



Portal Hypertension

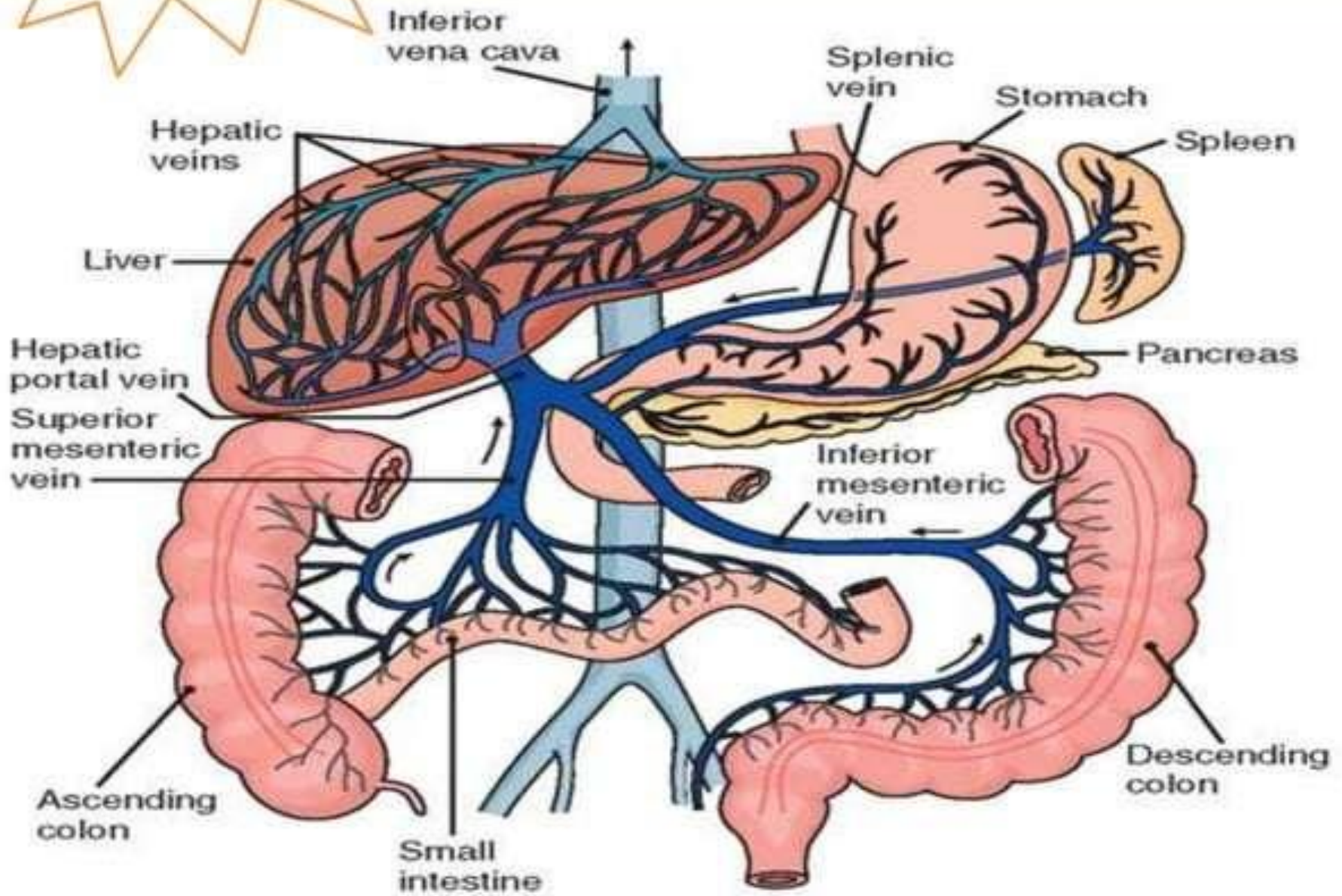


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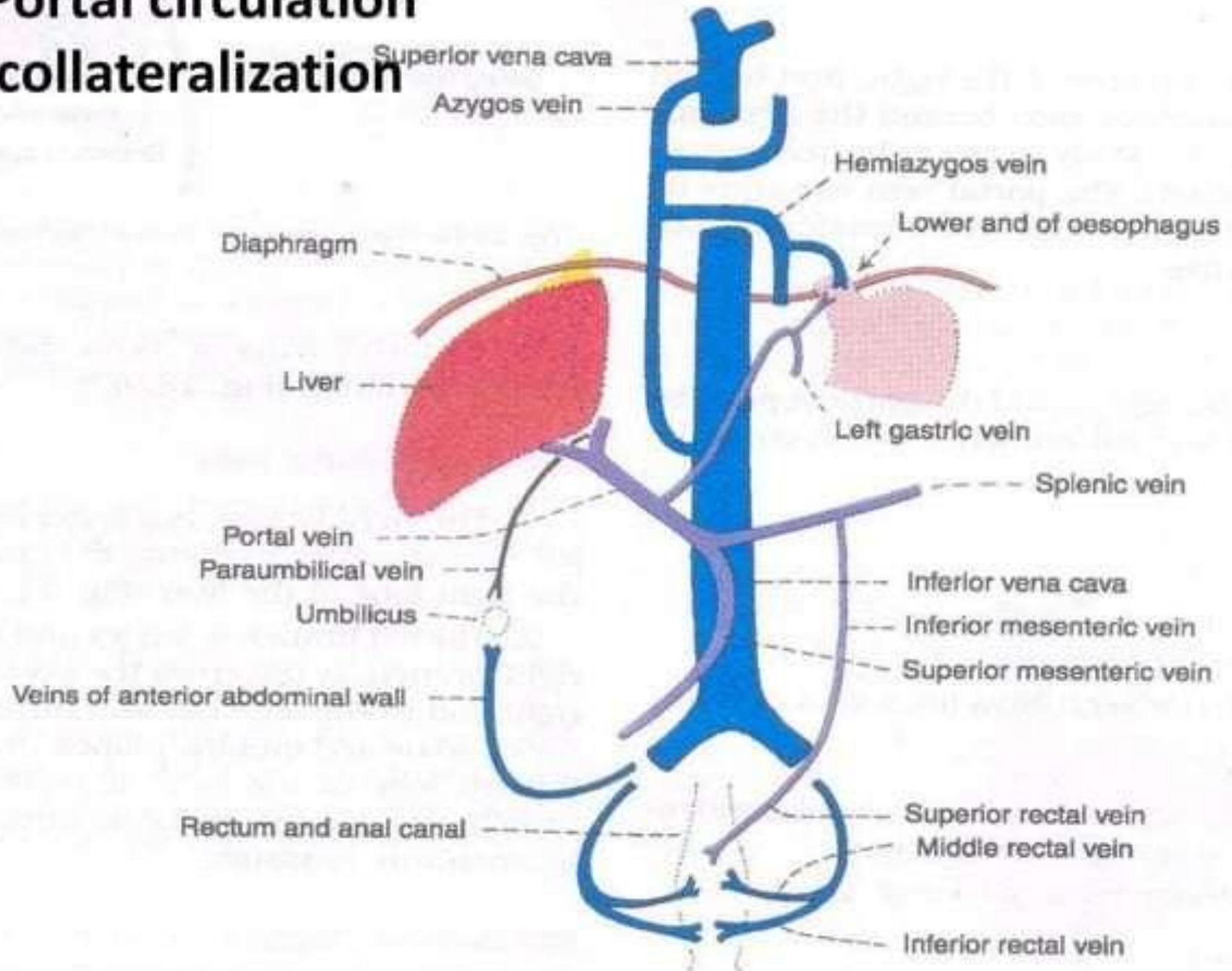
Portal venous pressure is the blood pressure in the hepatic portal vein, and is normally between 5-10 **mmHg**.



Portal circulation



Portal circulation collateralization



Meaning

- ÷ Portal hypertension is an increase in the blood pressure within a system of veins called the portal venous system.

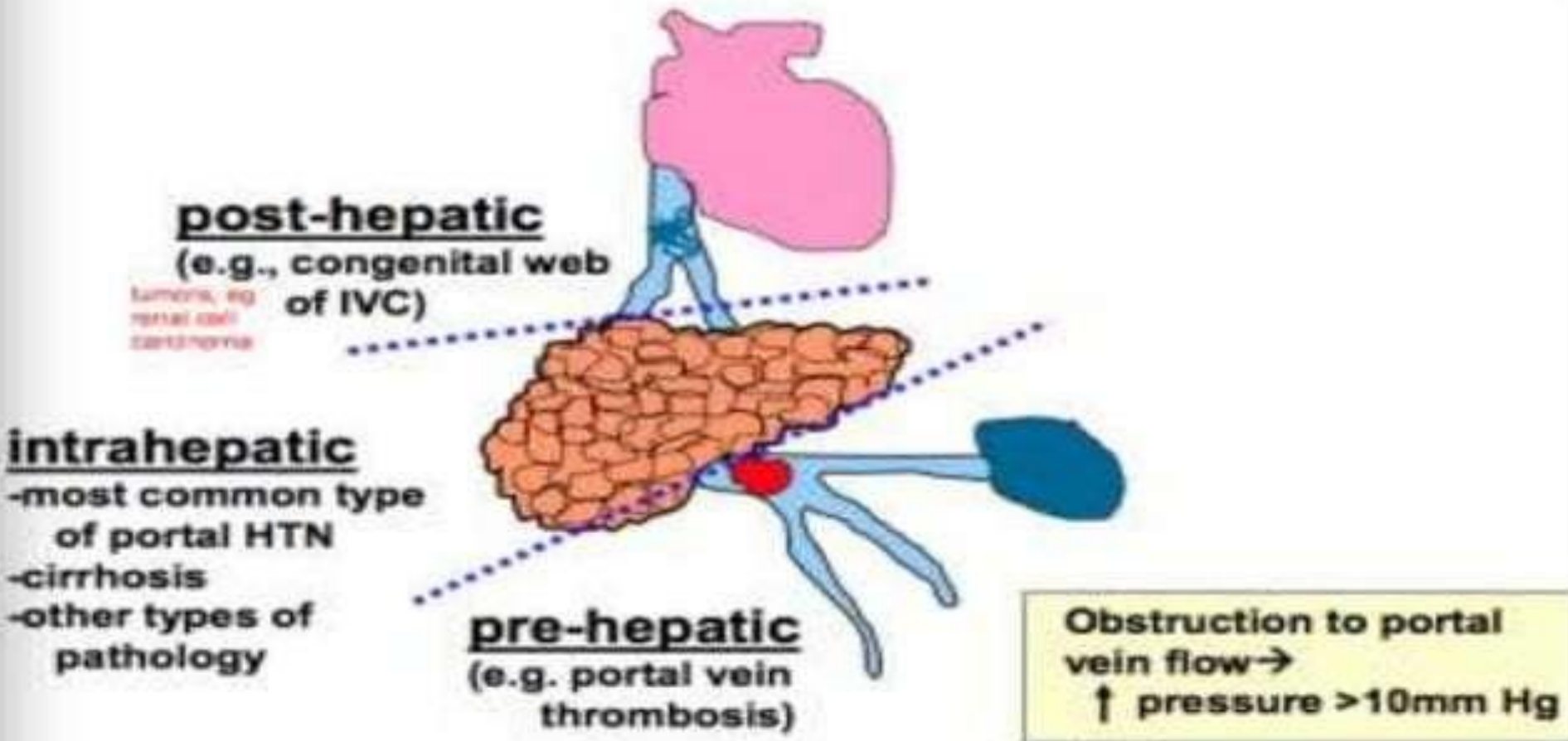


Definition

- + It is defined as the elevation of the hepatic venous pressure gradient to $> 10\text{mm Hg}$



Types:

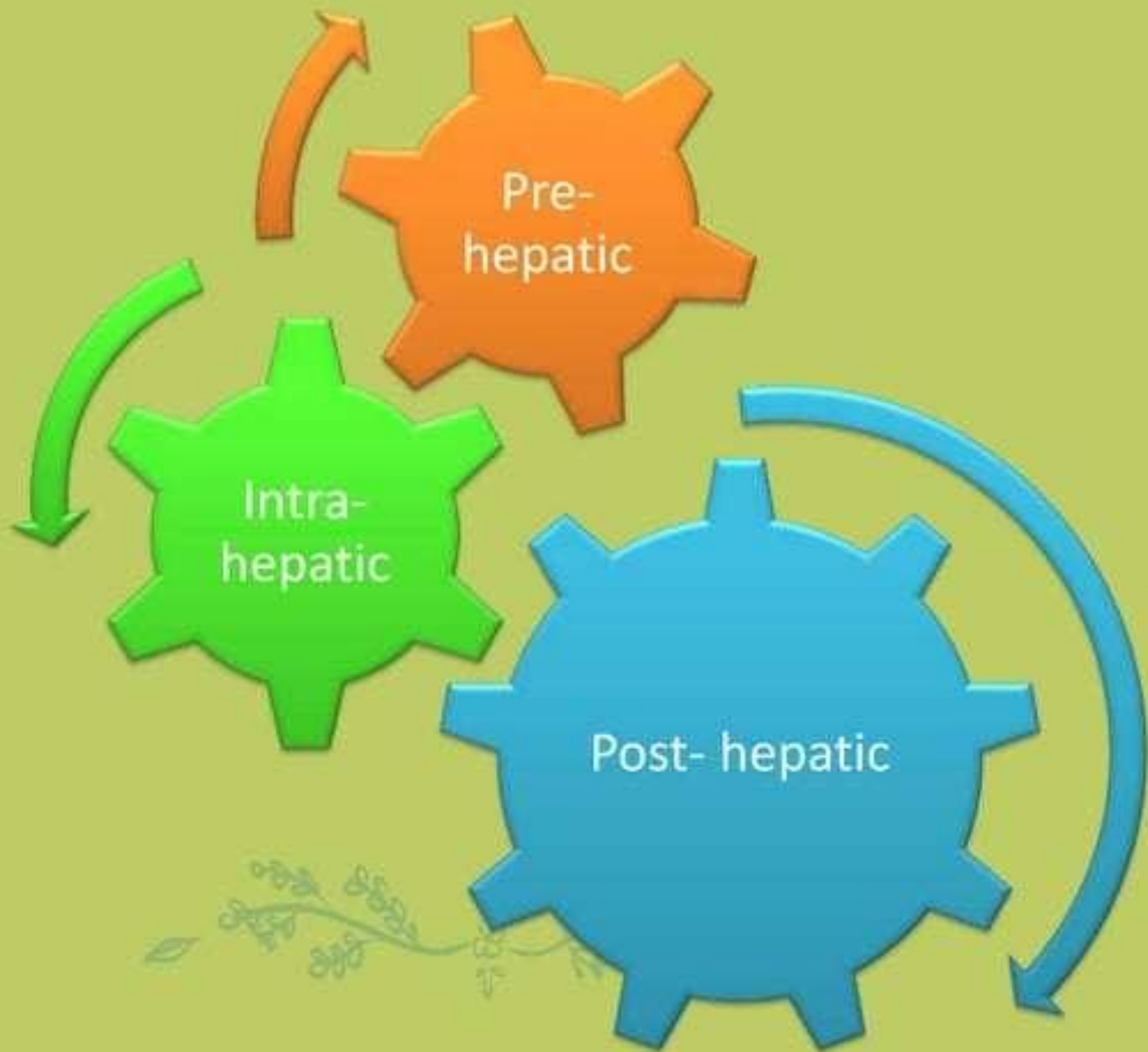


Classification of Portal Hypertension

Causes:

- + Depending on the site of vascular obstruction;





Pre- hepatic

- + Portal vein Thrombosis
- + Pancreatitis
- + Trauma
- + Hypercoaguable states



Intra-hepatic

- + Schistosomiasis
- + Congenital hepatic fibrosis
- + Sarcoidosis
- + Myeloproliferative diseases
- + Drugs
- + Toxins
- ❖ Cirrhosis
- ❖ Fatty liver
- ❖ Metastatic malignant disease



Postheaptic:

- Hepatic vein thrombosis (budd -chiari syndrome)
- Constrictive pericarditis
- Rt sided heart failure



Clinical manifestation:

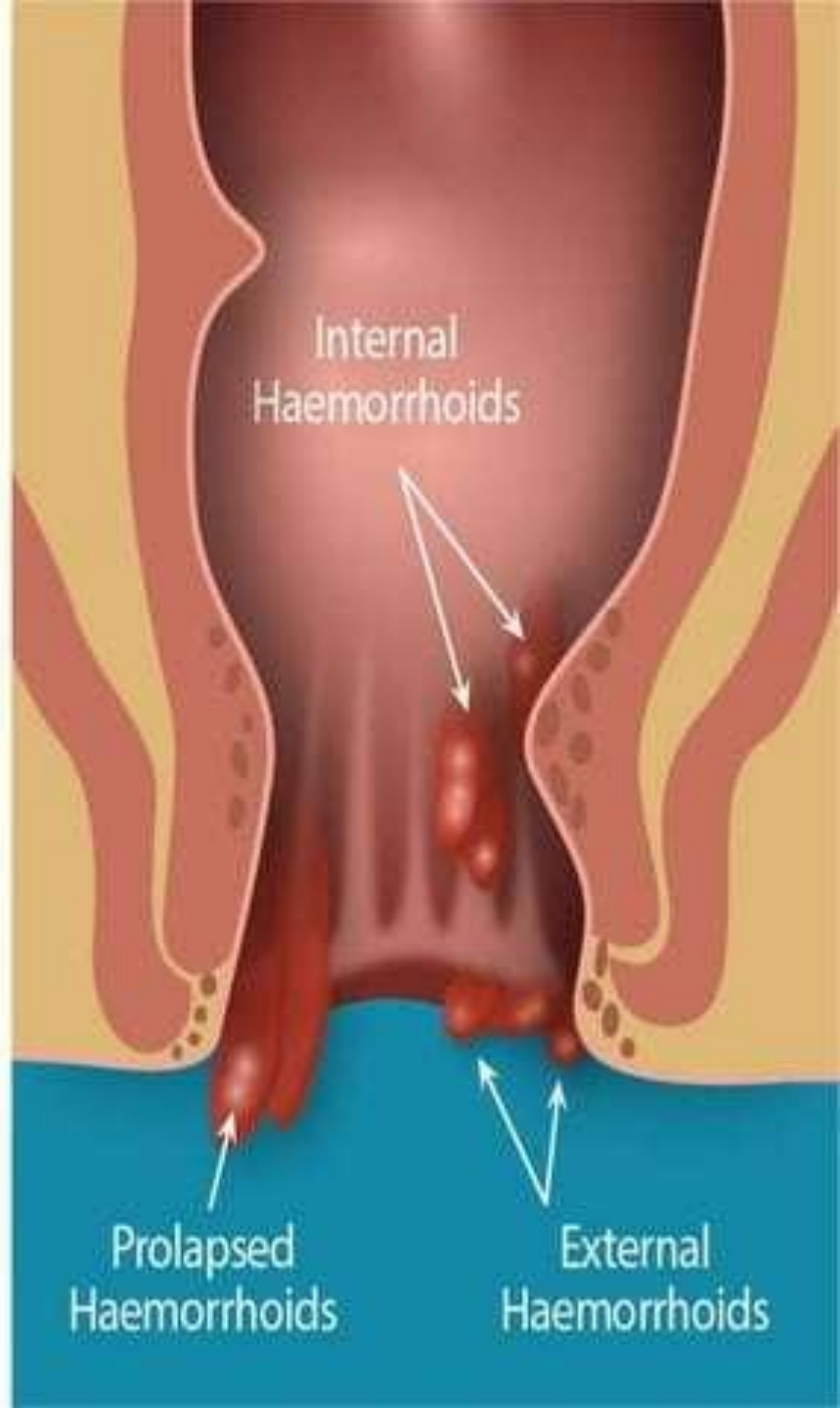
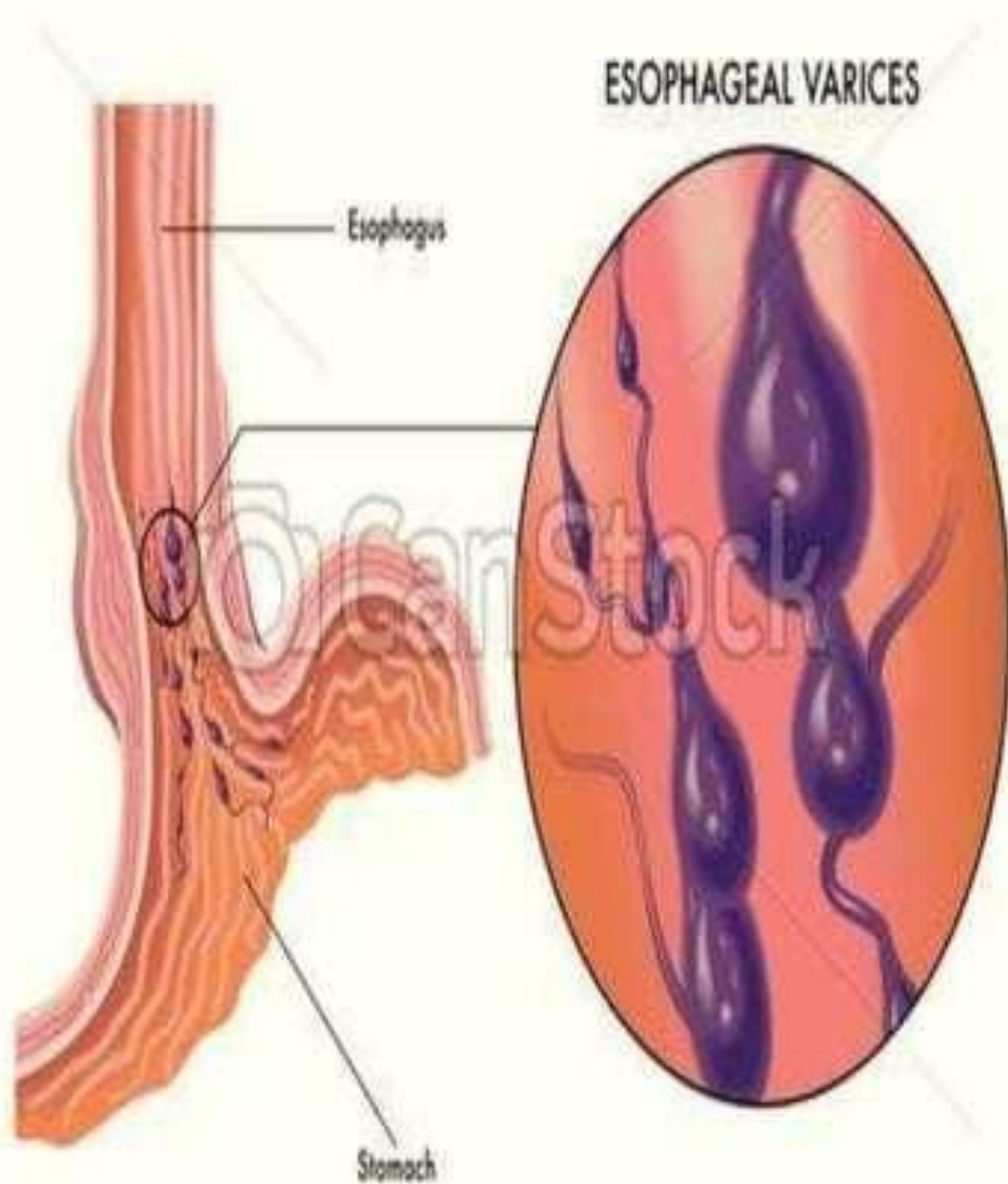
- + Ascites
- + Hypersplenism





- + Increased portosystemic shunting :
 - Oesophageal varices
 - Haemorrhoids
 - Caput medusae





Caput medusae: is the appearance of distended and engorged superficial epigastric veins, which are seen radiating from the umbilicus across the abdomen.





- + Hepatic encephalopathy
- + hepatorenal failure
- + Gastrointestinal bleeding
- + Reduced levels of platelets, blood cells that help form blood clots, or white blood cells

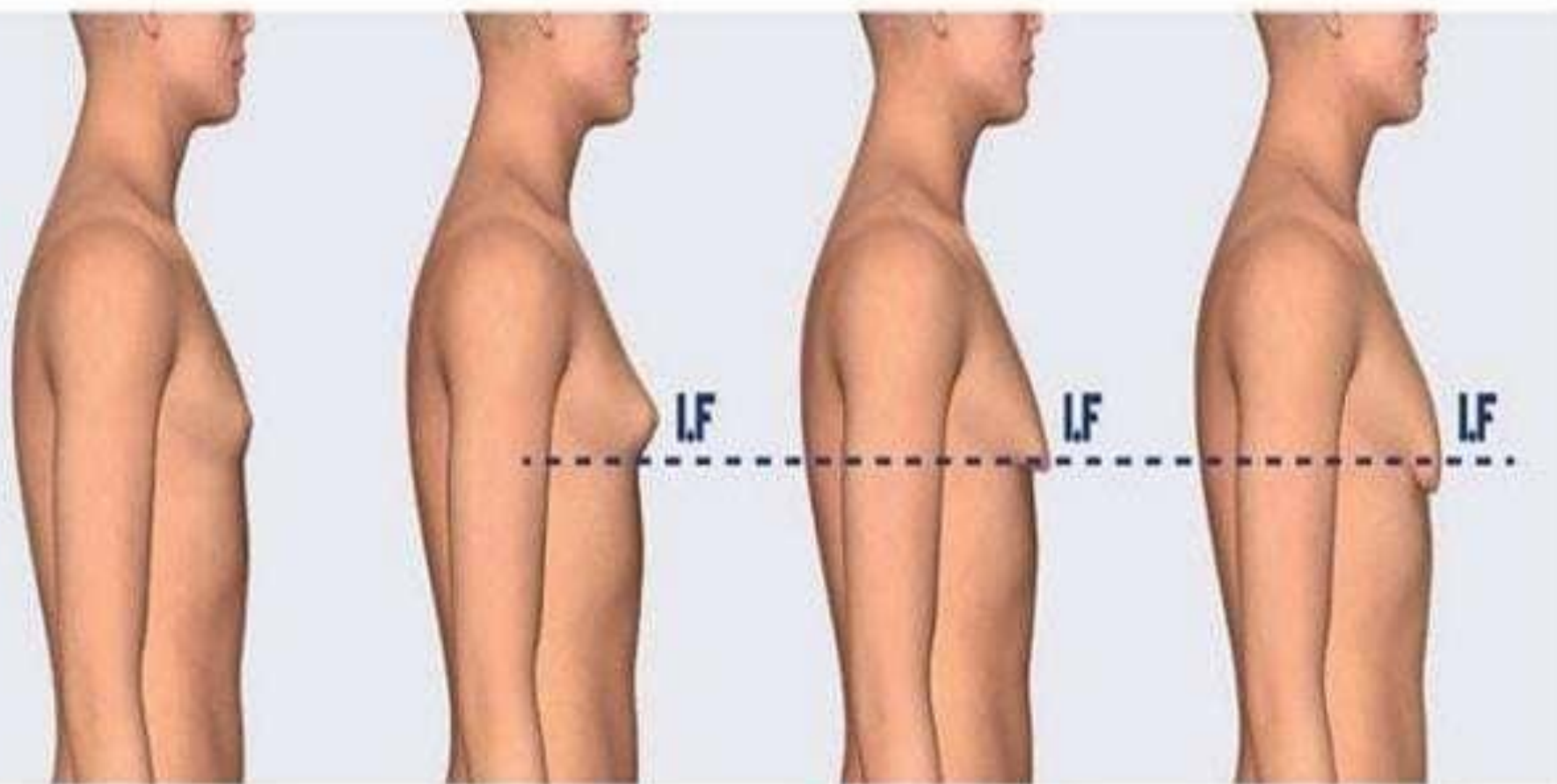




- + Abdominal pain
- + Black, tarry color stool
- + Melena
- + Hematemesis
- + Jaundice
- + Pruritus
- + Gynecomastia



Grades of Gynecomastia



Grade 1

Grade 2

Grade 3

Grade 4





- + Fatigue
- + Increased irritability
- + Altered sleep pattern
- + Weight loss
- + Spider angiomas



Effects of portal hypertension

- Esophageal varices

Hematemesis

Peptic ulcer

- Melena
- Splenomegaly
- Caput medusae
- Ascites

- Hemorrhoids

Effects of liver cell failure

- Coma
- Scleral icterus
- Fetor hepaticus (breath smells like a freshly opened corpse)
- Spider nevi
- Gynecomastia
- Jaundice
- Loss of sexual hair
- Liver "flap" = asterixis (coarse hand tremor)
- Bleeding tendency (decreased prothrombin)
- Anemia
- Testicular atrophy
- Ankle edema



Presentation of cirrhosis/portal hypertension.

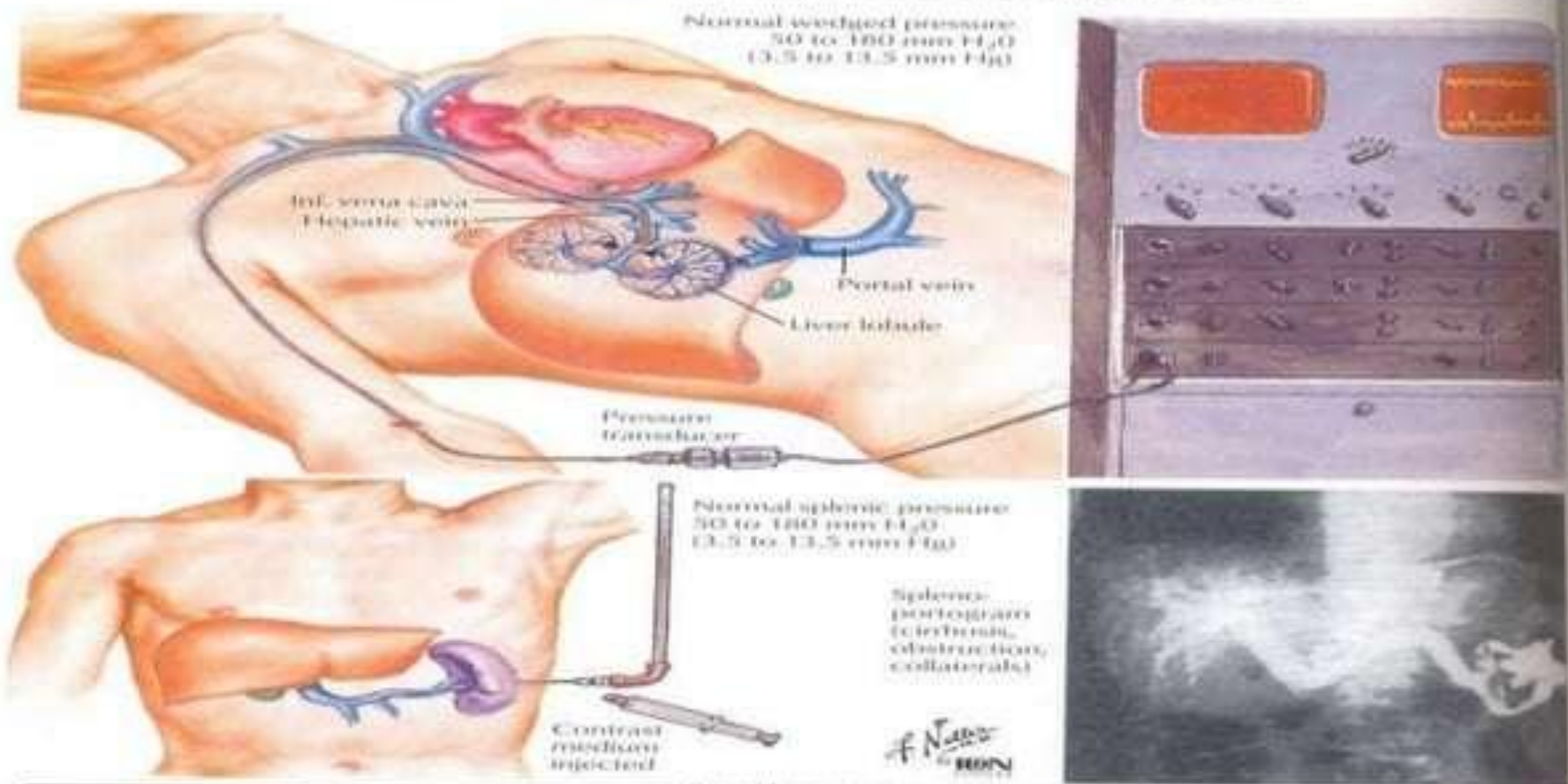
Diagnostic evaluation:

1. Blood Count
2. Liver Function Tests
3. Oesophagogastroduodenoscopy
4. Usg
5. Mri
6. Liver Angiography
7. Coeliac-mesenteric Arteriography
8. Splenic Portogram



Figure 224-1

Clinical Measurement of Portal Hypertension

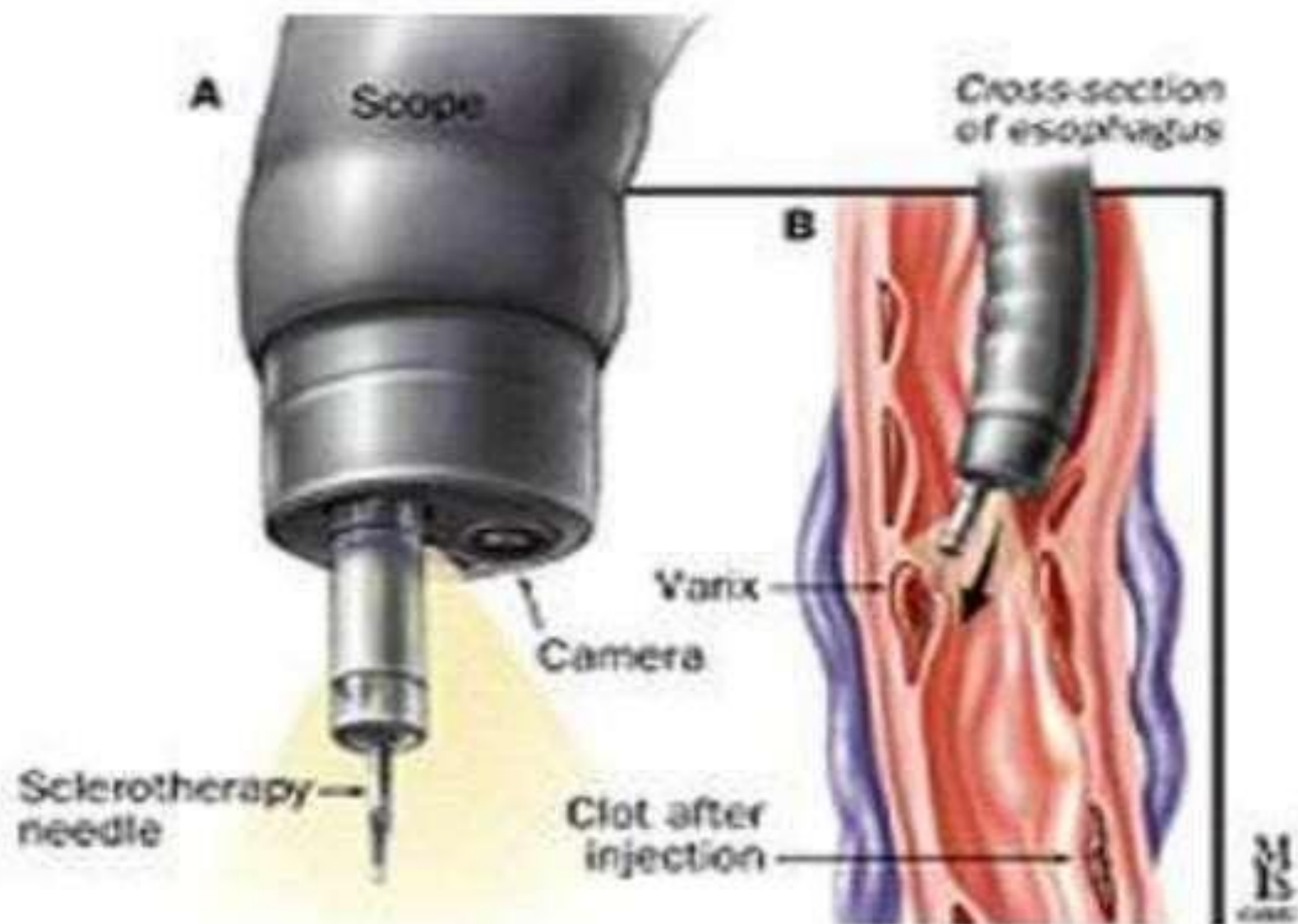


Treatment :

- + Endoscopic therapy :
 - .Banding
 - .Sclerotherapy







Rubber Band Ligation System[®]



Figure 14. Banding for esophageal varices.

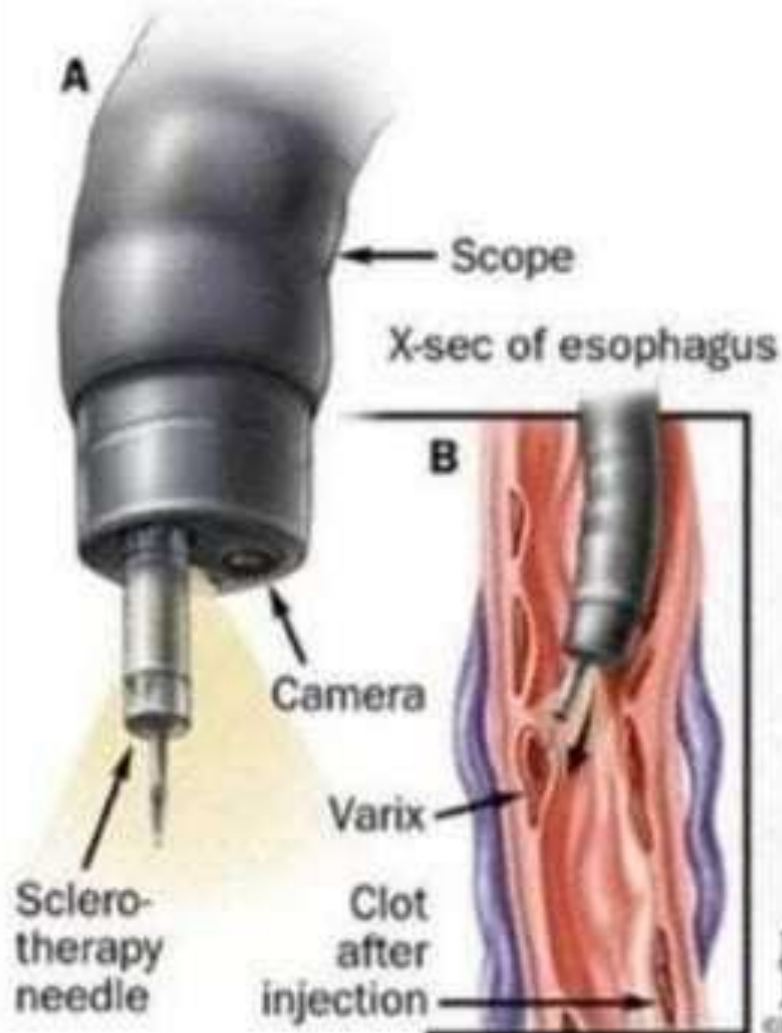


Figure 13. Sclerotherapy for esophageal varices.



- + Medications:
- + Beta blockers
- + Lactulose: to treat mental confusion.



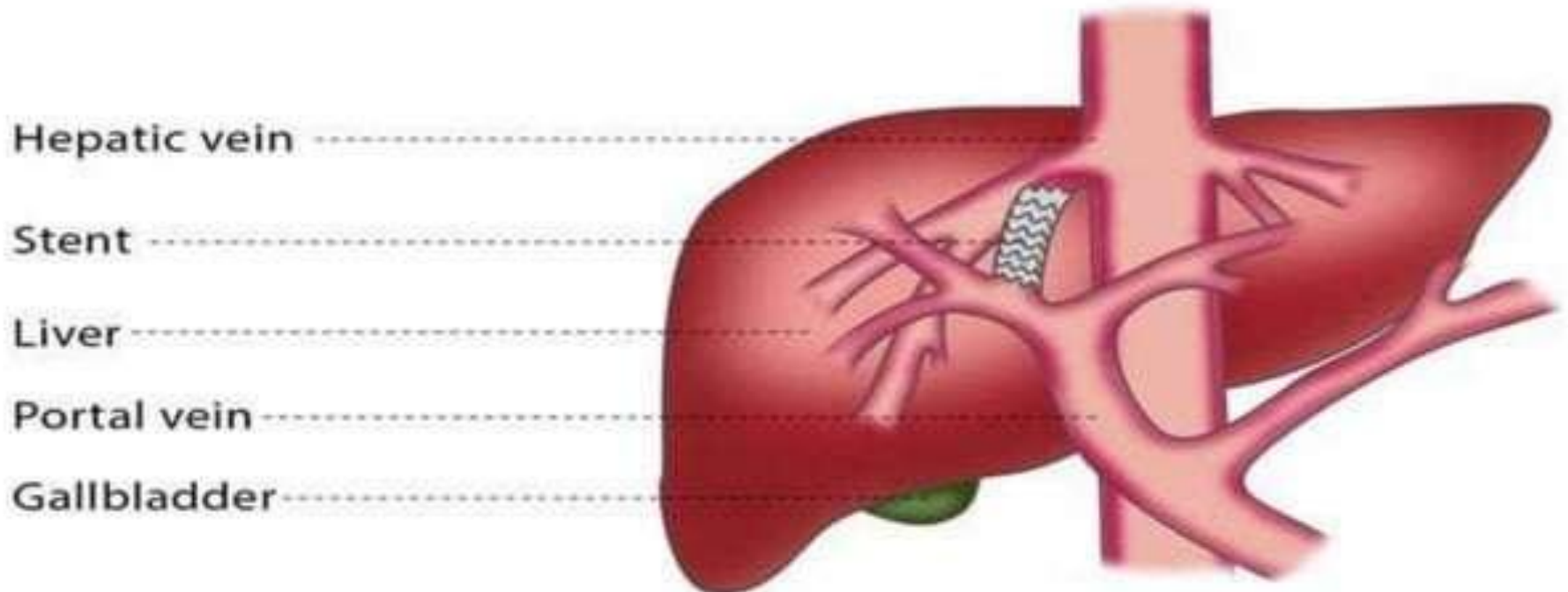


+ Life style changes:



Transjugular Intrahepatic Portosystemic Shunt (TIPS)

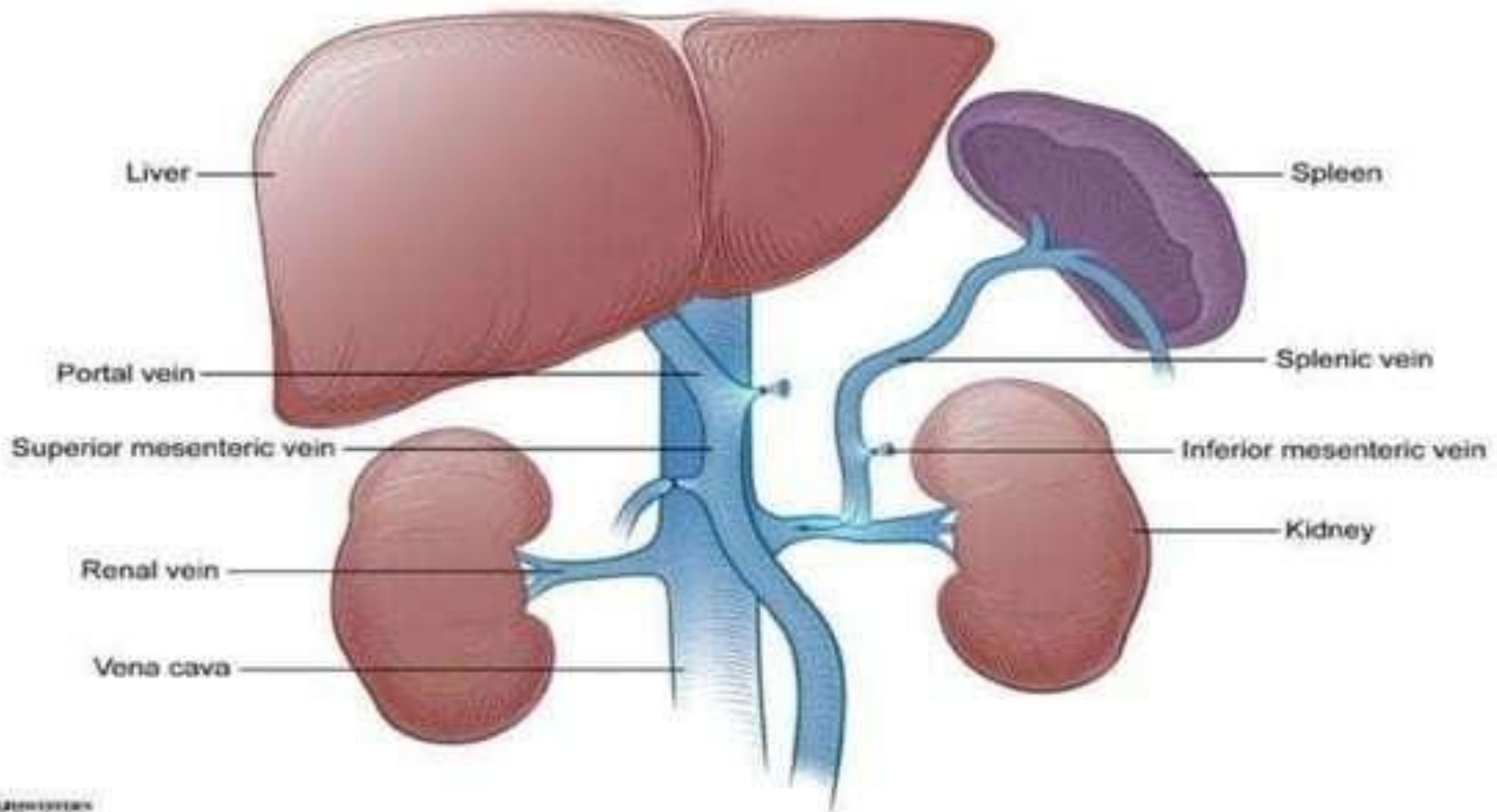
Transjugular intrahepatic portosystemic shunt (TIPS)



Distal Splenorenal Shunt



Distal Splenorenal Shunt



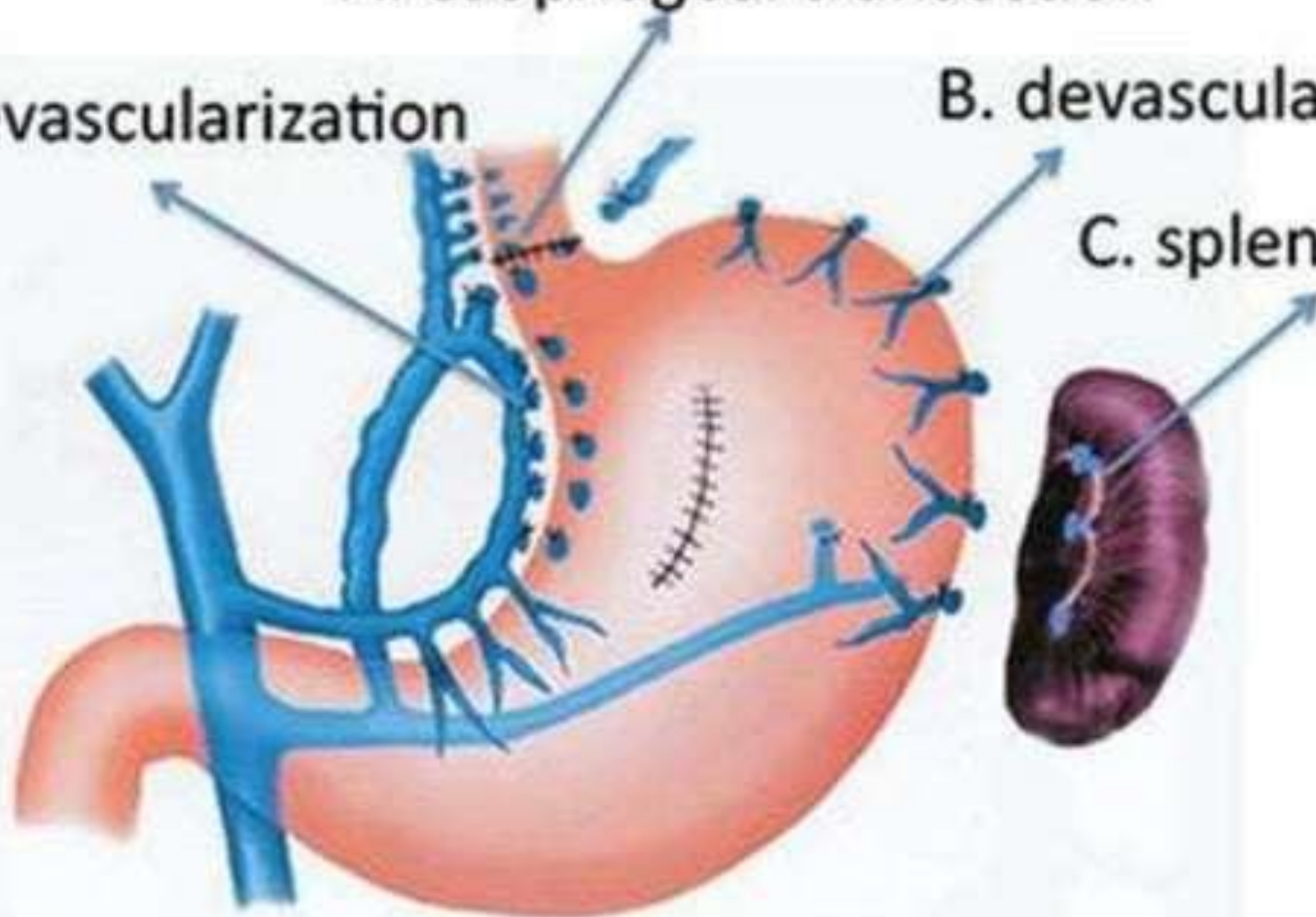
Devascularization

A. esophageal transection

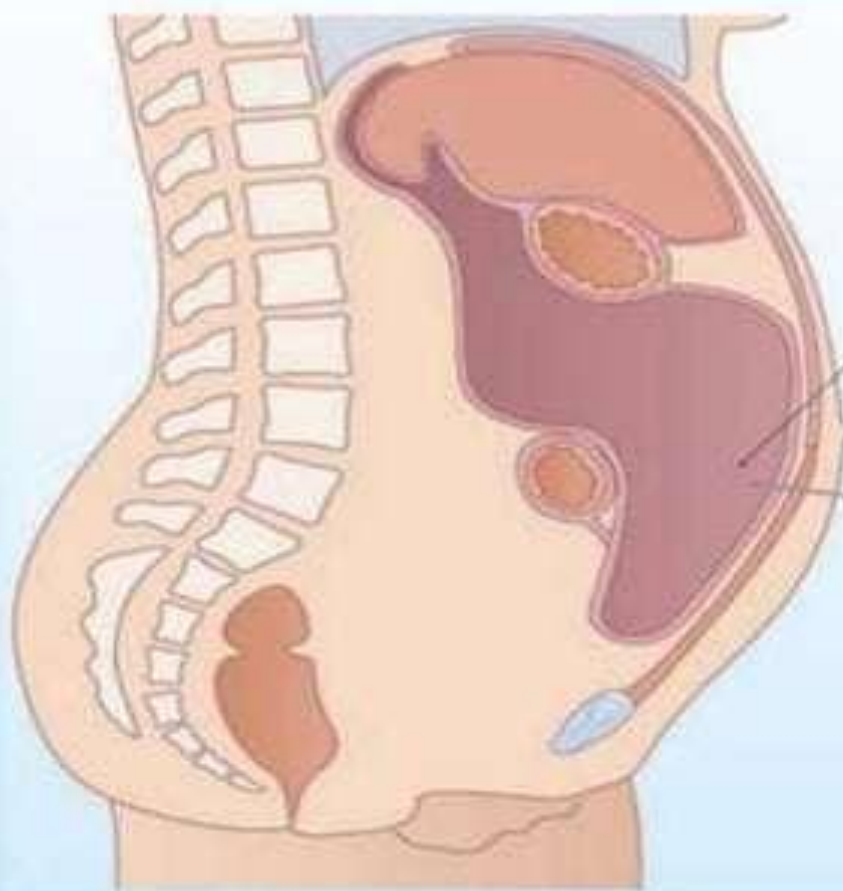
B. devascularization

B. devascularization

C. splenectomy



Paracentesis



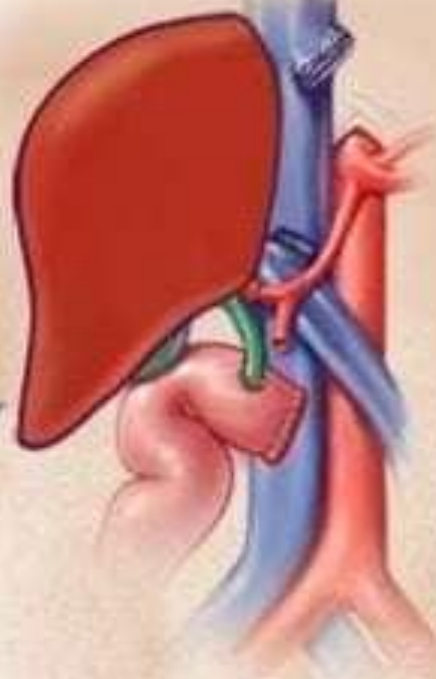
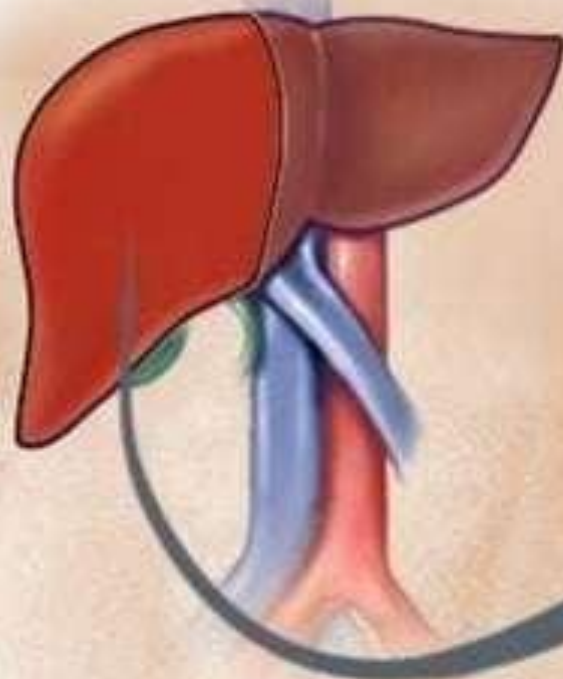
A drain is attached to remove the increased amount of fluid between abdominal organs



Liver transplant

Donor

Recipient



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