



G.I.T



Lecture: The OMENTUM (4)

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If there is any mistake or suggestions please feel free to contact us:

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Both - Black

Male Notes - BLUE

Female Notes - GREEN

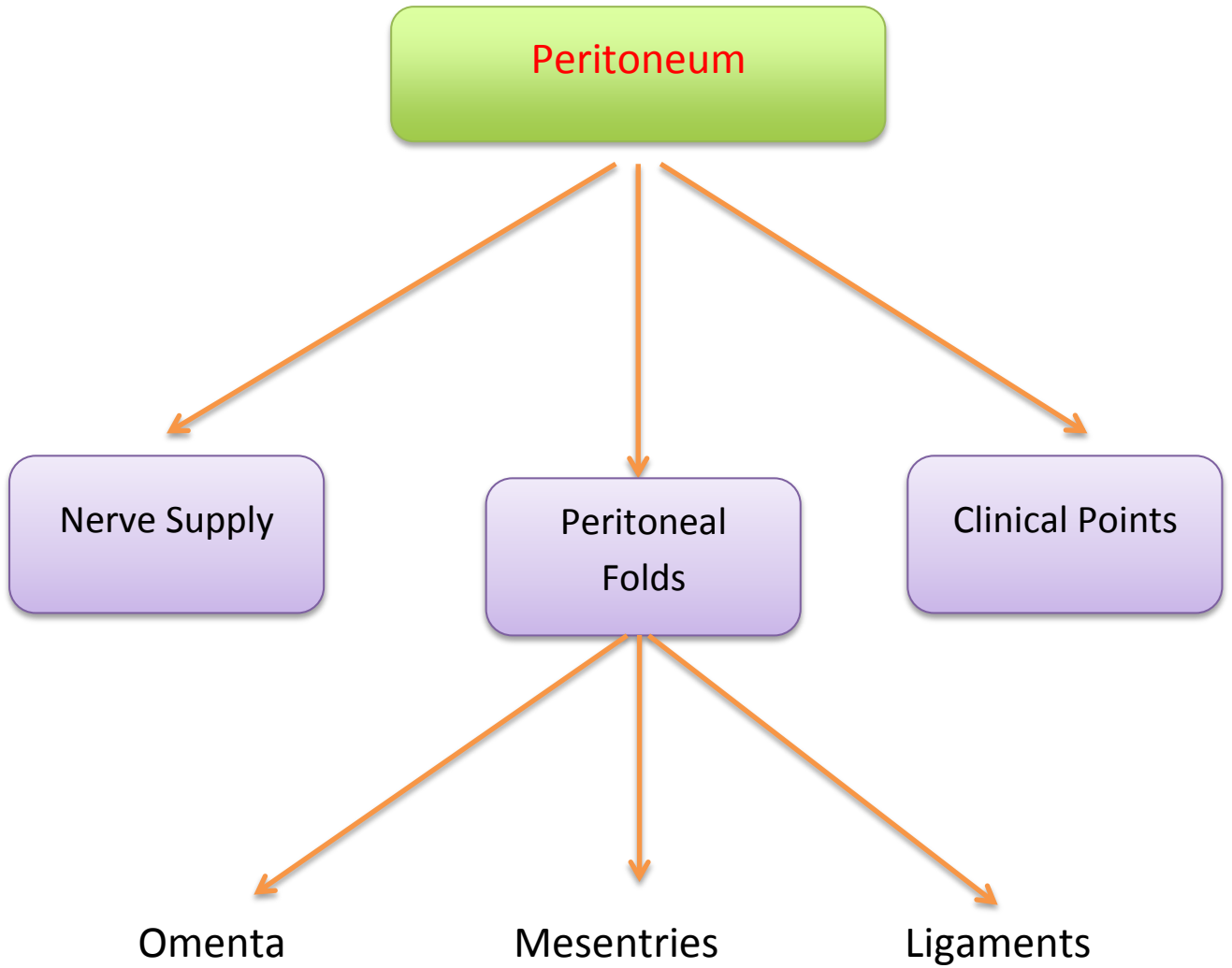
Explanation and additional notes - ORANGE

Very Important note - Red

Objectives:

- **At the end of the lecture the students must know:**
- Brief knowledge about peritoneum as a thin serous membrane and its main parts; parietal and visceral.
- The peritoneal cavity and its parts the greater sac and the lesser sac (Omental bursa).
- The peritoneal folds; omenta, mesenteries, and ligaments.
- The omentum, as one of the peritoneal folds.
- The greater omentum, its boundaries, and contents.
- The lesser omentum, its boundaries, and contents.
- The omental bursa, its boundaries.
- The Epiploic foramen, its boundaries.
- Mesentery of the small intestine, and ligaments of the liver.
- Nerve supply of the peritonium.
- Clinical points.

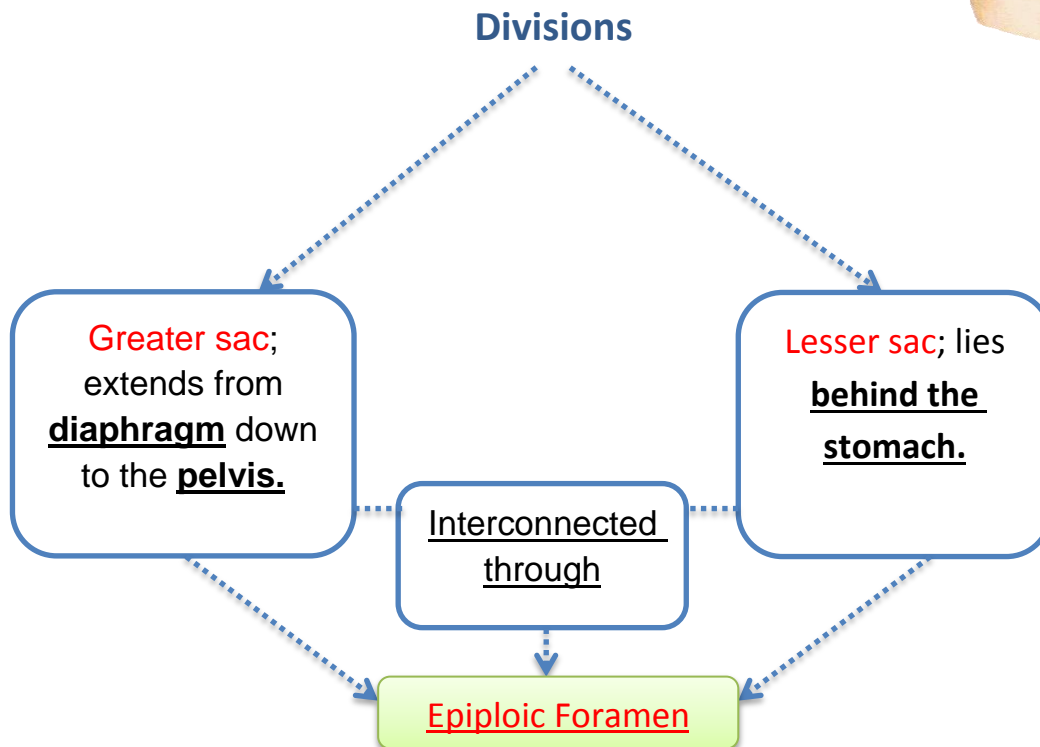
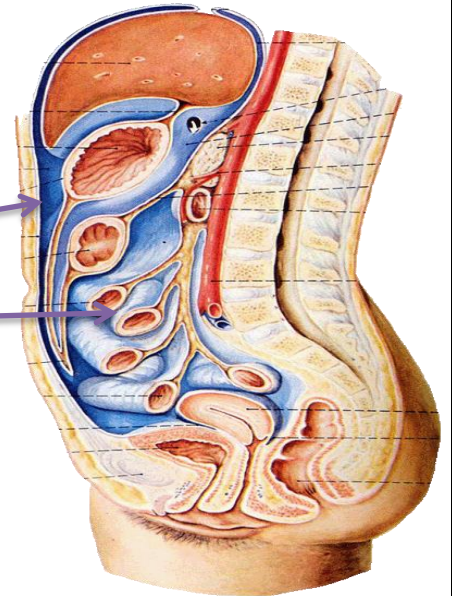
Mind Map:



The Peritoneum

Definition:

- Is a thin serous membrane
- Lining the wall of the abdominal and pelvic cavities, (**the parietal peritoneum**).
- Covering the existing organs, (**the visceral peritoneum**).
- The potential space between the two layers is **the peritoneal cavity**. (**The largest cavity in the body**)



In male : the peritoneum is a **closed** sac .

In female : the sac is **not completely closed** because it communicates with the exterior through the uterine tubes, uterus and vagina.

In relation to the organs

INTRAPERITONEAL ORGAN:

Is surrounded by the peritoneum and has a supporting mesentery

(Totally covered)

Examples:

Stomach & 1st part of duodenum, liver, gall bladder, spleen, jejunum, ileum, transverse colon, sigmoid colon, uterus, and ovaries.

EXTRAPERITONEAL or RETROPERITONEAL ORGAN:

A structure that lies behind the peritoneum or an organ that is only partially covered by the peritoneum and has no supporting mesentery.

Primarily retroperitoneal organs

Develop and remain outside the peritoneal cavity

Examples:

Kidneys, suprarenal glands, aorta, inferior vena cava, urinary bladder, prostate, vagina, and rectum.

Secondarily retroperitoneal organs

Develop in mesenteries, but get pushed against the body wall (parietal peritoneum) during growth so that only half of their surface or less is covered by peritoneum.

Examples: (PADD)

Pancreas, duodenum, ascending and descending colon.

The male doctor said they're not that important.

Folds of the Peritoneum

(Permit blood, lymph vessels and nerves to reach the viscera)

- Omenta
- Mesenteries
- Ligaments

Omenta

(Two layered fold of peritoneum connecting the stomach to another viscus)

Lesser Omentum

Extends between the liver and the lesser curvature of the stomach.

It is continuous with the two layers of peritoneum which cover the anterior & posterior surfaces of stomach and 1st part of the duodenum.

Ascends as a double fold to the porta hepatis of liver, and fissure for ligamentum venosum.

To the left of porta hepatis it is carried to the diaphragm.

Its right border is a free margin; constitutes the anterior boundary of the epiploic foramen.

Contents between the two layers of the lesser omentum :

Close to the right free margin, are the hepatic artery, the common bile duct, the portal vein, lymphatics, and the hepatic plexus of nerves.

At the attachment to the stomach, runs the right and left gastric vessels

Greater Omentum

The largest peritoneal fold, with cribriform appearance, contains some adipose tissue.

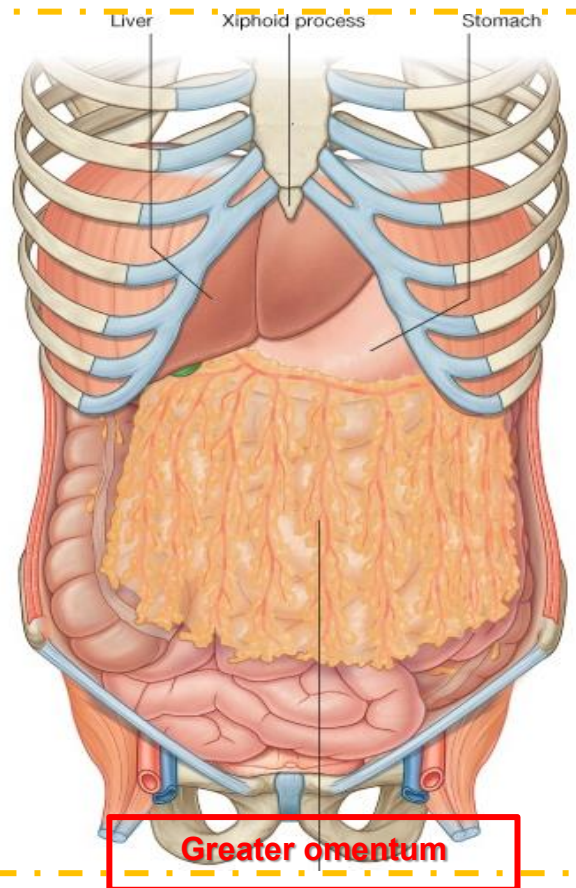
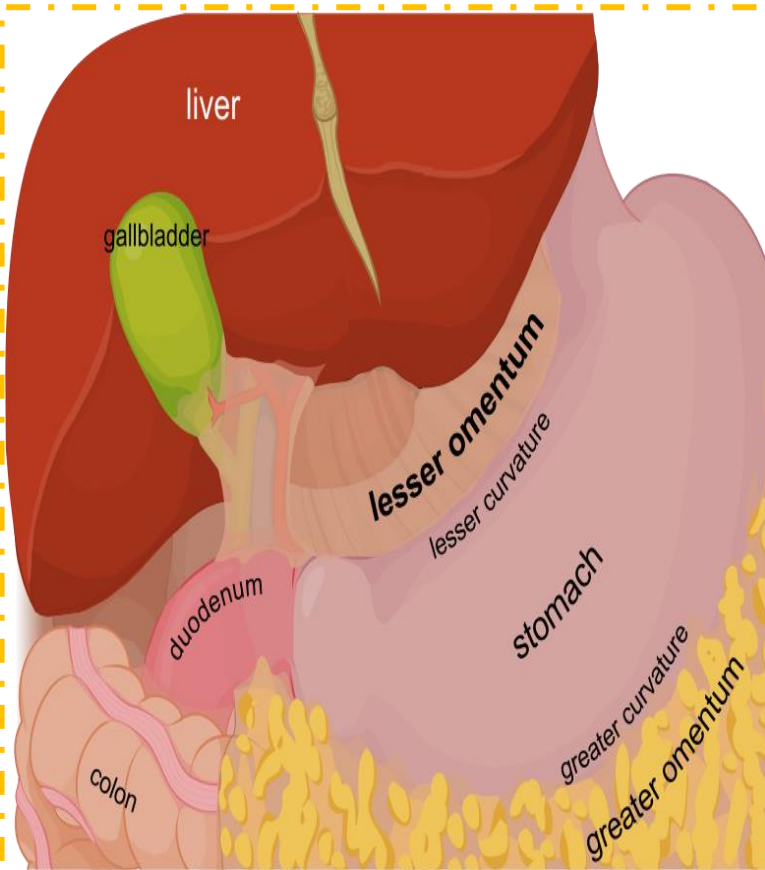
It consists of a double sheet of peritoneum, folded on itself so that it is made up of four layers (anterior 2 layers + posterior 2 layers).

The two layers which descend from the greater curve of the **stomach** and commencement of the duodenum, pass downward in front of the small intestines, then turn upon themselves, and ascend to the **transverse colon**, where they separate and enclose it.

The **left** border of the greater omentum is continuous with the **gastrosplenic ligament**.

Its **right** border extends as far as the **commencement of the duodenum**.

Contents : the anastomosis between the **right and left gastroepiploic vessels**.



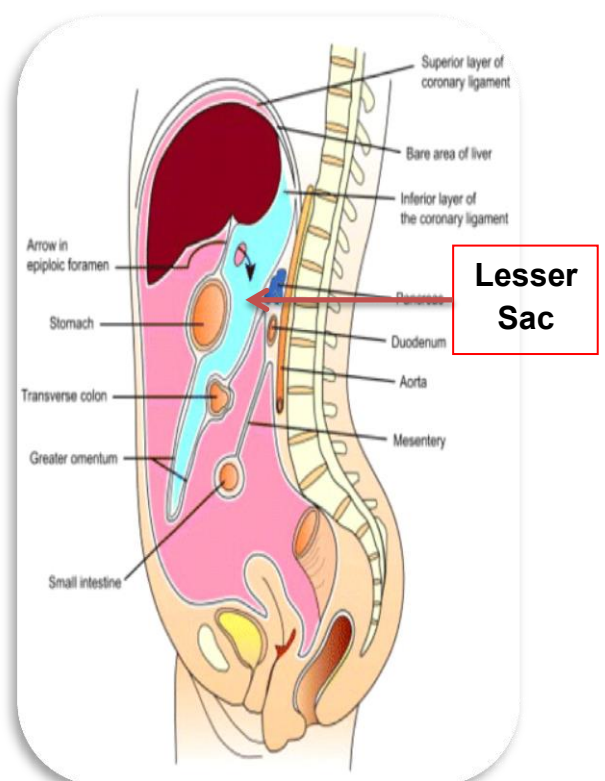
Omental Bursa (Lesser Sac):

It is a part of the peritoneal cavity behind the stomach.

Boundaries of the *Omental Bursa*:

Anterior wall, from above downward, by the caudate lobe of the liver, the lesser omentum, back of the stomach, and the anterior two layers of the greater omentum.

Posterior wall, from below upward, by the posterior two layers of the greater omentum, the transverse colon, and the ascending layer of the transverse mesocolon, the upper surface of the pancreas, the left suprarenal gland, and the upper end of the left kidney.



The male doctor
focused on this.

Epiploic Foramen:

It is the communication between the greater and lesser sac.
It is bounded by:

In front by the free border of the lesser omentum, with its contents: hepatic artery, common bile duct, and portal vein between its two layers.

Behind by the peritoneum covering the inferior vena cava.

Above (roof) by the peritoneum on the caudate process of the liver.

Below (floor) by the peritoneum covering the commencement of the duodenum and the hepatic artery, before ascending between the two layers of the lesser omentum.

Mesentry

Two-layered fold of peritoneum suspends the small intestine from the posterior abdominal wall.

Broad and a fan-shaped

Intestinal border-folded, 7 m long

Root of mesentery:

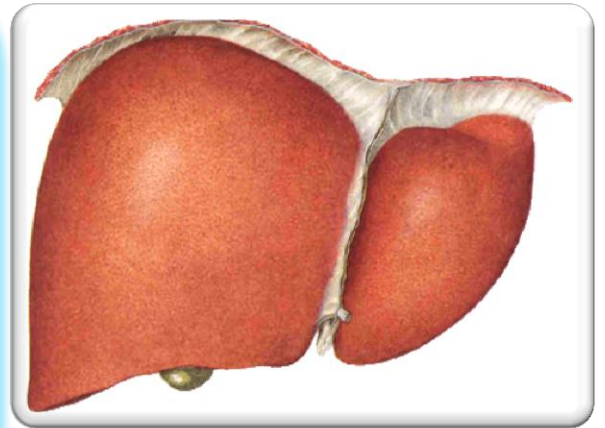
- 15 cm long
- Directed obliquely from duodenojejunal flexure at the level of left side of L2 to the ileocecal junction in the right iliac fossa at the level of right sacroiliac joint.

Ligaments

Two-layered folds of peritoneum that attach solid viscera to the abdominal wall and diaphragm.

Ligaments of liver:

- Falciform ligament of liver
- Coronary ligament
- Left and right triangular ligaments
- Ligamentum teres >> this is an obliterated vein



Nerve Supply of the Peritoneum

- The parietal peritoneum is sensitive to **pain, temperature, touch, and pressure.**
- The parietal peritoneum lining the anterior abdominal wall is supplied by:
lower six thoracic and first lumbar nerves.
- The central part of the diaphragmatic peritoneum is supplied by the **phrenic nerves.**
- The visceral peritoneum is sensitive **only to stretch and tearing.**
- It is supplied by autonomic nerves that supply the viscera or traveling in the mesenteries.

Clinical Points

Peritoneal Pain

From the Parietal Peritoneum

Abdominal pain originating from the parietal peritoneum is therefore of the somatic type. It is usually severe, and can be accurately localized.

From the Visceral Peritoneum

The visceral peritoneum, including the mesenteries, is innervated by autonomic nerves.

It is due to stretch caused by over distension of a viscus and pulling on a mesentery.

That gives rise to the sensation of pain.

Peritoneal Dialysis

Because the peritoneum is a semi permeable membrane:

It allows transfer of substances across itself.

It has been made use of in patients with acute renal insufficiency

Intraperitoneal organ :

Let's Sleep So Deep Until Sun Go in Top Of Sky

Let's = Liver

Sleep = Spleen

So = Stomach

Deep = 1st part of Duodenum

Until = Uterus

Sun= Sigmoid colon

Go= Gall bladder

in= ileum

Top= Transverse colon

Of= Ovaries

Sky! Remember sky Jet= Jejunum

Questions:

Q1) The peritoneum is covering Cavities, consisting oflayers and has a Space:

- A. 2,2,1
- B. 2,1,1
- C. 1,2,2

Q2) Both cavities are interconnected through which foramen?

- A. Peritoneal foramen
- B. Epiploic foramen
- C. None of them

Q3) Which one of these groups is **an intraperitoneal organ?**

- A. Jejunum, stomach, pancreas
- B. Spleen, jejunum, aorta
- C. Spleen, jejunum, stomach

Q4) Which one of these groups is **a secondarily retroperitoneal organ?**

- A. pancreas, duodenum, stomach
- B. ascending and descending colon, spleen
- C. pancreas, duodenum, descending colon

Q5) Which one of these groups is **an extraperitoneal organ?**

- A. Spleen, jejunum, aorta
- B. Kidney, pancreas, duodenum
- C. liver, gall bladder, spleen

Q6) Which one of these is the **RIGHT** border of lesser omentum?

- A. Right and left gastric vessels
- B. Epiploic foramen
- C. Both

Q7) Right and left gastric vessels are located at which side of the lesser omentum?

- A. Close to the right free margin
- B. At the superior margin
- C. At the attachment to the stomach

8) The largest peritoneal fold is?

- A. Mesentery
- B. Greater sac
- C. Greater omentum

Q9)The left border of the greater omentum is continuous with which one of these?

- A. Gastrosplenic ligament
- B. Right and left gastroepiploic vessels
- C. Duodenum

Q10) The part of the peritoneal cavity that is located behind the stomach ?

- A. Omental bursa
- B. Lesser Sac
- C. Both

Q11) The Anterior wall of the omental bursa contains which of these?

- A. lesser omentum, stomach, greater omentum
- B. greater omentum, transverse colon, left kidney
- C. None

Q12) The Posterior wall of the omental bursa contains which of these?

- A. lesser omentum, stomach, greater omentum
- B. greater omentum, transverse colon, left kidney
- C. None

Q13) The visceral peritoneum is sensitive to, while the parietal peritoneum is sensitive to :

- A. Pain, stretch
- B. Stretch, pain
- C. None

Q14) The visceral peritoneal pain is?

- A. Dull ache
- B. Localized
- C. Severe

Q	Answers
1	A
2	B
3	C
4	C
5	B
6	B
7	C
8	C
9	A
10	C
11	A
12	B
13	B
14	A

GOOD LUCK

Anatomy Team Leaders:

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