BLOCK EXAMINATION II

SEPTEMBER 19, 1997

PART I. Answer in the space provided. (15 pts)

1. Identify the structures/areas indicated. (2 pts)

a._____

b._____

c._____

d._____

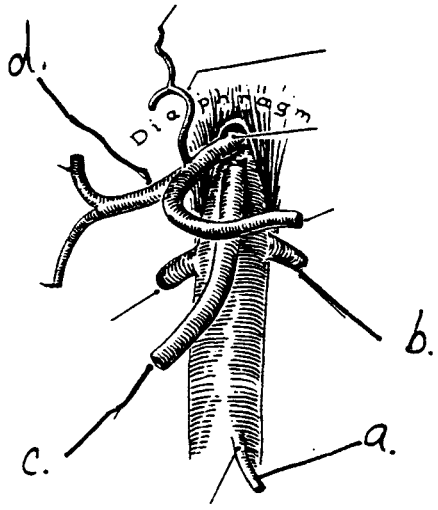


Figure 2.31. *A*, Celiac trunk and other branches of the aorta

2. Identify the structures. (2 pts)

a._____

b._____

c._____

d._____

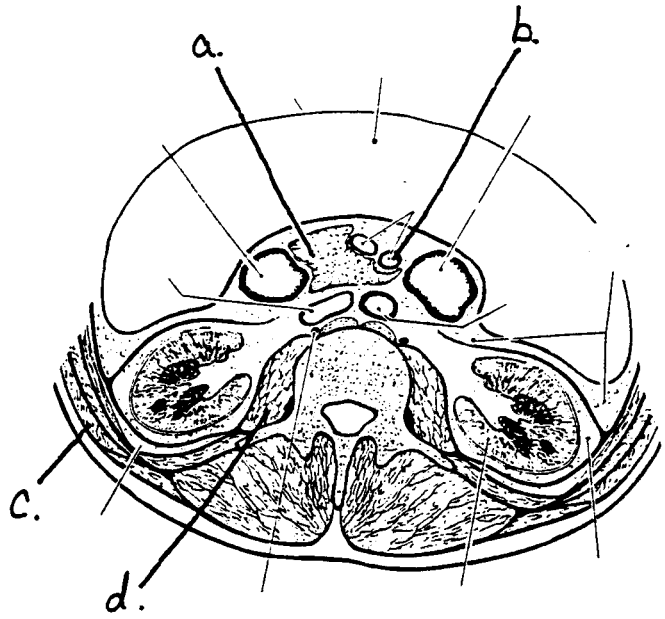
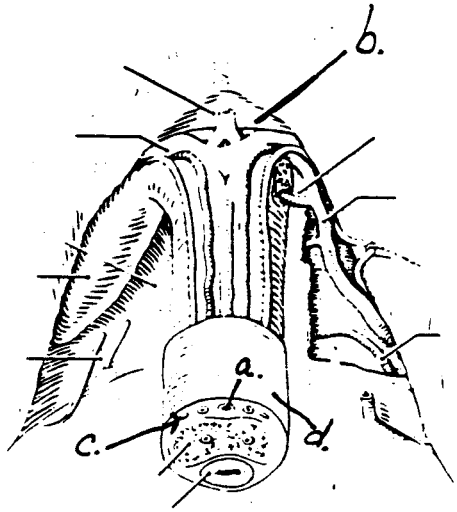


Figure 2.47. Transverse section of abdomen at the level of the kidneys.

Answer in the space provided.

3. Identify the structures. (2 pts)



a._____

b._____

c._____

d._____

4. Identify the structures. (2 pts)

a._____

b._____

c._____

d._____

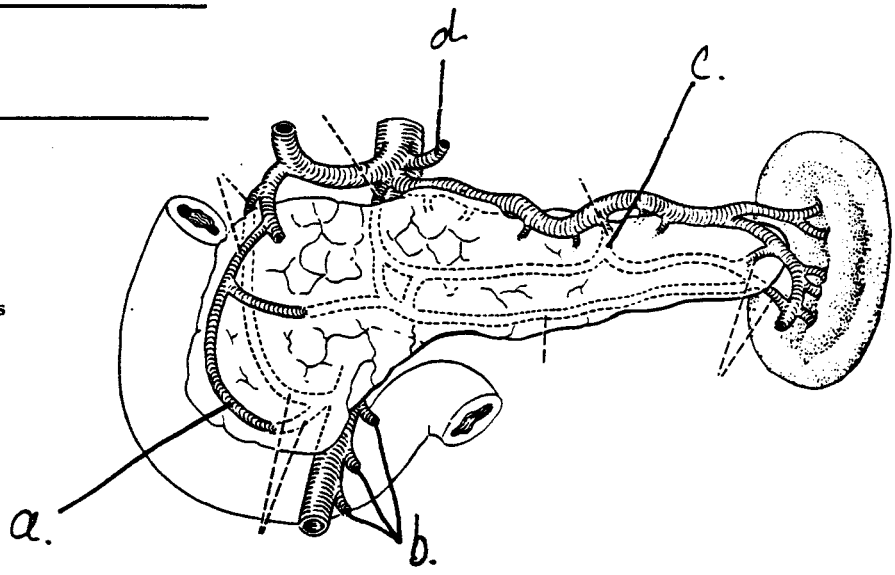


FIGURE 24-25.
The chief arteries of the pancreas and their anastomoses.

Answer in the space provided.

5. Identify the structures. (2 pts)

a. _____

b. _____

c. _____

d. _____

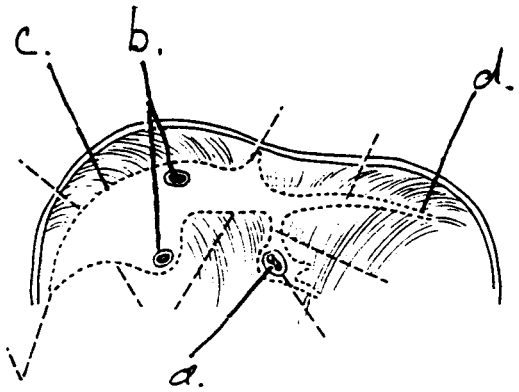


FIGURE 24-28.
Posterior view of the liver and its peritoneal attachments illustrated schematically (B) shows attachments to the diaphragm.

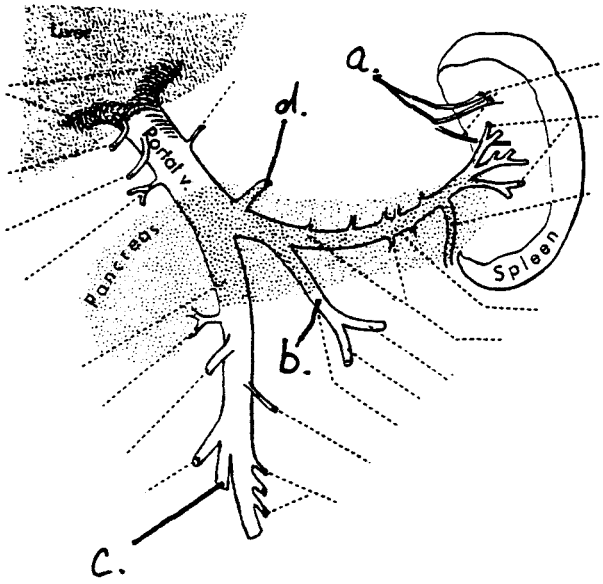
6. Identify the structures. (2 pts)

a. _____

b. _____

c. _____

d. _____



6. Identify the structures. (3 pts)

a. _____

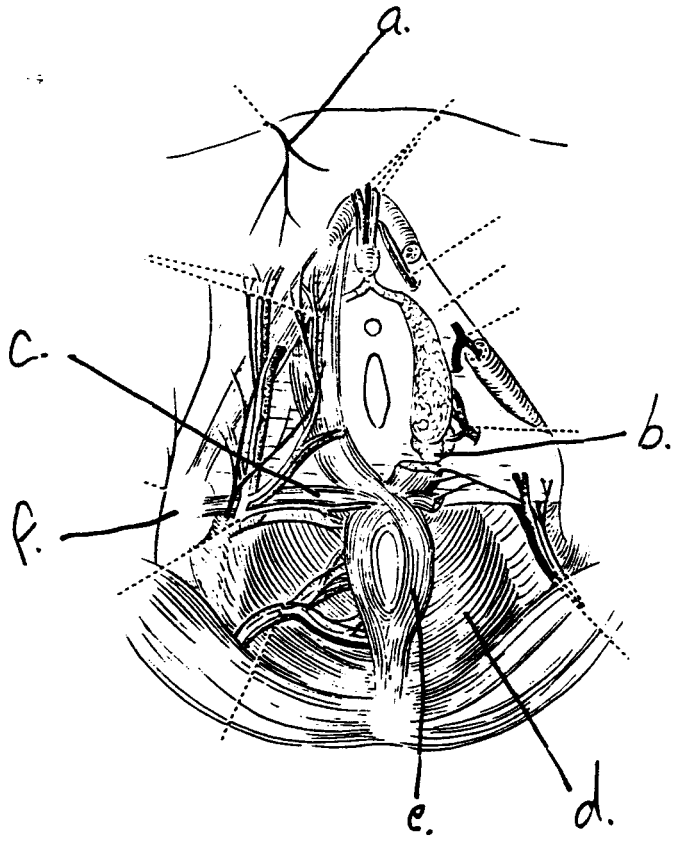
b. _____

c. _____

d. _____

e. _____

f. _____



Part II. Circle the correct answer. All, none, or some may apply. (35 pts)

1. With respect to the abdominal wall:

   a. Below the arcuate line the rectus abdominis muscles have the transversalis fascia as a posterior boundary.

   b. The thoracoabdominal nerves proceed in the abdominal wall between the internal oblique and transversus abdominis muscles.

   c. A key dermatome to remember is that T12 is in the region of the umbilicus.

   d. The transversalis fascia contributes to the formation of the femoral sheath.

   e. The lower fibers of the external oblique fuse with fibers of the internal oblique to form the conjoint tendon (falx inguinalis).

   f. The arcuate line represents the change from tela subcutanea to Camper's fat and Scarpa's fascia.

2. In regard to the inguinal canal:

   a. The round ligament (ligamentum teres) of the uterus passes through the inguinal canal and is a derivative of the gubernaculum.

   b. The deep inguinal ring represents a prolongation of the peritoneum termed the processus vaginalis.

   c. The pampiniform plexus of veins drains into the cremaster vein.

   d. Hemiation medial to the lateral umbilical fold is termed a direct hernia.

   e. The left testicular vein terminates into the left renal vein.

   f. The sympathetic innervation to the testes is by way of the lumbar splanchnics.

3. In your understanding of the abdominal cavity and its embryology:

   a. The left triangular ligament is derived from the ventral mesentery.

   b. At 5 weeks of age there is a 180 degree counterclockwise rotation of the gut that occurs about the axis of the superior mesenteric artery.

c. The lesser curvature of the stomach is turned to the right following a 90 degree clockwise rotation during development.

d. The superior recess of the lesser sac lies ventral to the greater omentum.

e. The posterior boundary of the Epiploic Foramen of Winslow is the inferior vena cava.

f. The medial umbilical ligament is the remains of the urachus.

4. With respect to the abdomen:

a. The inferior mesenteric artery lies at the lower border of L1.

b. The splenic vein receives the termination of the short gastric veins that course through the gastrosplenic ligament.

c. The chief pancreatic duct is the remainder of the dorsal pancreas in the fetus.

d. Paraduodenal recesses located on the left side of the duodenojejunal flexure create a potential danger for the entrapment of a loop of the bowel.

e. The normal spleen cannot be palpated.

f. The left lateral paracolic gutter is closed cranially by the phrenicocolic ligament.

5. With respect to the liver:

a. Percussion of the liver is difficult on the left owing to the gas in the fundus of the stomach.

b. The inferior vena cava is embedded in the liver in a deep sulcus located in the quadrate lobe.

c. Right and left hepatic veins drain into the portal vein.

d. Problems in venous drainage by way of the portal vein may produce esophageal varicosities.

e. In the fetus, the left and right umbilical veins terminate in the left portal vein.

f. The lumbar splanchnic nerves form the sympathetic supply to the liver and gall bladder.

6. Pertaining to the small and large intestine:

   a. The jejunum is longer than the ileum.

   b. The jejunum is thicker and of greater diameter than the ileum.

   c. Vasa recta are longer for the jejunum than for the ileum.

   d. Diverticulitis is a common affliction in the ileum.

   e. Arcades are complex in the ileum compared to the jejunum.

   f. The middle colic artery supplies blood to the transverse colon and reaches the colon by way of the transverse mesocolon.

7. With respect to the diaphragm:

   a. The thoracic duct traverse the diaphragm at the level of T10.

   b. The inferior phrenic arteries emanate from the aorta at the level of L3.

   c. The sympathetic trunk passes from the thorax to abdomen posterior to the medial arcuate (lumbocostal) ligament.

   d. The right and left crus of the diaphragm form the median arcuate ligament at the level of T12.

   e. The right crus of the diaphragm participates in the formation of the esophageal hiatus.

   f. A weakening in the diaphragm superior to the lateral arcuate ligament is termed the lumbocostal trigone.

   g. Pain from the central portion of the diaphragm can be referred to the base of the neck and to the shoulder.

8. Concerning the kidneys and suprarenals:

   a. In the supine position, the kidneys extend from T8 to T11 and therefore retroperitoneal operations for approaching the kidney may result in a pneumothorax.

   b. Both the kidney and the suprarenal gland has an outer cortex and an inner medulla.

c. Renal columns terminate into renal papilla.

d. The renal sinus contains perirenal fat.

e. The renal fascia is incomplete inferiorly and therefore infections around the kidney may descend into the pelvis.

f. The renal arteries arise inferior to the superior mesenteric artery.

g. Inferior to the duodenum, the right ureter is retroperitoneal and is crossed by the root of the mesentery.

9. With respect to the pelvis:

a. Parietal pelvic fascia is a continuation of the transversalis fascia.

b. The superior fascia of the pelvic diaphragm is also termed perivisceral fascia.

c.. The piriformis muscle is included in a definition of the pelvic diaphragm.

d. The ischial spine is directed inwards (inverted) in the female.

e. The puborectalis muscle inserts into the anococcygeal raphe.

f. The obturator internus muscle is found in both the pelvic cavity and the perineum.

g. The pubococcygeus muscle is innervated by the lumbar and pelvic splanchnics.

h. The artery of the ductus (vas) deferens is a branch of the umbilical artery.

10. With regard to pelvic nerves and vasculature:

a. The helicine arteries are innervated by the pudendal nerve.

b. The bulbospongious is a smooth muscle that contracts to maintain erection of the penis/clitoris.

c. The deep artery of the penis is derived from the internal pudendal artery.

d. An atonic bladder is produced by transection of the ventral roots of S2-4.

e. Sympathetic fibers from L1 to L3 are termed the "nervi erigentes".

f. Another term for the pelvic splanchnic nerves is sacral splanchnic nerves.

11. Concerning your understanding of the perineum:

a. External anal sphincter muscles are included in the perineum.

b. Internal anal sphincter muscles are included in the perineum.

c. The urogenital diaphragm includes the crus of the clitoris.

d. The deep transverse perineal muscles are ncluded in the urogenital diaphragm.

e. The transverse perineal ligament is formed by the fusion of the superior and inferior fascia of the urogenital diaphragm.

f. The bulbourethral glands are located in the urogenital diaphgram but have ducts that terminate in the spongy urethra.

Part III. Answer in the space provided. (50 pts)

1. A 45-year old women who has had 4 children and 2 miscarriages presents with a prolapse of the uterus. Indicate your understanding of the following with respect to the uterus, uterine tubes, and ovary: structure, orientation, relationships (anterior, posterior, superior, inferior, medial, lateral), support(s) and peritoneal associations, innervation (sensory and motor), vasculature and lymphatics, and briefly discuss the anatomical reasoning for a prolapse of the uterus. (15 pts)

2. Dysfunction of the duodenum because of intrinsic failure and/or impairment due to associated structures is crucial to comprehending gastrointestinal disorders. Discuss the duodenum with respect to the following: structure, relationship to surrounding structures, innervation (sensory and motor), vasculature, lymphatics, supports (visceral and fibrous), and indicate briefly a clinical significance for each part of the duodenum. (15 pts)

3. A tear in the membranous urethra and superior fascia during catheterization allows urine to extravasate into the ischiorectal fossa. Discuss the boundaries and contents of the ischiorectal fossa. What is the relationship of the ischiorectal fossa to the deep and superficial pouches? Given this medical situation, would urine be expected to enter the deep and/or superficial pouches? (12 pts)