What is Pancreas Anatomy?

Worksheet

The pancreas has four regions - head (nestled in the C-loop of the duodenum), neck, body (crossing the aorta and spine), and tail (reaching the spleen) - and performs both exocrine (digestive enzymes via the pancreatic duct) and endocrine (insulin/glucagon via the islets of Langerhans) functions.

Questions

1. Which part of the pancreas sits within the duodenal C-loop?

A) Tail
B) Body
C) Head
D) Neck

2. What structure does the tail of the pancreas approach?

A) Spleen
B) Liver
C) Left kidney only
D) Stomach

3. What do the islets of Langerhans secrete?

A) Digestive enzymes
B) Bile
C) Insulin and glucagon
D) Bicarbonate only

4. Where do pancreatic exocrine secretions drain?

A) Directly into the bloodstream
B) Ampulla of Vater into the duodenum
C) The gallbladder
D) The renal pelvis

5. A tumor is found in the pancreatic head. Which nearby structure's C-shaped curve makes surgical removal (Whipple procedure) especially complex?

6. A patient has a mass at the pancreatic tail. Which adjacent organ is most likely to be involved?

7. Explain how the pancreas performs both digestive and hormonal roles anatomically.

8. Define: What are the four regions of the pancreas?

9. Define: Where does the head of the pancreas sit?

10. Define: What does the pancreatic tail reach?

Answer Key

1. C) Head - The head of the pancreas is nestled inside the C-loop of the duodenum.

2. A) Spleen - The tail extends to the splenic hilum.

3. C) Insulin and glucagon - Islets are endocrine clusters that secrete insulin and glucagon.

4. B) Ampulla of Vater into the duodenum - Exocrine secretions travel via the pancreatic duct to the ampulla of Vater.

5. The head of the pancreas sits within the C-loop of the duodenum. Because the head shares blood supply and close contact with the duodenum, common bile duct, and major vessels, removing it requires removing part of the duodenum too (Whipple procedure).

6. The tail of the pancreas extends toward the spleen and lies at the splenic hilum. Tail masses often require evaluation of, or can invade, the spleen and splenic vessels.

7. Exocrine acinar cells (about 98% of the gland) secrete digestive enzymes into the pancreatic duct, which drains into the duodenum at the ampulla of Vater. Endocrine islets of Langerhans, scattered mostly in the tail, secrete insulin and glucagon directly into the bloodstream.

8. Head, neck, body, and tail.

9. Within the C-loop (curve) of the duodenum.

10. The hilum of the spleen.