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**MATRIC NO: 18/MHS05/009**

**DEPARTMENT: PHYSIOLOGY**

**COURSE: ANA 202**

**QUESTIONS:**

1. Why do we have the portal vein or the liver receiving more blood from the vein than it receives from the artery?
2. Discuss five (5) disease conditions of the liver.

**ANSWERS:**

1. The hepatic portal vein brings 75-85% of the blood to the liver. Portal blood, containing about 40% more oxygen than blood returning to heart from the systemic circuit, sustains the liver parenchyma. The hepatic portal vein carries virtually all the nutrients absorbed by the alimentary tract to the sinusoids of the liver. The exception is lipids, which are absorbed into and bypass the liver via the lymphatic system. Arterial blood from the hepatic artery, accounting for only 20-25% of blood received by the liver, is distributed initially to non-parenchymal structures, particularly the intrahepatic bile ducts.
2. **PALPATION OF LIVER:** The liver may be palpated in a supine person because of the inferior movement of the diaphragm and liver that accompanies deep inspiration. One movement of palpating the liver is to place the left hand posteriorly behind the person’s right upper quadrant, lateral to the rectus abdominis and inferior to the costal margin. The person is asked to take a deep breath as the examiner presses posteriorly with the right hand and pulls anteriorly with the left hand.

**ABERRANT HEPATIC ARTERIES:** The more common variety of right or left hepatic artery that arises as a terminal branch of the hepatic artery proper may be replaced in part or entirely by an aberrant artery arising from another source.

**RUPTURE OF LIVER:** The liver is easily injured because it is large, fixed in position, and friable. Often a fractured rib that perforates the diaphragm tears the liver. Because of the liver’s great vascularity and friability, liver lacerations often cause considerable haemorrhage and right upper quadrant pain. In such cases, the surgeon must decide whether to remove foreign material and the contaminated or devitalized tissue by dissection or to perform a segmentectomy.

**LIVER BIOPSY:** Hepatic tissue may be obtained for diagnostic purposes by liver biopsy. Because the liver is located in the right hypochondriac region where it receives protection from the overlying thoracic cage, the needle is commonly directed through the right 10th intercostal space in the midaxillary line. Before the physician takes the biopsy, the person is asked to hold his or her breath in full expiration to reduce the costodiaphragmatic recess and to lessen the possibility of damaging the lungs and contaminating the pleural cavity.

**VARIARTIONS IN RELATIONSHIP OF HEPATIC ARTERIES:** In most people the right hepatic artery crosses anterior to the hepatic portal vein; however, in some people the artery crosses posterior to the hepatic portal vein. In most people, the right hepatic artery runs posterior to the common hepatic duet. In some individuals, the right hepatic artery crosses anterior to the common hepatic duet, or the right hepatic artery arises from the SMA and so does not cross the common hepatic duet at all.