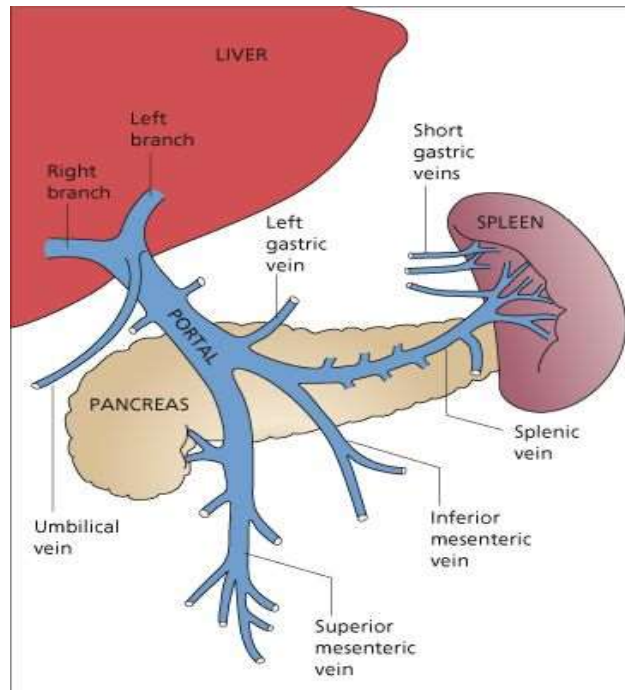




MJF AYURVEDA MAHAVIDYALAYA

Chomu, Jaipur

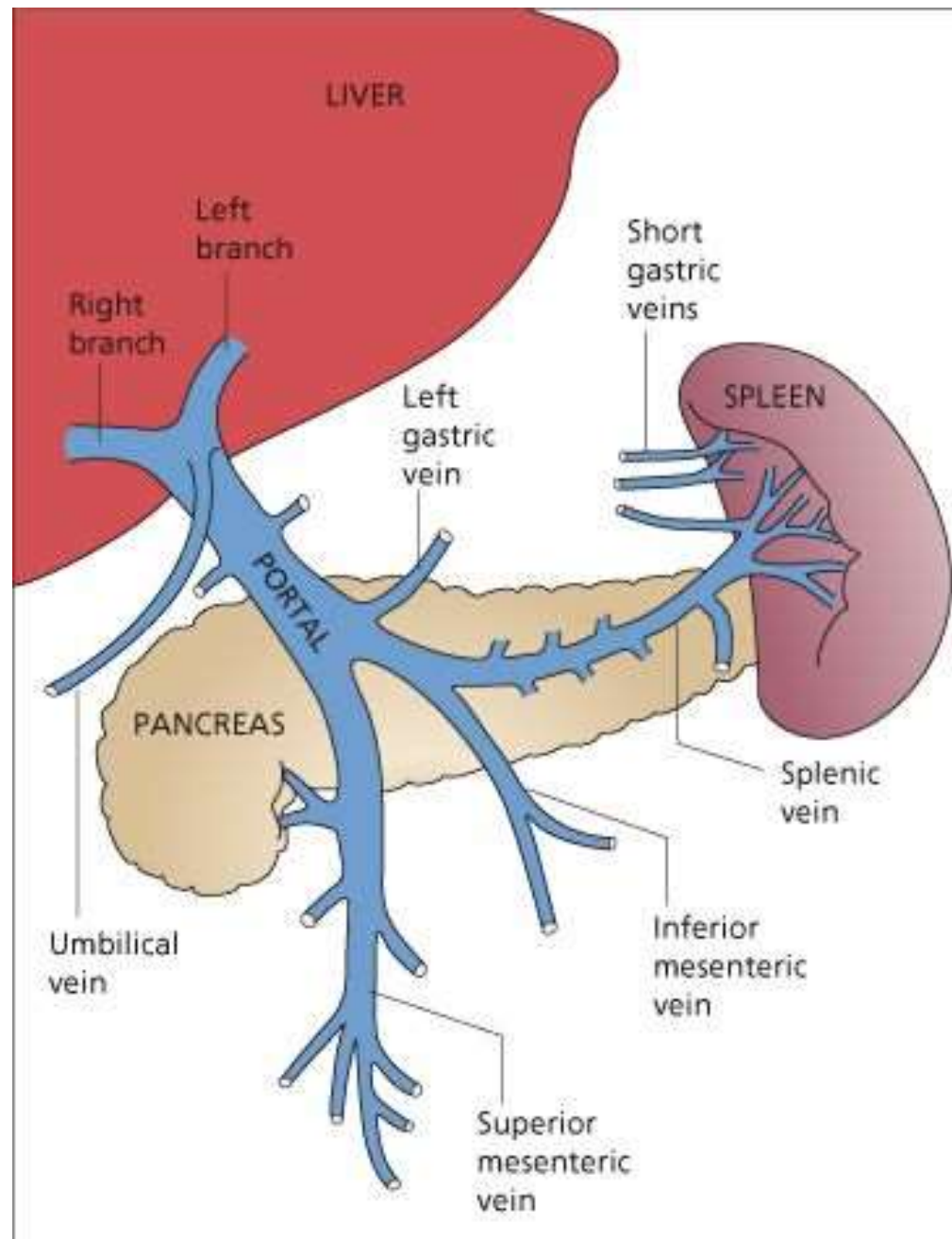
PORTAL VEIN



Presented by-
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Assistant Professor
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PO (Programme outcome)	CO (Course outcome)
PO 1-Demonstrate comprehensive knowledge and application of the Trisutraconcept to explore root causes, identify clinical manifestations of disease to treat ailments and maintain healthy status	CO6- Explain and demonstrate the gross anatomy of the organs of various systems and their applied anatomy in perspective of Ayurveda and Modern science
PO 2-Demonstrate knowledge and skills in Ayurveda, acquired through integration of multi disciplinary perspectives and keen observation of clinical and practical experiences.	

- Teaching Learnings method-Lecture with power point presentation
- Domain-Cognitive –Psychomotor
- Must to know/desirable to know/Nice to know-Must to know
- Millers pyramid-Knows and shows how
- Bloom texonomy-Remember and Understand



- **The portal vein or hepatic portal vein is a blood vessel that carries blood from the gastrointestinal tract, gallbladder, pancreas and spleen to the liver.**
- **This blood contains nutrients and toxins extracted from digested contents.**
- **Approximately 75% of total liver blood flow is through the portal vein, with the remainder coming from the hepatic artery proper.**
- **The blood leaves the liver to the heart in the hepatic veins.**
- **The portal vein is not a true vein, because it conducts blood to capillary beds in the liver and not directly to the heart.**

- It is a major component of the hepatic portal system, one of only two portal venous systems in the body – with the hypophyseal portal system being the other.
- The portal vein is usually formed by the confluence of the superior mesenteric and splenic veins and also receives blood from the inferior mesenteric, left and right gastric veins, and cystic veins.

- **Length- approximately 8 cm**
- **Location- in the right upper quadrant of the abdomen, originating behind the neck of the pancreas.**
- ***Also called splenic-mesenteric confluence.***

- **Immediately before reaching the liver, the portal vein divides into right and left. It ramifies further, forming smaller venous branches and ultimately portal venules. Each portal venule courses alongside a hepatic arteriole. These vessels ultimately empty into the hepatic sinusoids to supply blood to the liver.**

Clinical significance

- **Portal hypertension-**

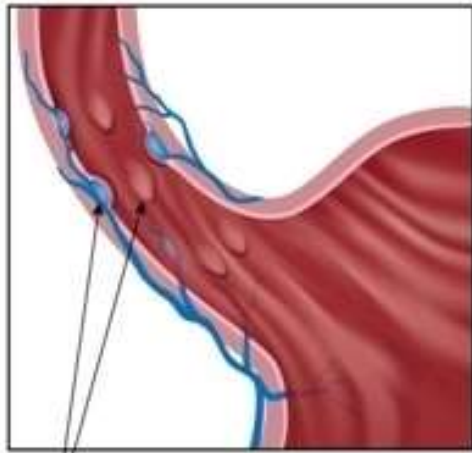
Increased blood pressure in the portal vein, called portal hypertension, is a major complication of liver disease, most commonly cirrhosis.

Clinical signs of portal hypertension include those of chronic liver disease: ascites, esophageal varices, caput medusae and piles.

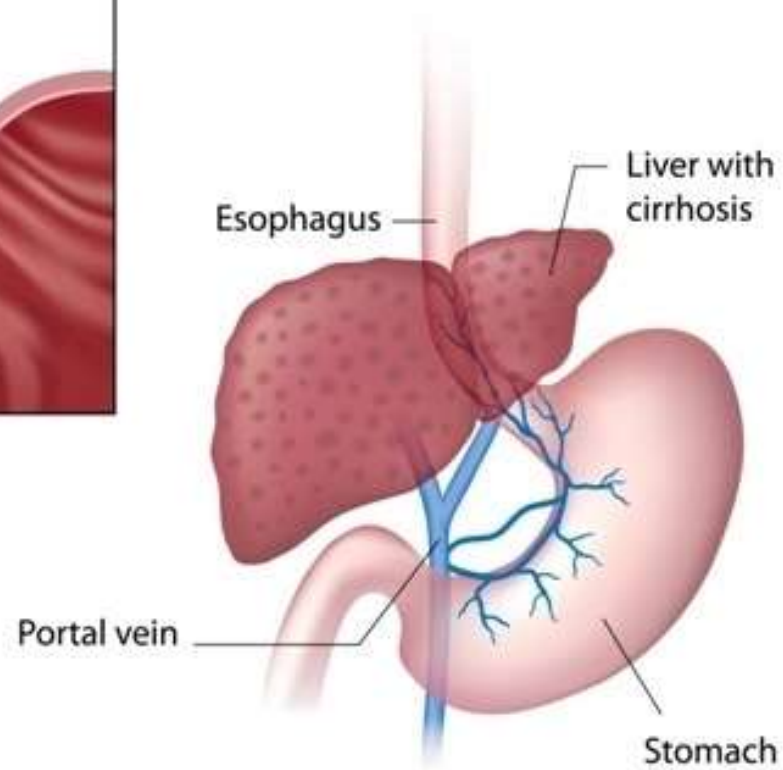
Portal-systemic anastomoses, in which the portal venous system communicates with the systemic venous system, are in the following locations:

- Between the esophageal veins draining into either the azygos vein (systemic system) or the left gastric vein (portal system); when dilated these are *esophageal varices*.**
- Between the rectal veins, the inferior and middle veins draining into the IVC (systemic system) and the superior rectal vein continuing as the inferior mesenteric vein (portal system); when abnormally dilated these are *hemorrhoids*.**

Esophageal Varices



Esophageal varices



Esophagus

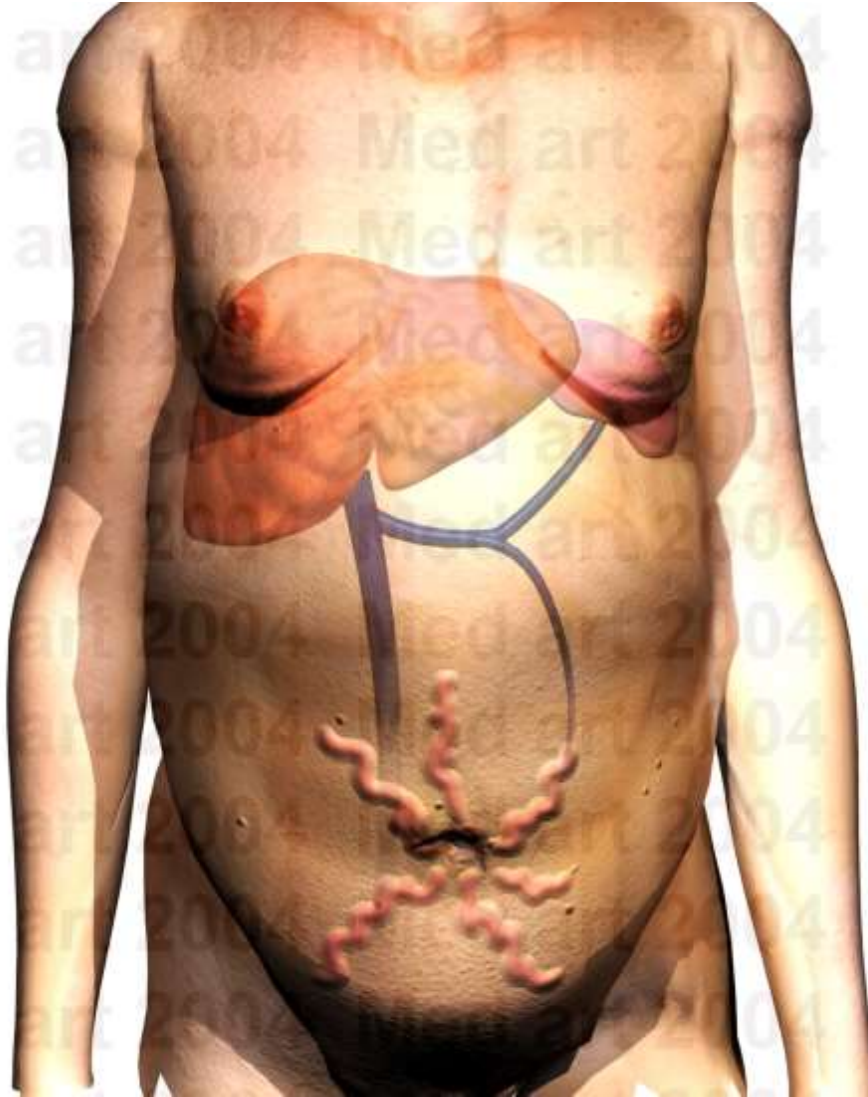
Liver with
cirrhosis

Portal vein

Stomach

- Paraumbilical veins of the anterior abdominal wall (portal system) anastomosing with superficial epigastric veins (systemic system); *when dilated these veins produce caput medusae—varicose veins radiating from the umbilicus. These dilated veins were called caput medusae because of their resemblance to the serpents on the head of Medusa, a character in Greek mythology.*
- Twigs of colic veins (portal system) anastomosing with retroperitoneal veins (systemic system).

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FORMATIVE ASSESSMENT

- MCQ QUESTIONS-

1. The portal vein is formed by the union of:
 - a) Splenic vein and inferior vena cava
 - b) Splenic vein and superior mesenteric vein
 - c) Splenic vein and inferior mesenteric vein
 - d) Superior mesenteric vein and inferior mesenteric vein

Answer: b) Splenic vein and superior mesenteric vein

2. The portal vein is approximately how long?

- a) 4 cm
- b) 6 cm
- c) 8 cm
- d) 10 cm

Answer: b) 6 cm

3. Which of the following does **NOT** directly drain into the portal vein?

- a) Superior mesenteric vein
- b) Splenic vein
- c) Inferior mesenteric vein
- d) Renal vein

Answer: d) Renal vein

4. The portal vein enters the liver at:

- a) Falciform ligament
- b) Porta hepatis
- c) Coronary ligament
- d) Bare area

Answer: b) Porta hepatis

5. The portosystemic anastomosis at the lower end of the oesophagus occurs between:

- a) Left gastric vein and azygos vein
- b) Splenic vein and renal vein
- c) Inferior mesenteric vein and internal iliac vein
- d) Superior mesenteric vein and femoral vein

Answer: a) Left gastric vein and azygos vein

thank
you

