

((PBL. PROBLEM BASED LEARNING))

Hi everybody , so today we're getting exciting PBL lecture , which is really very useful for us in the actual life. (This sheet contain photos and slides so you don't have to refer to slides) . As we all know this lecture has very little amounts of grades in the exam so the doctor actually figure these questions literally in the lecture. that COULD we see it in the exam , so I symbol it as **(VIP <?*>)** , so wherever u find it focus very well in this area . **(VIP <?*>)** (خطر : هذه الاشارة مهمة اينما تجدها !!)

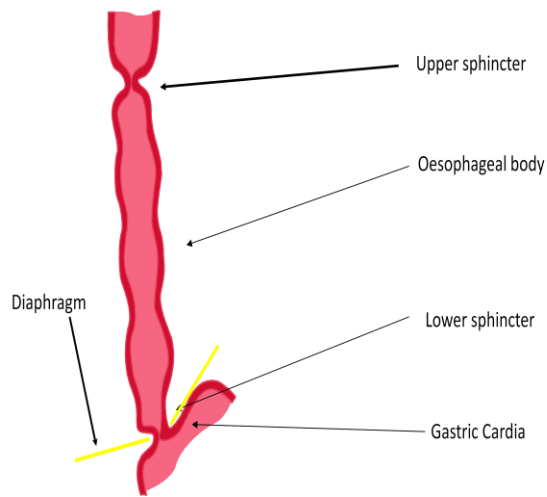
Ayham

(Clinical Manifestations of Gastrointestinal Disorders)

* we'll talk today about these main topics :

- ESOPHAGEAL DISORDERS
- PEPTIC ULCER DISEASE
- INFLAMMATORY BOWEL DISEASE
- MALIGNANCY
- LIVER DISEASE
- BILLIARY DISEASES

Anatomy



This figure shows ; the anatomy of esophagus , upper esophageal sphincter composed mainly by Cricopharyngeus muscle (lower part of inferior constrictor muscle) , while you eating it (upper sphincter) will be close to not let the food out from esophagus upward . lower esophageal sphincter composed of rings of smooth muscle ((laxity of this part will make reflux))

the defect in this area lead to make what called GERD disease (talk later about it) .

SYMPTOMS OF ESOPHAGEAL DISORDERS :

- 1) Dysphagia: which is the difficulty of swallowing. We need to be able to differentiate between types of dysphagia. Whether it is difficulty of swallowing liquids or solids whether it was sudden or progressive. Can cause a tumor in the GI track (must do upper GI endoscopy for esophagus to diagnose it)
- 2) Odynophagia: pain during the swallowing which can be seen if infection hit the esophagus (candidal infections, diabetic patient and cancer patients, could face this .)
- 3) Heartburn: high acidity of stomach effect. A burning sensation.
- 4) Regurgitation
- 5) Atypical Chest Pain: the Typical chest pain is related to the heart problems (retrosternal, increases with physical activity) , meanwhile any other disorder not related to heart and effect the chest is Atypical chest pain (trauma , sores, esophageal spasms)

Mr. Wiki says :

(GERD) is a chronic symptom of mucosal damage caused by stomach acid coming up from the stomach into the esophagus

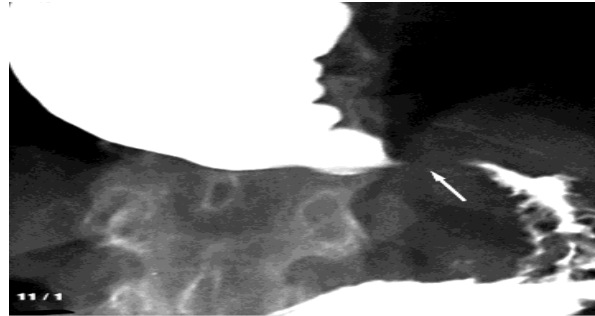
, abnormal relaxation of the lower esophageal sphincter .

* Diseases affecting the Esophagus:

1) Gastro esophageal reflux disease ((GERD)): diagnosed by 24 hours pH monitoring
treatment of choice ; proton pump inhibitors

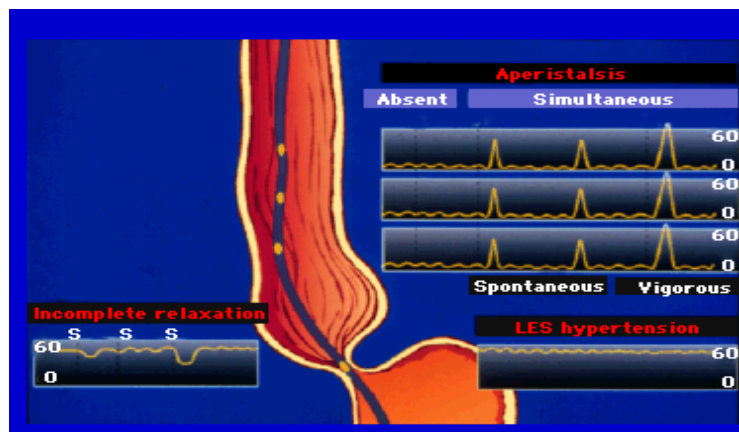
2) Achalasia, motor neuron disease .
(when u swallow the lower sphincter must be relaxed , but if the lower sphincter keeps contracte this will lead to loss of peristalsis, that means patient has Achalasia).

diagnosis of Achalasia is // manometry:
measure the pressure at the end of
esophagus //



3) Tumors ; One of its symptoms ; dysphagia. The patient might present with a bleeding ulcer which is caused by the tumor.

in the right figure here, barium swallow , the white is the esophagus which effect by dilatation and distal narrowing (which called beak of bird) caused by achalasia .



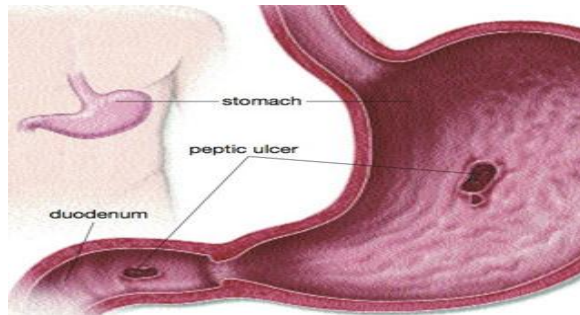
this figure shows the manometry
of Achalasia patient .

PEPTIC ULCERS ;

there are many types of ulcers depending on the stage. is discontinuation of epithelial that covers gastric mucosa (has two types) :

1) Duodenal ulcer (which increase in fasting state) more common especially in males

2) Gastric ulcer (which increase in feed state)



*** Clinical features of peptic ulcer disease :**

1- Pain:

epigastric and abdominal pain radiating to back (might be caused by referred pain. patient by himself complain from this pain). It increases with spicy food, and it is constant (you always feel the pain). Note : any pain the patient complain about it , you have to determine several things about that pain (such as ;) Site ,Radiation ,Character ,Severity ,Onset, Duration, Course, Pattern Aggravating and relieving factors .
the site and the character in this case is(the gastric) .

2- Dyspepsia (عسر الهضم)

it May describe variety of upper GI symptoms , like (Nausea, heart burn, bloating, belching, epigastric discomfort) , so the patient must be very specific in describing his pain to determine the exact symp. that he has .

3- Nausea & vomiting (nonspecific symptoms.)

and these the complication that can be shown ;

- haematemesis ;vomiting with blood
- coffee ground vomitus (brown color)
- Melena (blood turns from red to black due to the presence of gastric enzymes) black/tarry stool with a foul smell, tend to have upper GI bleeding
- haematochesia; fresh blood per rectum. Sign of massive upper or lower GI bleeding

4- gastric tenderness show of pain upon physical examination by the physician

5- Hemodynamic changes: upper GI bleeding give tachycardia of heart and low blood pressure.

6- Guarding (when u put ur hand on GI patient and he contracts his muscles because of pain) this is different than rigidity, which leads to an involuntary contraction of the muscles.

** complication that can face the GI patients :

A) GI bleeding. Melena, haematemesis, haematochesia.

B) Perforation (ulcer distribute through all the gastric wall) & penetration (ulcer penetrate on pancreas & some organs)

C) Gastric outlet obstruction.

Complications: perforation (the contents perforate the mucosa and go to the peritoneum causing peritonitis), penetration: the ulcer penetrates another organ.

H. pylori has other complications. It is considered pre-cancerous. H. pylori to gastric obstruction.

INFLAMMATORY BOWEL DISEASE (IBD)

(is autoimmune disease) , has two types (VIP <?*>) = (IBL and the differences of both diseases). Both diseases cause ulcerations in the colon. Ulcerative colitis starts at an area and extends upwards (rectum towards sigmoid or other parts, continuous and superficial, no skip area). Crohn's starts anywhere and it is a transmural ulceration (affects all layers)

(1) Crohn's disease(CD), which effect deeply from mouth to anus / or in any position in the body/ and there's skip areas (not continuous) , it most commonly affects the terminal ileum (to make terminal ileitis) , it affects all walls of colon .

More variable than those of ulcerative colitis .

Fatigue, prolonged diarrhea with abdominal pain, weight loss, and fever, with or without gross bleeding, are the hallmarks of Crohn's disease, vitamin B12 and iron deficiency

could have also ; extra. intestinal manifestation.

Extra-intestinal manifestation: eyes, joints, hepatitis, clubbing, sclerosing cholangitis (strictures in the billiary tree), erythema nodosum (subcutaneous nodules seen in the pretibial area ulcerative patients) , jaundice



* pseudo-polyps can be seen in this pic .

(2) Ulcerative colitis (UC), from rectum go proximally toward colon superficial, (we can't find it any where like crohn's) **it effects only superficial inflammation on colon .**

we could notice in ulcerative patient diarrhea , blood stool , abdominal pain and anemia with pseudo- polyp

presentation similar to both diseases (1) &(2) .



(clubbing) ; in the left picture ,

* There is swelling of the terminal phalanges due to interstitial oedema and dilatation of the capillaries and arterioles.

* There is loss of the angle between the nail and nail bed with fluctuation in the nail bed.

* Might reach what we call drumstick appearance.

*increase in longitudinal curvature

(main causes of clubbing) :

1- Liver cirrhosis

2- Inflammatory bowel disease

3- Coeliac disease. حساسية القمح



(erythema nodosum)

its main causes ;

- * IBD (inflammatory bowel disease)
- * Sarcoidosis
- * TB (Tuberculosis)
- * Connective tissue diseases
- * Post infectious

**** Clinical manifestation of IBD (UC & CD)**

- **Ileitis and colitis** *Diarrhea, abdominal pain, weight loss, and fever are the typical clinical manifestations for most patients with ileitis, ileocolitis, or Crohn's colitis*
- **Abdominal pain**
- **Bleeding** *gross bleeding is much less frequent than in ulcerative colitis*
- **Perforation and fistulae** *Transmural inflammation is also associated with the development of sinus tracts that can lead to serosal penetration and bowel wall perforation*
- **Perianal disease** *perianal pain and drainage from large skin tags, anal fissures, perirectal abscesses, and anorectal fistulae*
- **Other sites of intestinal inflammation** *severe oral involvement, esophageal involvement gastroduodenal Crohn's disease, sprue-like picture*
- **Extraintestinal manifestation** : eyes, joints, hepatitis, clubbing, sclerosing cholangitis, erythema nodosum

((Local complications of IBD:))

1. *Intestinal obstruction*
2. *Severe hemorrhage*
3. *Acute perforation*
4. *Fistulae (connection between two epithelial surfaces , like chron's patient)*
5. *Abscess formation*
6. *Toxic megacolon. (systemic toxication and dilatation of colon and it has high mortality)*

((Systemic complications of IBD))

- Eye involvement with conjunctivitis, uveitis and episcleritis
- ankylosing spondylitis & Sacoilitis
- peripheral arthritis

((Chronic diarrhea :))

when ur neighbor comes to u, and ask u as doctor about the causes and cure to his diarrhea
what u suggest ?!! (study the following well or just memorize it as usual ;)

normal defecating of human being is (1-3) times daily. Some patients go to the bathroom even more. And sometimes, normally the stool is somehow watery. You need to be careful.

patient must be specific to his diarrhea and constipation causes .

(causes) :

- 1) IBS (irritable bowel syndrome) like at we face in the exam periods ,
- 2) Infections (ameba make chronic diarrhea)
- 3) Drugs (antibiotics and laxatives and diabetes drugs)
- 4) Malabsorption

5) Bowel resection (after bowlestoctomy / gastrectomy) short bowel syndrome. The stool doesn't have enough length to pass through causing diarrhea

6) Autonomic neuropathy (by diabetes)

colon cancer sign (if patient has diarrhea with constipation together)

7) Fecal impaction (which is the accumulating of feces in the tubules to make constipation)

* if there's constipation with alternative diarrhea that closely indicate the existence of cancer , so as doctor u should be very alert about that .

the anemia iron deficiency has two main causes are (GI & vaginal)

9) Thyroid disorder: thyrotoxicosis.

((constipation))

(causes ;)

- Diet
- IBS
- Drugs (ex . Ca⁺ & Fe⁺) and morphine , tramadol, antidepressants
- Intestinal obstruction(one has cancer or ileus .. usually happens with patients with hypocalcaemia)
- Immobility (in old persons they don't move any more)
- hypothyroid:
- hypercalcaemia.

((Malignancy))

(VIP<?*>)

HERE SHE SAID THAT THIS IS A DEFINITE QUESTION!

(in all GI)

- most common manifestation is (((weight loss))) in abnormal way

Loss more than 10% from normal weight of patient during the 6 previous months
or more than 5% of previous one month . **(VIP<?*>)**

- blood loss (in stool or via hematemesis)

- nausea

- vomiting

- lymph node enlargement (any malignancy can metastasize through lymph nodes)

- constipation alternating with diarrhea or any change in the bowel habits.

((Chronic liver disease))

(causes)

- hepatitis (C or B)

- drugs: many of the herbal and weight loss drugs cause liver and renal failure.

- Metabolic: Wilson's disease lead to cirrhosis and chronic liver disease

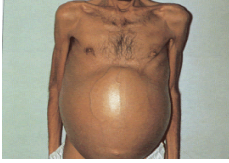
- autoimmune hepatitis

((Chronic liver disease manifestation :))

1) Jaundice



2) Collateral veins (result of portal hypertension)



3) Ascites (a sign of portal hypertension): diagnosed via doppler ultrasound



4) palmer erythema (due to high estrogen levels)



5) Purities (no pic): as a result of the accumulation of bile salts on the skin. These salts are irritant.

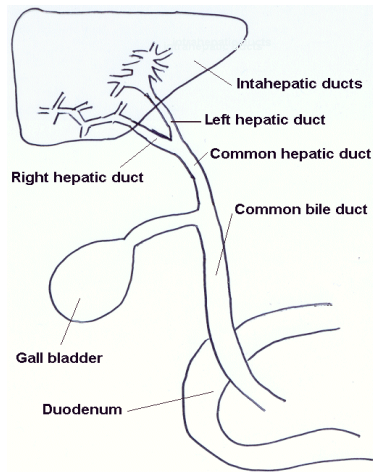
6) spider angyomata: result of high estrogen in these patients.

7) hypoalbuminemia: white fingers are sympt

8) testicular atrophy

She said that she will ask us about them in the following form: all the of the following are signs of chronic liver disease except... (study this slide very well)

((Biliary disorders :))



with the liver there is what we call a billiary tree. The billiary tree has the bile duct and the common bile duct. here the intahepatic ducts collect in the liver to give the left and right hepatic ducts , then the both combine to give the common hepatic duct then the common bile duct , to put its content in the duodenum . ((any problem we find it here that indicate the **billiry disorders**) ..

Where the patient face the Pain: right upper quadrant pain radiating to the right shoulder and scapula, the pain is episodic.

When we talk about gall stones these are the manifestation:

- (maybe give acute callosity)
- Gall stones (a lot of patients show asymptomatic gall stone)
- Acute cholecystitis (inflammation in wall of gall bladder)
- Choledocholithiasis if the stone go to the billiary tree

Episodic jaundice and episodic abdominal pain

- Acute cholangitis (result the structure malignant or benign)
- Tumors gall bladder, pancreas, billiary.

medical life full of obstacles and clashes all of it against you , but you have to face it by your armor of hope & weapon of faith to reach your dreams ; so stand up , fight , get your aim .

(AYHAM DEGHAIM)