

Pathology:

أسئلة الامتحان في مادة الباثولوجي كانت على أنواع:

- (1) نسب وأرقام.
- (2) ومعظم الاسئلة كانت على شكل: أي من الجمل التالية صحيحة أو خاطئة، فعشان هيك انا كل موضوع إجي عليه أسئلة كتبتوا مع المعلومات اللي سأل عنها وجابها.
- (3) وفي دايمنا بكل امتحاناتو بسأل عن أهم خاصية في اي مرض معين. وصيغة السؤال كالتالي:

The **pathognomic** of is:

The **most characteristic** feature of Is:

The **hallmark** of Is:

Leukoplakia:

- 1) plaques are more frequent among **older men**.
 - 2) Are most often on the vermilion border of the lower lip, buccal mucosa, the hard & soft palates, & less frequently on the floor of the mouth & other intraoral sites.
-

In the parotids 70% to 80% of these tumors are benign.

Dysphagia (difficulty in swallowing)

Hematemesis (vomiting of blood)

Secondary achalasia may arise from

- 1) **Chagas disease**, caused by **Trypanosoma cruzi**, which causes destruction of the myenteric plexus of the esophagus, duodenum, colon, & ureter.
 - 2) Disorders of the dorsal motor nuclei such as polio, & autonomic neuropathy in DM.
-

Two anatomic patterns of hernia are recognized:

- (1) Axial, or **sliding hernia**, **95%** of cases, **bell-shaped dilation**.
 - (2) Nonaxial, or **paraesophageal hernia** (**5%**).
-

Esophageal lacerations account for 5% to 10% of upper GIT bleeding episodes.

Varices are present in approximately two-thirds of all cirrhotic patients.

Three histologic features are characteristic of uncomplicated **reflux esophagitis**:

(1) **Intraepithelial** eosinophils with/without neutrophils (Intraepithelial neutrophils are markers of severe injury);

(2) **Basal zone hyperplasia; &**

(3) **Elongation of lamina propria papillae.**

Barrett esophagus affects males more than females (ratio of 4:1)

DU are more frequent in persons with (1) chronic renal failure (CRF), (2) hyperparathyroidism {in these conditions, hypercalcemia, whatever its cause, stimulates gastrin production & therefore acid secretion), (3) alcoholic cirrhosis, & (4) chronic obstructive pulmonary disease (COPD).

Suppression of mucosal prostaglandin synthesis, which increases secretion of hydrochloric acid & reduces bicarbonate & mucin production, is the key to NSAID-induced peptic ulceration.

السؤال كان جوابه بالامتحان الملون بالأحمر:

Gastric cancers show 2 morphologic types, **intestinal & diffuse.**

- (I) **Intestinal type** is thought to arise from gastric mucous cells that have undergone **intestinal metaplasia** in the setting of **chronic gastritis**. This pattern of cancer tends to be **better differentiated** & is the **more common type in high-risk populations**.
- (II) **Diffuse variant** is thought to **arise de novo from native gastric mucous cells**, is **not associated with chronic gastritis**,

& tends to be poorly differentiated. Whereas the intestinal-type ca occurs primarily after age 50 years with a 2:1 male predominance, the diffuse ca occurs at an earlier age with female predominance.

Table 15-5 Risk Factors for Gastric Carcinoma

(I) Intestinal-Type Adenocarcinoma

1. **Chronic gastritis with intestinal metaplasia + Helicobacter pylori.**
2. **Nitrites.**
3. **Decreased intake of fresh vegetables & fruits.**
4. **Partial gastrectomy.**
5. **Pernicious anemia**

(II) Diffuse Carcinoma

1. inherited mutation of E-cadherin
2. **Infection with H. pylori and chronic gastritis often absent**

هاي المعلومة الدكتور جابها على up mid o final o make up انشالله تيجيكم

Gastric carcinoma is classified on the basis of (I) depth of invasion, (II) macroscopic growth pattern, & (III) histologic subtype.

The morphologic feature having the greatest impact on clinical outcome is the depth of invasion.

One of Characteristic features of Gastric carcinoma, termed a **leather bottle stomach, or linitis plastica.**

الدكتور بحب هاد المرض، النقاط هدول اجو بالامتحان، والسؤال كان ييجي على شكل:

Concerning Congenital megacolon, which of the following is/ are true
Or

Concerning Congenital megacolon, which of the following is/ are wrong:

Hirschsprung Disease: Congenital Megacolon:

- 1) Distention of the colon to greater than 6 or 7 cm in diameter.
- 2) occurs as a congenital & as an acquired disorder.
- 3) Has an **aganglionic segment that lacks both the Meissner submucosal & Auerbach myenteric plexuses.**

- 4) There is functional obstruction & progressive distention of the colon proximal to the affected segment.
- 5) Ganglia are absent from the muscle wall & submucosa of the constricted segment but may be present in the dilated portion.
- 6) Hirschsprung disease occurs in approximately 1 in 5000 to 8000 live births.
- 7) predominates in males in a ratio of 4:1.
- 8) It is much more frequent in those with other congenital anomalies such as hydrocephalus, ventricular septal defect, & Meckel diverticulum.
- 9) **Morphology: lack of ganglion cells, & of ganglia, in the muscle wall & submucosa of the affected segment** +The mucosal lining of the **distended** portion shows **stercoral ulcers**.
- 10) **Acquired megacolon** may result from (1) **Chagas disease**, (2) **Organic obstruction** of the bowel by a neoplasm or inflammatory stricture, (3) **Toxic megacolon** complicating ulcerative colitis or Crohn disease or (4) A **functional psychosomatic disorder**.

Acquired diverticula may occur **anywhere** in the GIT, but by far the most common location is the **colon**

The ® hallmark of malabsorption syndromes is **steatorrhea (excessive fat content of the feces)**.

هاد الجدول اجا عليه سؤال بال mid و make up.

Table 15-9 Major Malabsorption Syndromes

Defective Intraluminal Digestion

Digestion of fats & proteins:

Pancreatic insufficiency, due to pancreatitis or cystic fibrosis,

Zollinger-Ellison syndrome, with inactivation of pancreatic enzymes by excess gastric acid secretion,

Solubilization of fat, due to defective bile secretion,

Ileal dysfunction or resection, with ↓ bile salt uptake, Cessation of bile flow from obstruction, hepatic dysfunction,

Nutrient preabsorption or modification by bacterial overgrowth,

Distal ileal resection or bypass,

Total or subtotal gastrectomy

Primary Mucosal Cell Abnormalities:

Defective terminal digestion

Disaccharidase deficiency (lactose intolerance),
Bacterial overgrowth, with brush-border damage,
Defective transepithelial transport,
Abetalipoproteinemia

Reduced Small Intestinal Surface Area

Celiac disease, Crohn disease.
Short-gut syndrome, after surgical resections,

Infections

Acute infectious enteritis, Parasitic infestation, Tropical sprue,
Whipple disease,

Lymphatic Obstruction

Lymphoma, Tuberculosis & tuberculous lymphadenitis

Celiac disease (Gluten-sensitive enteropathy) There is hence a strong genetic susceptibility, with **95% of patients having an HLA-DQ2** haplotype

UC has been associated with HLA-DRB1, whereas HLA-DR7 & DQ4 alleles are associated with 30% of CD cases in North American white males.

The final common pathway for the pathogenesis of IBD is inflammation

كان في عدة خيارات وكان الجواب هو inflammation
الخصائص جدول مهمات:

Crohn disease =

- 1) Most common part affected is the ileum.
- 2) 5-6 Fold increase risk of Colonic Carcinoma.
- 3) Non-Caseating granulomas.
- 4) String sign.
- 5) Skip lesions.
- 6) creeping fat.

The **incidence & prevalence of Crohn disease** has been steadily **raising in the US & Western Europe**, with annual incidence in the US of **3 to 5 per 100,000 populations.**

ترتيب زمني للتغيرات في مرض Crohn Disease

Ulcers → Cobblestone appearance → Fissures → adhesions → Sinus Formation → Fistula → abscess.

Important: The differences between UC and CD:

In UC =

- 1) Superficial mucosal ulcers.
 - 2) Serosa is normal.
 - 3) No mural thickening.
 - 4) No granulomas.
 - 5) No skip lesions.
 - 6) High Risk of carcinoma.
-

Ulcerative Colitis=

- 1) 7 per 100.000
 - 2) Involves usually rectum and sigmoid colon.
 - 3) بتكون على شكل Pseudopolyps.
-

Most common cancer among Jordanian male is: colorectal cancer.

Adenomatous polyps are segregated into four subtypes on the basis of the epithelial architecture:

- ▶ **Tubular adenomas** the most common.
 - ▶ **Villous adenomas**
 - ▶ **Tubulovillous**
 - ▶ **Sessile serrated adenomas.**
-

هاي المعلومة مهمة جدا اجت على الجواب الملون بالأحمر final

The malignant risk with an adenomatous polyp is correlated with three interdependent features:

- 1) polyp size.
- 2) histologic architecture.
- 3) severity of epithelial dysplasia.

The chief determinant of the risk of an adenoma's harboring carcinoma is
= **maximum diameter or polyp size.**

Familial Polyposis Syndromes

- 1) minimum number of 100 are required for the diagnosis.
 - 2) Most polyps are **tubular** adenomas.
-

The development of **ca from adenomatous lesions** is documented by these general observations:

- ⇒ both have the same **high prevalence.**
 - ⇒ both have the same **distribution**
 - ⇒ in some years both have the same peak incidence.
 - ⇒ When invasive ca is identified at an early stage, surrounding adenomatous tissue is often present.
 - ⇒ The risk of cancer is **directly related** to the number of Adenomas
 - ⇒ Removing all adenomas that are identified **reduce** the incidence of colorectal cancer.
-

When ca in the distal colon are discovered, they tend to be annular, encircling lesions that produce so-called napkin-ring constrictions.

1% to 4% of all GI malignancies are lymphomas.

The most common form in Western countries is **MALT lymphoma.** This is a sporadic lymphoma that **originates in B cells** of the **mucosa-associated lymphoid tissue (MALT)** of the GIT.

Gastric MALT lymphomas arise in the setting of mucosal lymphoid activation, as a result of **Helicobacter-associated chronic gastritis**.

Although all carcinoids are potentially malignant tumors, the tendency for aggressive behavior correlates with the:

- 1) **Site** of origin,
- 2) The **depth of local penetration**.
- 3) The **size of the tumor**.

A characteristic feature of carcinoids is a solid, yellow-tan appearance.

Appendix:

- 1) 10% of US population.
 - 2) male/female ratio of 1.5:1
 - 3) Appendicitis is associated with **obstruction in 50% to 80%** of cases.
-

Ascites

- Ascites refers to the collection of excess fluid in the peritoneal cavity, becomes clinically detectable when **at least 500 mL have accumulated**.
-

Viral hepatitis:

HBV infection may generate ★ "**ground-glass**" or ★ "**sanded**" nuclei.

Salient features of **Autoimmune Hepatitis** include:

- Female predominance (70%),
- Absence of serologic markers of a viral infection,
- Elevated serum **IgG** (>2.5 g/dL),
- High titers of autoantibodies in 80% of cases {most patients have circulating **antinuclear antibodies, anti-smooth muscle antibodies, liver kidney microsomal antibody, & anti-soluble liver/pancreas antigen**}. •The main effectors of cell damage in autoimmune hepatitis are believed to be CD4+ helper cells.

- The presence of other forms of autoimmune diseases, seen in up to 60% of patients, including rheumatoid arthritis, thyroiditis, Sjögren syndrome, and ulcerative colitis.
 - The overall risk of cirrhosis is 5%.
-

Hereditary hemochromatosis

- 1) Iron is deposited in liver, skin, and pancreas.
 - 2) Inflammation is absent.
 - 3) Male : femal ratio = 5-7 : 1.
 - 4) Clinical triad of: cirrhosis, DM, skin pigmentation.
-

Primary Biliary Cirrhosis (PBC)

- 1) **The primary feature of this disease is a nonsuppurative destruction of small & medium-sized intrahepatic bile ducts.** مهمة جدا.
 - 2) More than 90% of persons with PBC have high titers of **antimitochondrial antibodies**.
-

Primary Sclerosing Cholangitis

- 1) progressive fibrosis & destruction of extrahepatic & large intrahepatic bile ducts.
 - 2) **shows a characteristic "beading"**.
 - 3) Primary sclerosing cholangitis is commonly seen in association with IBD, particularly **chronic ulcerative colitis, which coexists in approximately 70% of individuals**.
 - 4) , the prevalence of primary sclerosing cholangitis in persons with ulcerative colitis is about 4%.
 - 5) Males are affected more often than females in a ratio of 2:1.
 - 6) **Cholangiocarcinoma** may develop in 10% to 15% of individuals with primary sclerosing cholangitis.
 - 7) The characteristic feature of **primary sclerosing cholangitis** is a fibrosing cholangitis of bile ducts. Specifically, affected portal tracts show concentric periductal **onion-skin fibrosis** & a modest lymphocytic infiltrate.
-

Hepatocellular Carcinomas (HCC)

- 1) HCC constitutes approximately 5.4% of all cancers.

- 2) **There is a pronounced male preponderance of HCC throughout the world.**
 - 3) **Aflatoxin + HBV** infection, increases the risk of HCC development by more than **200-fold over noninfected, nonexposed populations.**
 - 4) The **peak incidence of HCC** is between **20 & 40 years of age.**
 - 5) **IN Japan & Central Europe, chronic HCV infection is the greatest risk factor in the development of liver cancer.**
 - 6) In China & South Africa = **HBV** + dietary **aflatoxins** derived from the fungus *Aspergillus flavus*, **are the greatest risk factor in the development of liver cancer.**
 - 7) **All patterns of HCC have a strong propensity for invasion of vascular channels.** Extensive intrahepatic metastases ensue, & occasionally **snakelike masses** of tumor invade the portal vein (with occlusion of the portal circulation) or inferior vena cava, extending even into the right side of the heart.
 - 8) The **median survival is 7 months**, with death from:
 - (1) Profound cachexia, (2) GIT or esophageal variceal bleeding, (3) Liver failure with hepatic coma or (4) Rarely, rupture of the tumor with fatal hemorrhage.
-

Cholelithiasis (Gallstones)

- 1) There are two main types of gallstones:
 - **80% are cholesterol stones**, containing crystalline cholesterol monohydrate
 - The remainders are composed predominantly of bilirubin & calcium salts & are designated **pigment stones.**
- 2) **cholesterol stones:** arise only in Gall bladder + most are radiolucent + 20 % are radiopaque contains calcium carbonate.
- 3) **pigment stones:** arise anywhere in the biliary tree = GB + bile duct.
- 4) **Radiopaque:** black + large number + found in sterile GB + Crumble easily + composed of calcium carbonate.
- 5) **Radiolucent:** found in intra or extra hepatic + few Number + soft, greasy + calcium soap.

Biochemistry:

Which of the following is the highest monounsaturated?

- a. Coconut oil
- b. Palm oil
- c. Olive oil
- d. Soybean oil
- e. Corn oil.

Answer: c

Which of the following is the highest saturated fatty acid?

- a. Coconut oil
- b. Palm oil
- c. Olive oil
- d. Soybean oil
- e. Corn oil.

Answer: a

Which of the following is the lowest saturated fatty acid?

- a. Coconut oil
- b. Palm oil
- c. Olive oil
- d. Soybean oil
- e. Corn oil.

Answer: e

Which of the following is part of intestinal flora?

- a. Vit. D
- b. Niacin.
- c. Vit. A
- d. Vit. K
- e. Thiamin.

Answer: d

Which of the following is Partially endogenous?

- a. Vit. K
- b. Biotin.
- c. Folates
- d. Vit. C
- e. Niacin

Answer: e

Which of the following is not fat soluble?

- a. Cholecalciferol
- b. Phylloquinones.
- c. Tocopherols.

- d. Ascorbic acid.
- e. Beta- carotenes.

Answer: d

Regarding intestinal vitamin absorption, which of the following is absorbed by ACTIVE transport?

- a. Biotin
- b. Niacin
- c. Thiamine.
- d. Riboflavin.

Answer: c

Which type of intestinal absorption is suitable for Vit. K?

- a. Simple passive transport.
- b. Facilitated passive transport.
- c. Active transport.
- d. Proton pump.
- e. Na⁺ / K⁺ pump.

Answer: b

Which of the following is not absorbed in the liver?

- a. Retinol
- b. Cyanocobalamin
- c. Iron.
- d. Ascorbic acid.
- e. Glycogen.

Answer: d.

GGT is:

- a. Is found high in kidney and liver.
- b. Is a useful test to confirm hepatic disease in patient with decreased ALP.
- c. It's used in the clinical diagnosis of bone and liver.
- d. Is found in placenta and pregnant women.
- e. It's a sensitive test for viral hepatitis.

Answer: a

آخر سؤال مش متذكره بس كان على على موضوع:

Ranson's criteria

The last slide in pancreatic subject.

مكتوبه بخط ايدو وهاي مهمة كتير

Good luck

أسف على التقصير، أو أي خطأ، وإن شاء الله موفقين (:
أخوكم عمر بني هاني ☺