

* Liver *

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- **Features** :- Liver is large and solid gland.
:- Secretes bile and performs various metabolic function.
- **Location** :- Right Hypochondrium
:- Greater part in epigastrium
:- extend into left Hypochondrium.
- **External Feature** :- wedge-shaped.
→ 5 surface :- i) Anterior ii) Posterior
iii) Superior iv) Inferior v) Right
- **one prominent border** :- Inferior border
- separates anterior surface from → inferior surface.
- **2 lobes** :- Divide into Right & Left lobe by.
→ falciform ligament
- anteriorly & superiorly.
→ fissure for ligamentum teres
- Inferiorly.
→ fissure for ligamentum venosum - posteriorly
- **Right lobe** :- Larger than left lobe.
:- present caudate & quadrate lobes

i) Caudate lobe :- Situated on Posterior surface.
 :- Bounded \rightarrow Right By \rightarrow groove for the Inferior Vena cava.
 \rightarrow Left By \rightarrow fissure for Ligamentum Venosum.
 \rightarrow Inferior \rightarrow Porta Hepatis.

ii) Quadrate lobe :- Situated on Inferior surface
 :- Bounded \rightarrow Anterior By \rightarrow Inferior bord.
 \rightarrow Posteriorly \rightarrow Porta Hepatis
 \rightarrow Right \rightarrow Gall bladder
 \rightarrow Left \rightarrow fissure for ligamentum teres

• Porta Hepatis :- Deep transverse fissure about 5 cm long.

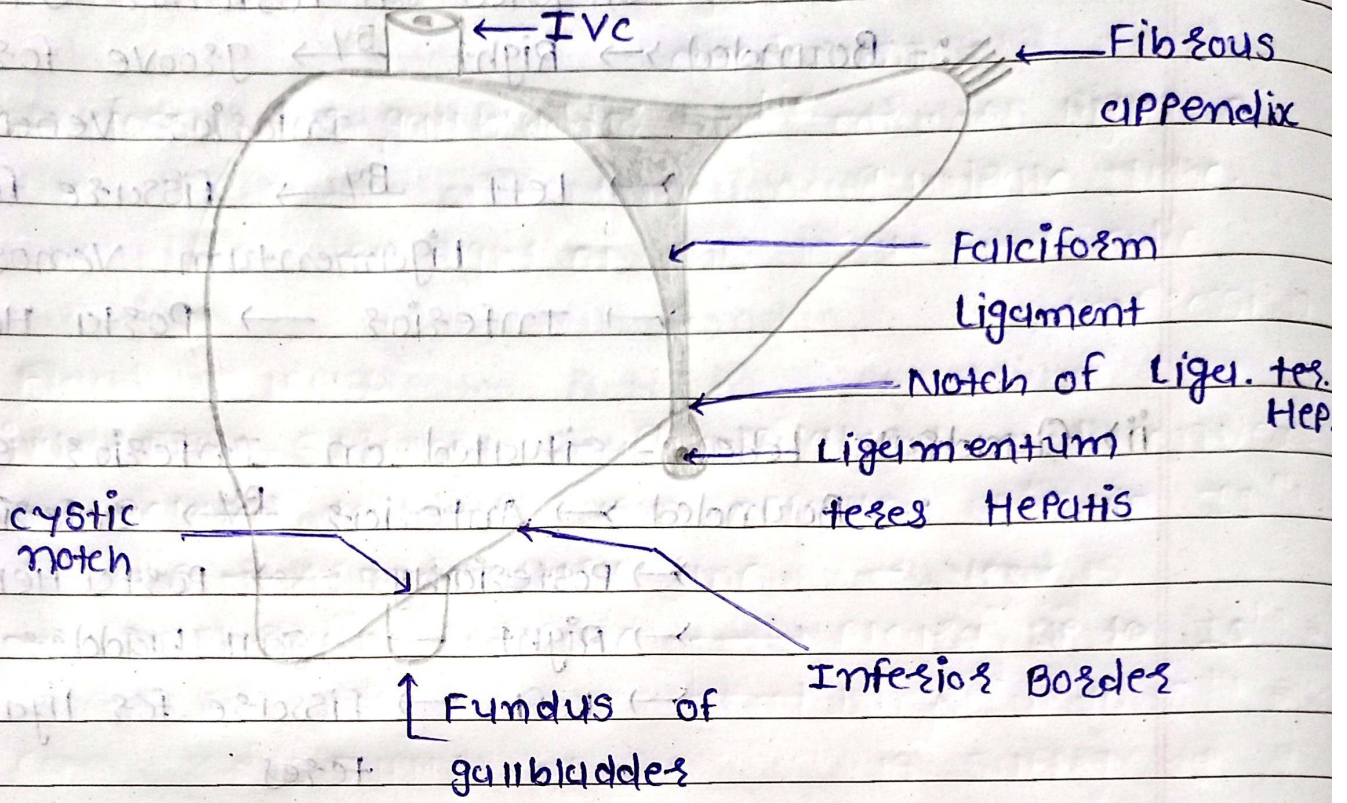
:- Situated on \rightarrow inferior surface of Right lobe of liver

:- Lie b/w caudate lobe above and Quadrate lobe below.

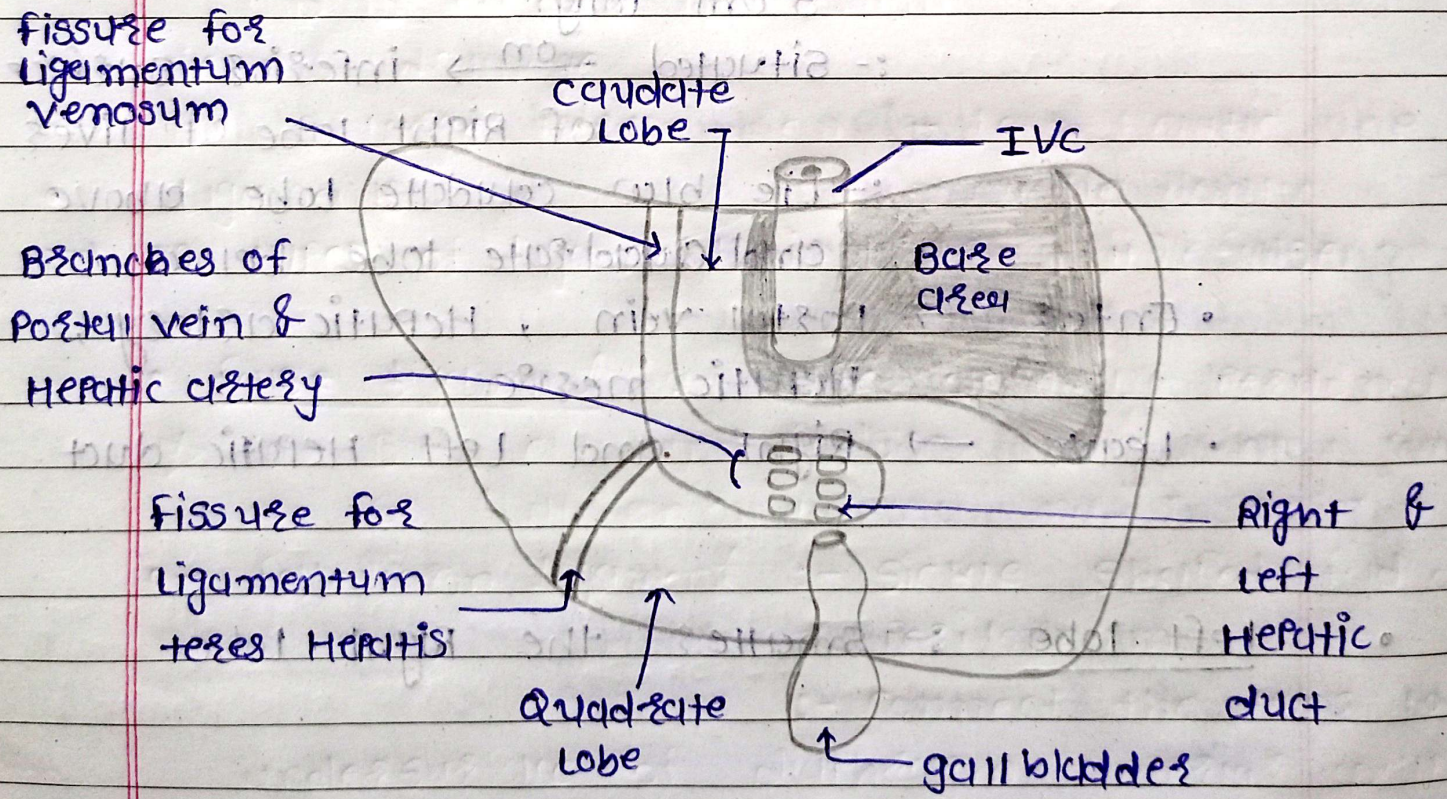
• Enters \rightarrow Portal vein, Hepatic artery, Hepatic nerve.

• Leave \rightarrow Right and Left Hepatic duct.

• Left lobe :- Smaller than Right lobe.



[Front view of liver]



[Back view of liver]

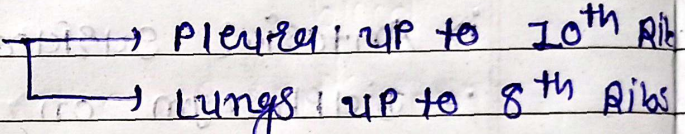
o → Quadrate lobe ^{Related} → Pylo^{us}, 1st part of duodenum.

o → fossa for gall bladder ^{lie} → to right of quadrate lobe.

→ Right of this fossa → colic impression.

iv) Right surface :- Quadrilateral and convex.

o → Related to diaphragm opposite 7th to 11th ribs in midaxillary line.

o → Diaphragm separate  Pleura: up to 10th Rib
Lungs: up to 8th Ribs

v) Superior surface

o → ~~at~~ shows concavity in the middle part.

This is cardiac impression.

• Ligaments

→ 2 types of ligaments (i) true (ii) false.

• false ligament :- are actually peritoneal folds.

o → falciform ligament :- sickle shaped fold of peritoneum.

:- connect the liver to under surface of diaphragm anterior wall of (abdomen).

o- coronary ligament :- Δ fold of peritoneum connecting - base \rightarrow to diaphragm.

:- consist of two layers upper & lower.

o- Right triangular Ligament :- Small triangular fold of peritoneum

:- which connecting Right lateral surface of liver - to diaphragm.

o- Left triangular Ligament :- Small Δ fold of peritoneum.

:- which connect upper surface of left lobe to diaphragm.

o- Lesser omentum :- fold of peritoneum connect lesser curvature of stomach \rightarrow to

visceral surface of liver

:- Hepatic attachment - J shape.

:- Vertical limb attach, Margin of fissure for ligamentum venosum.

:- Horizontal limb attach \rightarrow Margin of porta Hepatis.

• True ligament :- They are actually Remnants of fetal structure

o- Ligamentum teres Hepatis :- Remnants of left umbilical vein.

o- Ligamentum Venosum :- Remnant of ductus Venosus.

:- which in fetal life connect left branch of portal vein with IVC.

• Blood Supply

→ Liver is highly vascular organ.

→ Receive blood from 2 source.

— Arterial blood



is supply by
Hepatic artery.
(20%)

— Venous blood



is supply by
portal vein
(80%)

• Venous drainage

→ By 3 large Hepatic vein — Left Hepatic vein

— Middle Hepatic vein

— Right Hepatic vein.

o- 3 vein may enter IVC Independently.

★ o- But left and middle vein usually join.
So that only two major vein join the IVC.

• Nerve supply :-

i) Sympathetic fibres derived from → coeliac plexus.

→ Run along lesser omentum and enter Post. Hepatis.

ii) Parasympathetic fibres derived from Hepatic branch of

Anterior Vagus trunk.

→ Reach Post. Hepatis through lesser omentum

• Hepatic segments

→ ~~are~~ structural units of liver

→ Right lobe :- divided into ┌→ Anterior part
└→ Posterior part

→ Left lobe :- divided into ┌→ Medial part
└→ Lateral part

→ Each of these part further divided into upper and lower part.

→ Vein draining the hepatic segments are intersegmental → they drain more than one segment.

→ Fissure for ligamentum teres

★

and ligamentum venosum

→ Make junction
→ b/w Medial
and Lateral
segment of
left lobe.

• Clinical Anatomy of Liver

i) Liver Disease

- The liver is susceptible to various diseases, including Hepatitis, cirrhosis, Liver cancer

ii) Jaundice

- Yellowing of the skin and eyes can be a sign of liver disease or impaired bile flow

iii) Portal Hypertension

- Increased pressure in the portal vein system can lead to various complications, including esophageal varices.