

# Portocaval Anastomosis

## Portocaval Anastomosis

Anastomosis is the connection between two blood vessels. Portocaval anastomosis includes all the connections made between veins of the portal circulation and the systemic circulation. The major areas where the two systems anastomose are the following:

### Esophageal Region

Is the area where veins of the abdomen meet the azygos system. The **esophageal branch** of the portal circulation includes the **left gastric vein** which arises from the the portal vein. And from the systemic circulation we have the **azygos vein** which dumps into the superior vena cava in the thorax.

### Paraumbilical Region

Is the area around the umbilicus where the **paraumbilical veins** of the portal circulation which arise from the **left branch of the portal vein** meet the **superficial epigastric vein** of the systemic circulation which arises from the **great saphenous vein which drains into femoral vein**.

### Rectal Region

Is the area where the **superior rectal vein** which arises from the **inferior mesenteric** from the portal vein circulation meets the systemic circulation and the **middle and inferior rectal veins** which arise from the **internal iliac vein**.

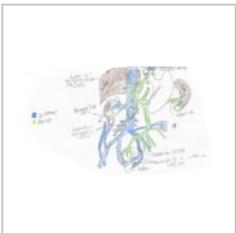
### Retroperitoneal Region

Is the area around the peritoneal where the portal circulation veins: **right and middle colic** which arises from the **superior mesenteric** and **left colic vein** which arises from the **inferior mesenteric** meet with the systemic circulation and the veins: **gonadal vein** ( testicular or ovarian based on gender) which arise from the **inferior vena cava** on the right and from the **renal vein** on the left , lumbar veins which are part of the **azygos vein**.

In the case that the liver is blocked or diseased and the blood finds difficulty passing through the portal system then the blood pressure in the system will increase. This is called portal hypertension. In cases of portal hypertension areas of anastomosing veins can become enlarged from the pressure or even rupture causing bleeding and varices.

## Medical Terminology

- At the esophageal region this condition is called **esophageal varices**.
- In the paraumbilical region it's called **caput Medusae** (head of Medusa since it resembles the snakes on the head of Medusa the Greek mythological creature which turned men to stone if they gazed into her eyes).
- At the rectal region they are called **anorectal varices** (haemorrhoids) and
- there is **no clinical name** for the retroperitoneal swelling vessels.



## Links

### Related Articles

- Portal Vein
- Esophageal Varices

### Bibliography

- NETTER, Frank. *Atlas of human anatomy*. 5th edition. 2010. ISBN 978-1-4160-5951-6.

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