergastrinemia

* Clical features :

- burning + pain 1-3 after meal
- relieved by eating + worse at night
- iron deficiency, hemorrhage, perforation → surgery

B-Polyps and Tumors

1-Gastric Polyps :

- masses above mucosa
- epithelial or Stromal cells hyperplasia
- 75% inflammatory and hyperplastic Polyps
- background of chronic gastritis
- H.Pylori → Regress

↓

• Gastric adenomas

- 10% of Polyps
- background of Chronic gastritis
- Dysplasia in all cases
- Risk adenocarcinomas
- 30% → carcinomas

2- Gastric Adencarcinomas :

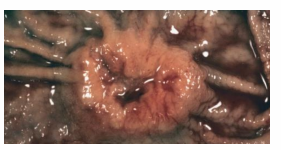
• mimic gastritis ≫ late diagnosis

2 Types

intestinal

FAP: APC gene mutation

M: - Bulky mass
- Form glands



C: developed from precursor

M > F - 55y

diffuse

- Familial → CDH-1 (E-cadherin)
- sporadic → CDH-1, β catenin
- signet ring cells
- Thick wall

weight loss

bad prognosis

- No precursor
- M = F
- younger

Tx: surgery, Chemotherapy, anti HER2

3-lymphomas :

• Common extranodal in Stomach

- MALToma
- diffuse large B cell lymphoma

4-Neuroendocrine (Carcinoid) Tumor

- From G-cells
- good prognosis
- Carcinoid syndrome :
  - associated with metastasis
  - due to vasoactive substance → amines production leads to :

Flushing, sweating, bronchospasm, Colicky pain, right cardiac fibrosis

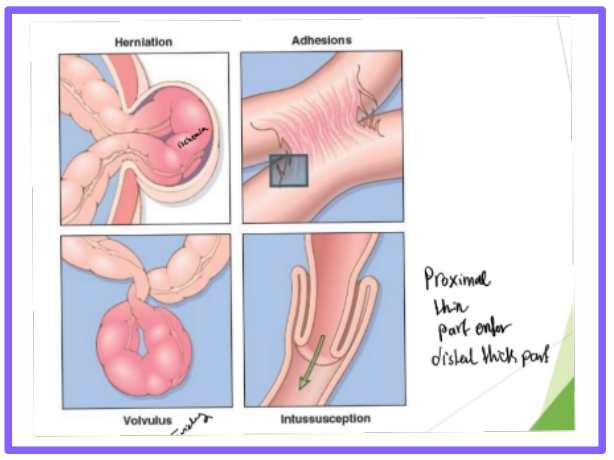
Disease of the intestineses:

1- obstruction

((Pain, distention, Vomiting, Constipation)

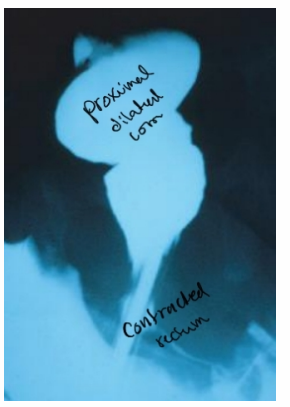
.Mechanical

- **Intussusception:**
  - propelled by peristalsis
  - <2y .untreated → infraction
  - Causes { <2 → idiopathic; Peyer Patches; Meckles diverticulum (ileum); Tumors }
  - Jelly Stool (stool mixed with mucus)
  - Managment { uncomplicated → Contrast enemas (diagnostic + therapeutic); Complicated → surgery }



.non-Mechnical Functional

- **Hirschsprung disease:**
  - Congenital → Colonic innervations
  - absent of ganglionic cells → prevent peristalsis
  - Neonatal failure to pass meconium
  - later: obstructive Constipation
  - distrputed migration Cecum → rectum
  - Mutation in RET
  - most → rectosigmoid
  - Macro: Aganglionic region → Normal or contracted
    proximal → dilated
  - D: barium enema, Biobsy, microscopic
  - Complications: Enterocolitis
  - Tx: Surgical resection



2- Vascular disorders of bowel

.Ischemic bowel disease

- **Hemorrhoids;**
  - dilated anal and perianal collateral vessels
  - Portal + Caval venous systems
  - Predisposing factors: venous stasis + portal hypertension
  - External (below) / Enternal (above) anorectal line
  - (fresh) S: Bleeding, thrombosis
  - Tx: Sclerotherapy, rubberband, infrared coagulation, hemorrhordectomy

Dysentry: small, bloody, painful diarrhea

3- diarrheal disease

a-Malabsorphive diarrhea:

- Steatorrhea
- Manifestations: anorexia, Borborygmi, Anemia, bleeding (Vit.K), Neurpathy, endocrine disorders

b- Cystic fibrosis:

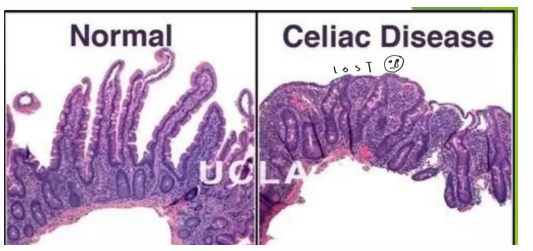
- Mutation CFTR
- defects in ion transport (intraluminal)
  - ↓
  - Thick viscous secretions
- Meconium ileus in neonates

C- Celiac disease:

- gluten sensitive
- HLA-DQ2 . HLA-DQ8
- Gluten → gliadin → APC → CD4+T → cytokines → Tissue damage
- 2nd Portion of duedenum or Proximal Jejunum

Triad:
- CD8+ Tcells
- Crypt hyperplasia
- Villous atrophy

D: Clinical, histologic + serologic correlation



C:
- children — classical (failure to thrive)
- Blistering skin — non classical (herpes الهربس)
- adults: Anemia / B12+folate deficieng: less common
  - ↑risk of Tcell lymphoma & S.I adenocarcinoma

D:

① Non-invasive serology
- @ most sensitive.
  - IgA
  - IgA+IgG
- ⓑ most specific: Antiendomysial Ab

③ invasive: small bowel biopsy

D- Lactase deficiency:

- osmotic diarrhea
- lactose remain in the gut lumen

2 Types:
- Congenital: rare, AR, after milk ingestion
- Aquired: follow viral or bacterial enteritis

E- Abetalipoproteinemia:

- AR
- rare
- steatorrhea
- infant → failure to thrive
- ↓ absorption of fat bc ✕ synthesis of TG-rich LP
  - ✕ transepithelial

4- inflammatory

For life (chronic)

الصفحة اللي بعدها ←

- Sigmoid diverticulitis
- Chronic inflammatory bowel disease (CIBD) Hygiene hypothesis

a- Crohn disease: any area in GIT / transmural

most common region: terminal ileum, ileocecal valve and cecum

- Cobblestone appearance
- Fissure, fistulas, perforations
- Creeping Fat

micro: Neutrophils (in active), deep ulcer

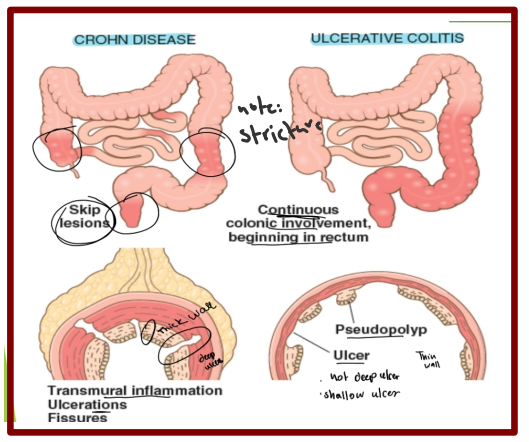
metaplasia in left colon,

Non-caseating granulomas 35%, Crypt abscess, arranged جنب بعض

C: ① right lower-quadrant acute pain

② Bloody diarrhea - متقطع

Complications: anemia, hypoproteinemia, fistulas, Peritoneal abscess, Strictures, adenocacinoma فشوحي



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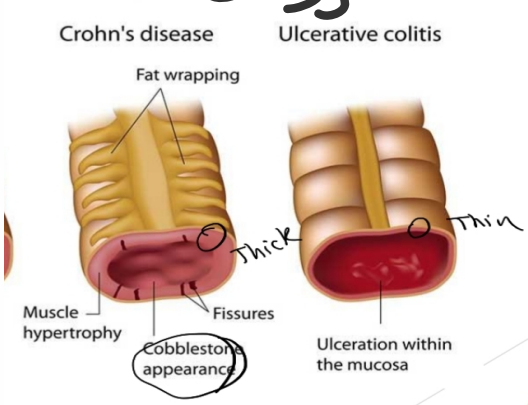


b- Ulcerative Colitis: left lower quadrant Colon & rectum / mucose & Submucosa

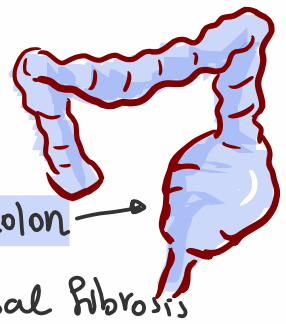
- SI is normal (except in backwash ileitis

Macro: Pseudopolyps, superficial broad-based ulcers, Toxic megacolon

Micro: inflammatory infetration, E. metaplasia, Submucosal fibrosis (neutrophils)

C: bloody mucoid diarrhea + lower abdominal cramps, relied by defecation

Tx: Colectomy



- Colitis-associated Neoplasia:

UC + CD

Risk:

① duration ② involvment ③ inflammation

Feature	Crohn Disease	Ulcerative Colitis
Macroscopic		
Bowel region affected	Ileum ± colon	Colon only
Rectal involvement	Sometimes	Always
Distribution	Skip lesions	Diffuse
Stricture	Yes	Rare
Bowel wall appearance	Thick	Thin
Inflammation	Transmural	Limited to mucosa and submucosa
Pseudopolyps	Moderate	Marked
Ulcers	Deep, knifelike	Superficial, broad-based
Lymphoid reaction	Marked	Moderate
Fibrosis	Marked	Mild to none
Serositis	Marked	No
Granulomas	Yes (~35%)	No
Fistulas/sinuses	Yes	No

Extra intestinal: for both

- Uveitis
- Polyarthritis
- Sacroiliitis
- Ankylosing spondylitis
- erythema nodosum
- Clubbing fingers
- Jaundiced
- Primary sclerosing Cholangitis (UC more)

Clinical		
Perianal fistula	Yes (in colonic disease)	No
Fat/vitamin malabsorption	Yes	No
Malignant potential	With colonic involvement	Yes
Recurrence after surgery	Common	No
Toxic megacolon	No	Yes

- Sigmoid diverticulitis

.Aquired .Mucosa + submucosa

.Pseudodiverticulal

Morphology: Sigmoid Colon, Thin wall, X musuclaris, perforation, strictures .Can Caused by diverticulitis

C: asymptomatic / Constipation or diarrhea

TX: fiber diet, Antibiotics / surgery

↓ constipation ↓ infection ↓ perforation

Neoplastic: adenoma

Non-neoplastic:

5- Polyps and neoplastic disease

Sessile Polyp : no stalk

Pedunculated Polyp : stalk

- Inflammatory Polyps:

- Syndromis rectum
- chronic cycle of injury and healing

- hyperplasia
- pileup of GC & Epithelial overcrowding
- no malignant / Noatypia
- left colon / rectosigmoid

- Adenomas
- epithelial dysplasia
- Most doit → Carcinoma BUT Precursor for majority of adenocarcinoma

a- Colon adenoma:

epithelial dysplasia

risk for malignancy: size, grade

b- Villous adenoma:

more frequent invasive foci

3 Types: Tubular, Tubulovillous, Villous

- hamartomatous:

Disorganized

a-Juvenile Polyps: most common

- TGF-B mutation AD
- ↑ risk of adenocarinoma

Sporadic → Solitary

Syndromic → Multiple

- Pedunculated
- dilated gland
- Cystic + granulation

b- Peutz-Jeghers syndrome:

- AD
- Multiple Polyps
- S.I
- ↑ risk of malignancies
- LKB1/STK11 mutation
- network of CT, Sm, lamina propria
- Mucocutanous hyperpigmentation

normal s.E

Thank you