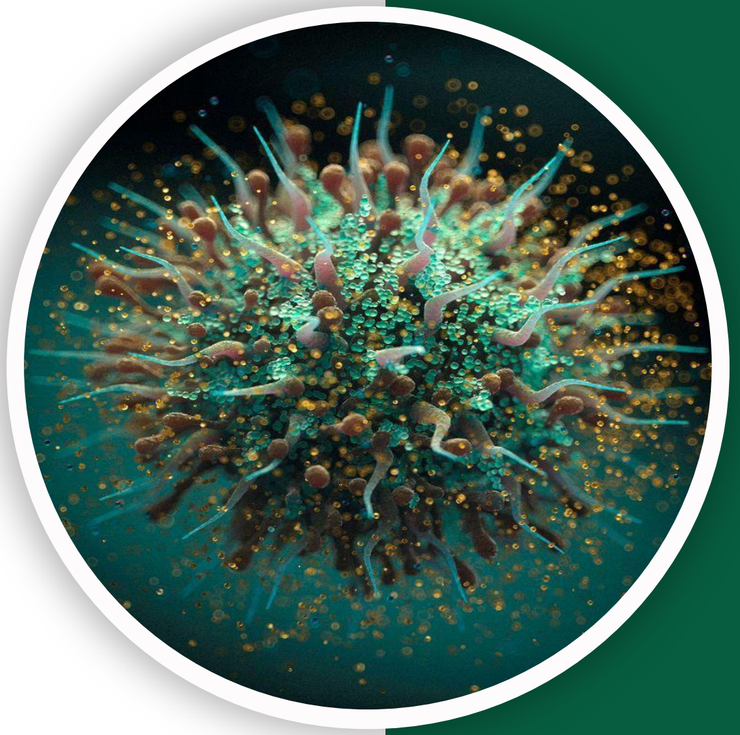
بسم الله الرحمـٰن الرحيم

(وَفَوْقَ كُلِّ ذِي عِلْمٍ عَلِيمٌ)

GIS Pathology | FINAL 2

Alcoholic liver disease



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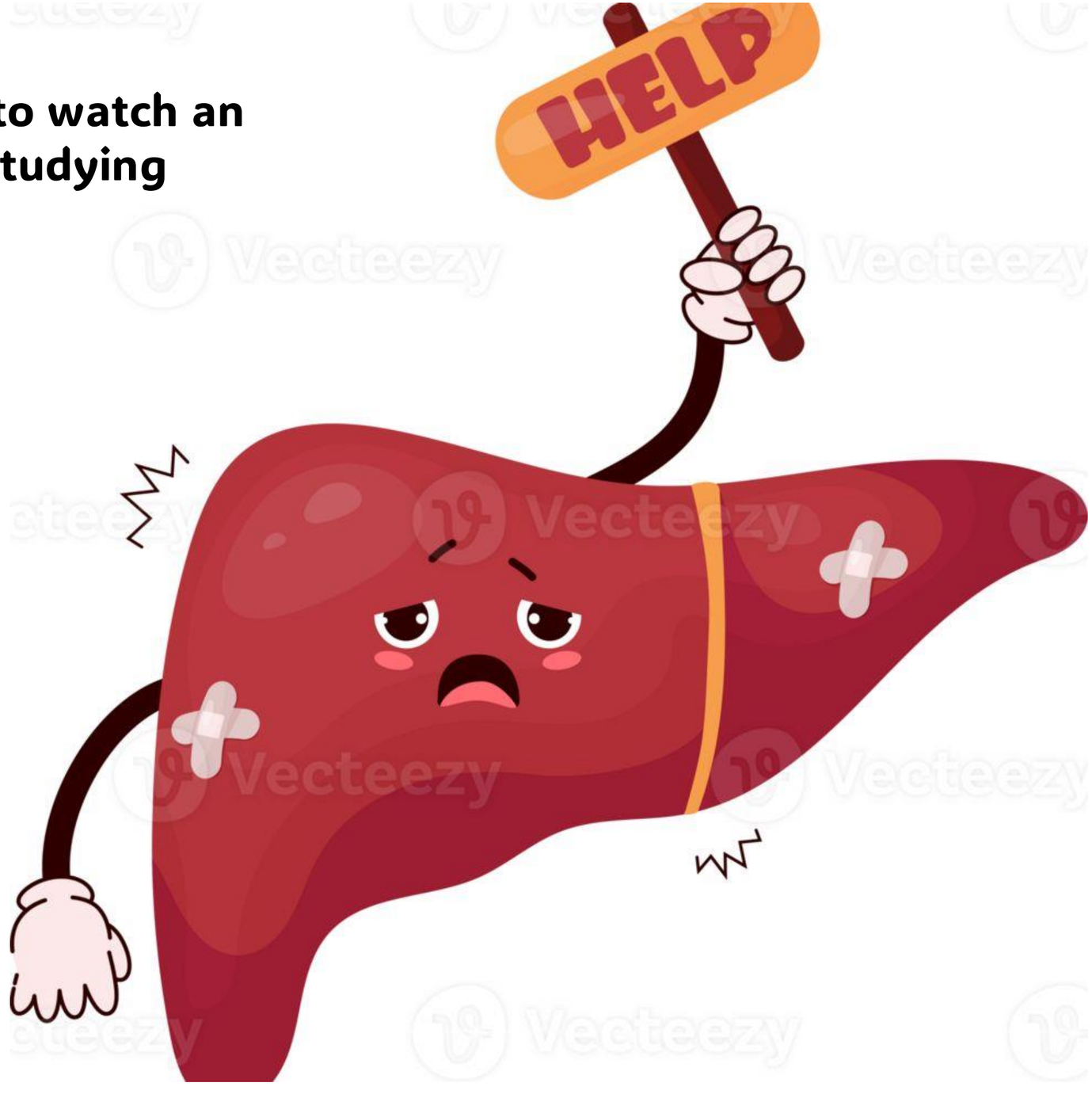
Click on the liver to watch an overview before studying



رَبِّ اشْرَحْ لِي صَدْرِي، وَيَسِّرْ لِي أَمْرِي، وَاحْلُلْ عُقْدَةً مِّن لِّسَانِي، يَفْقَهُوا قَوْلِي

Alcoholic liver disease

an important liver disease because it develops as a result of exposure to toxic substances in alcohol, such as ethanol.

-Alcohol is most widely abused agent

-It is the 5th leading cause of death in USA due to:

1. accidents
2. Cirrhosis

-80 – 100 mg/dl is the legal definition for driving under the influence of alcohol

-44 ml of ethanol is required to produce this level in 70kg person

-Short term ingestion of 80 gms/d of ethanol is associated with fatty change in liver

It's believed that injury of hepatocytes that lead to alcoholic liver disease starts with levels of 80-100 mg/dl and this minimal level of injury is achieved by consuming about 44 ml of ethanol.

The risk increases when increasing the amount of consumed alcohol.

-27In occasional drinkers, bl. Level of 200 mg/dl produces coma & death & resp. failure at 300-400 mg/dl

-Habitual drinkers can tolerate levels up to 700 mg/dl without clinical effect due to metabolic tolerance explained by 5-10X induction of cytochrome P-450 system that includes enzyme CYP2E1 which increases the metabolism of ethanol as well as other drugs as cocaine & acetominophen

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There is a difference between occasional and habitual drinkers. In occasional drinkers, the absence of tolerance increases susceptibility to the complications and harmful effects of alcohol intake, such as respiratory failure at a blood alcohol level of 200 mg/dL, and coma or death at levels of 300–400 mg/dL.

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Another factor, besides whether a person is an occasional or habitual drinker, that influences alcohol uptake is the enzyme system responsible for ethanol metabolism. For example, the cytochrome P450 system determines the duration of exposure to ethanol and its metabolic products in the body. The more active this system is, the shorter the exposure time, which explains the variation in responses among individuals.
This enzyme system becomes activated in the presence of substances such as ethanol or its metabolic product, acetaldehyde. However, because the same system is also responsible for metabolizing other chemicals, drug doses may need adjustment in these patients, since activation of the system increases the rate of metabolism.
In addition, the use of other drugs by alcoholics can further influence the overall outcome of alcohol exposure and toxicity.

- **Forms of alcoholic liver disease**

1-Hepatic steatosis (90-100% of drinkers)

2-Alcoholic hepatitis (1- 35% of drinkers)

3-Cirrhosis (14% of drinkers)

- Steatosis & hepatitis may develop independently

Forms of Alcoholic Liver Disease:

1.Hepatic steatosis (90–100% of drinkers):

Hepatic steatosis refers to fatty infiltration of the liver, and it occurs in almost all alcoholics. It develops early after exposure to ethanol. In the early stages, fat accumulation in the liver is reversible. However, continued alcohol intake, prolonged exposure, and ongoing hepatocyte injury can lead to progression through a chronic pathway, making the process potentially irreversible and causing chronic damage to hepatocytes.

2.Alcoholic hepatitis (1–35% of drinkers):

Alcoholic hepatitis is characterized by the presence of inflammatory components, which is why it is called “hepatitis.” It occurs in approximately one-third of alcoholics.

3.Cirrhosis (14–15% of drinkers):

Cirrhosis is the final outcome of many liver diseases, including liver injury caused by ethanol. It develops in about 14–15% of drinkers.

Hepatic steatosis

-Can occur following even moderate intake of alcohol in form of microvesicular steatosis

-Chronic intake → diffuse steatosis

-Liver is large (4 - 6 kg) soft yellow & greasy

-Continued intake →fibrosis

-Fatty change is reversible with complete absention from further intake of alcohol

Hepatic steatosis

Hepatic steatosis refers to fatty infiltration of the liver. Normally, the liver is essentially free of fat, so the presence of any fat infiltration is considered significant. As mentioned previously, this condition develops early after exposure to ethanol.

Initially, the fat accumulation is usually **microvesicular**, meaning small fat vesicles appear as globular deposits within the cytoplasm of hepatocytes. Small vesicles are described as microvesicular, while larger vesicles are termed macrovesicular.

The extent of fat infiltration can range from mild to severe depending on the amount and duration of alcohol intake.

Fat infiltration causes enlargement of the liver, so hepatomegaly may be detected during physical examination, particularly on abdominal examination below the right costal margin.

If alcohol exposure continues, the process may become **irreversible**. Although fatty infiltration alone is reversible in the early stages, once fibrosis develops, the damage becomes irreversible. As mentioned, the progression of the disease depends on both the duration and amount of alcohol intake.

Alcoholic hepatitis

Characteristic findings :

1 **Hepatocyte swelling & necrosis**

-Accumulation of fat & water & proteins

-Cholestasis

-Hemosidrein deposition in hepatocytocytes & kupffer cells

2 **Mallory-hayline bodies**

-easinoplilic cytoplasmic inclusions in degenerating hepatocytes formed of cytokeratin infermediate filaments & other proteins

Alcoholic hepatitis

In alcoholic hepatitis, hepatocyte injury is more severe than in simple fatty infiltration. In hepatic steatosis, hepatocytes are structurally normal except for the presence of fat within the cytoplasm. However, in alcoholic hepatitis, the hepatocytes become injured and therefore show swelling. This swelling occurs because the cells accumulate water in addition to fat, since fatty infiltration is already present as the earliest stage in most alcoholics.

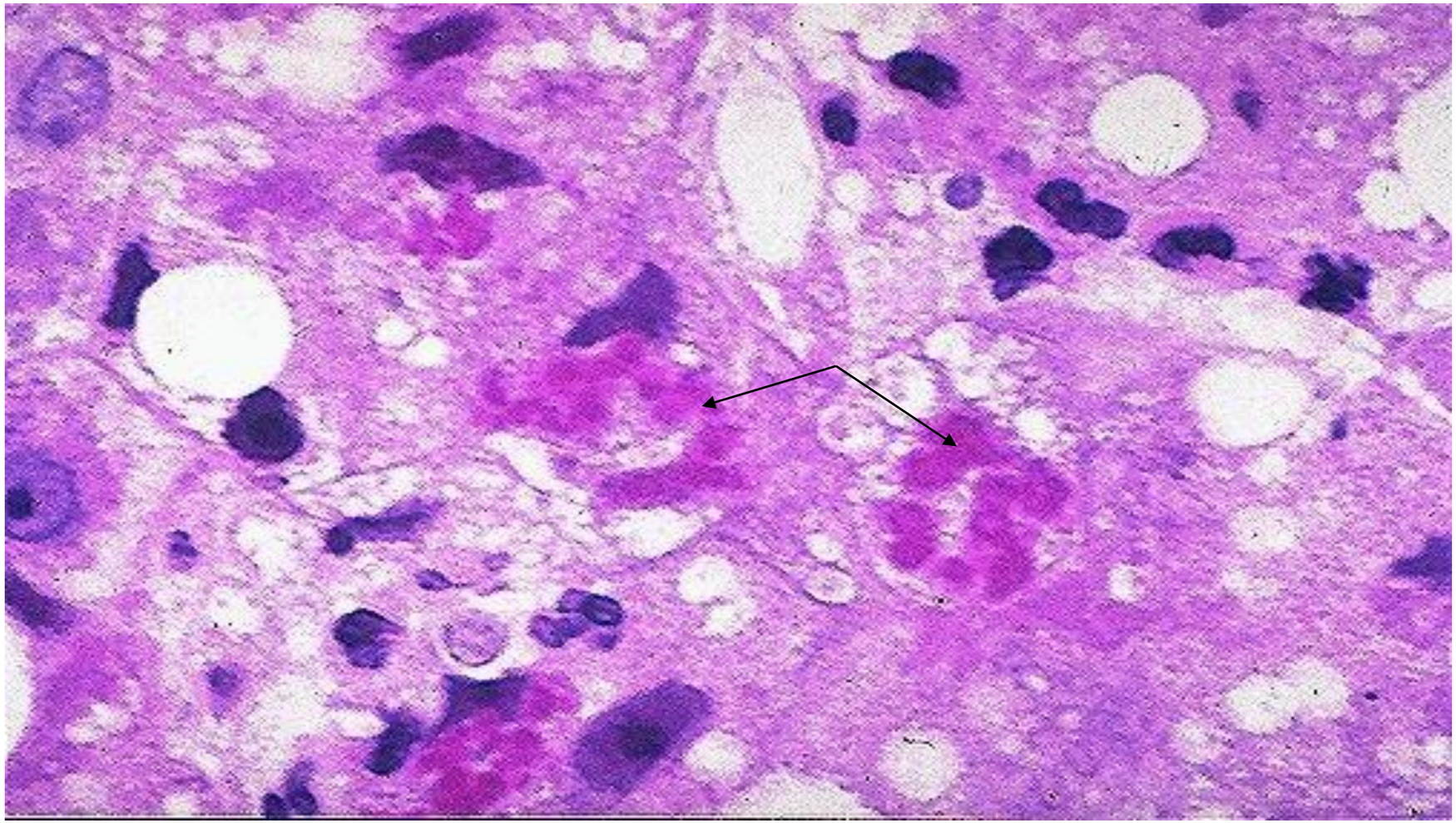
Once injury and inflammation develop, hepatocytes become stressed and their normal function is impaired. Reduced hepatocyte function leads to accumulation of different substances, such as bile. **Deposition of bile within the liver is called cholestasis**. Cholestasis indicates that hepatocytes are suffering from toxic damage.

In addition, hepatocytes may show iron deposition in the form of hemosiderin. Although hepatocytes normally store iron, iron accumulation increases in the setting of cellular injury and may also appear in **Kupffer cells**, indicating liver damage.

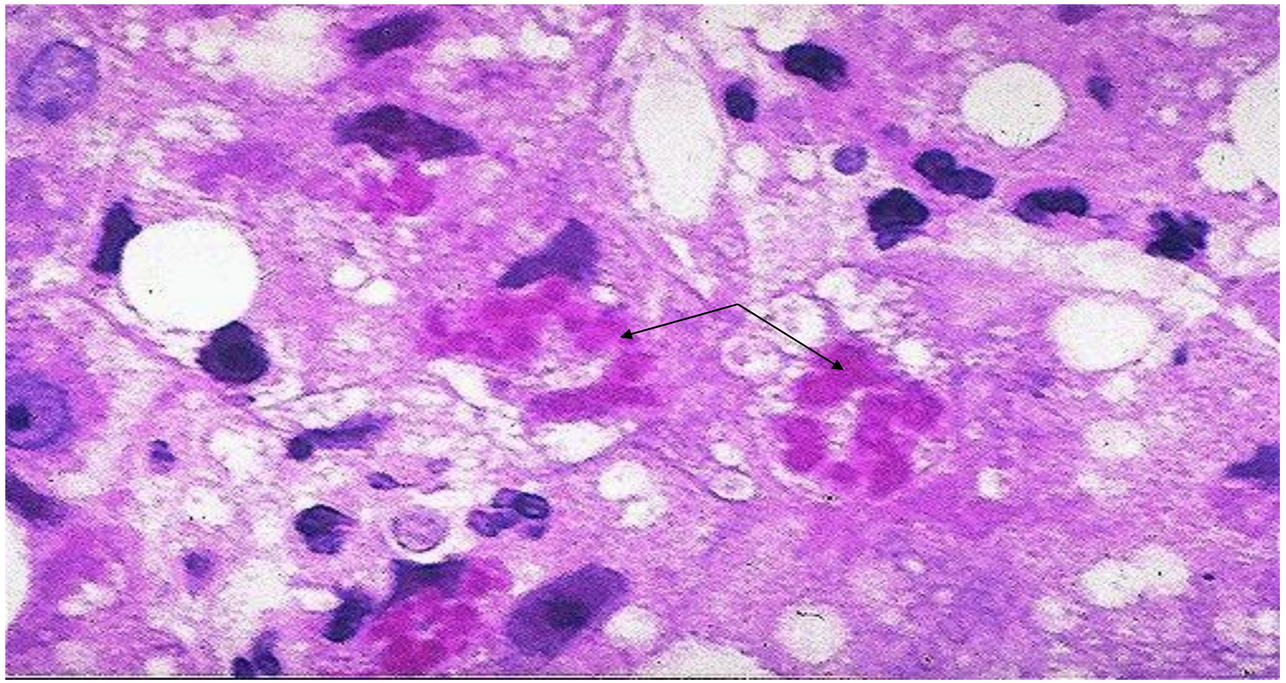
A very important feature of alcoholic liver disease is the presence of **Mallory-hyaline bodies**. These are protein accumulations within the cytoplasm of hepatocytes. They form due to collapse and fragmentation of intermediate filaments, which are components of the cellular cytoskeleton, following exposure to ethanol. These fragmented filaments aggregate and form the characteristic Mallory-hyaline bodies seen within hepatocyte cytoplasm.

Mallory-hyaline bodies appear eosinophilic and can be identified on H&E stain.

Mallory-hayline bodies



Mallory-hyaline bodies



As seen in the picture, the cytoplasm of the hepatocytes contains eosinophilic globular inclusion-like bodies called Mallory-hyaline bodies. Similar precipitated inclusions can also occur in other diseases, but they are usually smaller than Mallory-hyaline bodies. Therefore, the presence of these precipitations raises the possibility of alcoholic liver disease, especially when the patient's alcohol history is unknown.

The combination of fatty infiltration and Mallory-hyaline bodies strongly suggests alcoholic liver disease.

-Mallory-hayline inclusions are characteristic but not pathognomonic of alcoholic liver disease.

- they are also seen in :

a) Primary biliary cirrhosis
b) Wilson disease
c) Chronic cholestatic syndromes
d) Hepatocellular carcinoma

Although Mallory-hyaline bodies are characteristic and diagnostically helpful in alcoholic liver disease, they are not pathognomonic because they can also occur in other diseases. These other conditions can usually be excluded based on the clinical history, the patient's age, and other clinical findings.

Conditions that may show Mallory-hyaline-like bodies should therefore be ruled out, and asking about the patient's past medical history can help confirm the diagnosis. Identifying the underlying cause in the early stages is important because it may help prevent progression of liver damage.

However, in late stages, when the damage becomes irreversible or cirrhosis has already developed, determining the exact cause is less useful, since the mechanisms and causes of injury differ between diseases.

conditions that may show Mallory-hyaline-like bodies:

A- Primary biliary cirrhosis

Autoimmune diseases: these patients usually have circulating antibodies, the clinical setting is different, and they are more commonly females.

B- Wilson disease

Inherited diseases: these begin early in life and are associated with increased copper deposition.

C- Chronic cholestatic syndromes

Cholestatic diseases: these are characterized by cholestasis in hepatocytes due to obstruction either inside or outside the liver, and they can also be excluded clinically.

D- Hepatocellular carcinoma

Malignancies: in Western countries, malignancies may develop on top of cirrhosis, and Mallory-hyaline bodies can also be seen in these tumors.
Therefore, these findings are helpful when a patient presents with cirrhosis of unknown cause, as the presence of Mallory-hyaline bodies may suggest the possibility of alcoholic liver disease.

Characteristic findings :

3 -Neutrophilic reaction

4 -Fibrosis

-Sinusoidal & perivenular fibrosis

-Periportal fibrosis

5 -Cholestasis

6 -Mild deposition of hemosiderin in hepatocytes & kupffer cells

Characteristic findings :

3-Neutrophilic reaction

These patients show neutrophilic infiltration, which indicates more severe damage due to the inflammatory process. The presence of neutrophils further increases the hepatocellular injury caused by exposure to ethanol.

4-Fibrosis

-Sinusoidal & perivenular fibrosis

-Periportal fibrosis

If the process becomes chronic, it eventually leads to fibrosis. The fibrosis may extend within the liver parenchyma, resulting in thickening of the basement membrane. This interferes with the exchange between hepatocytes and blood, which contributes to the manifestations of liver disease.

All of these features point to one thing: the liver injury in alcoholic hepatitis becomes more severe and progressive.

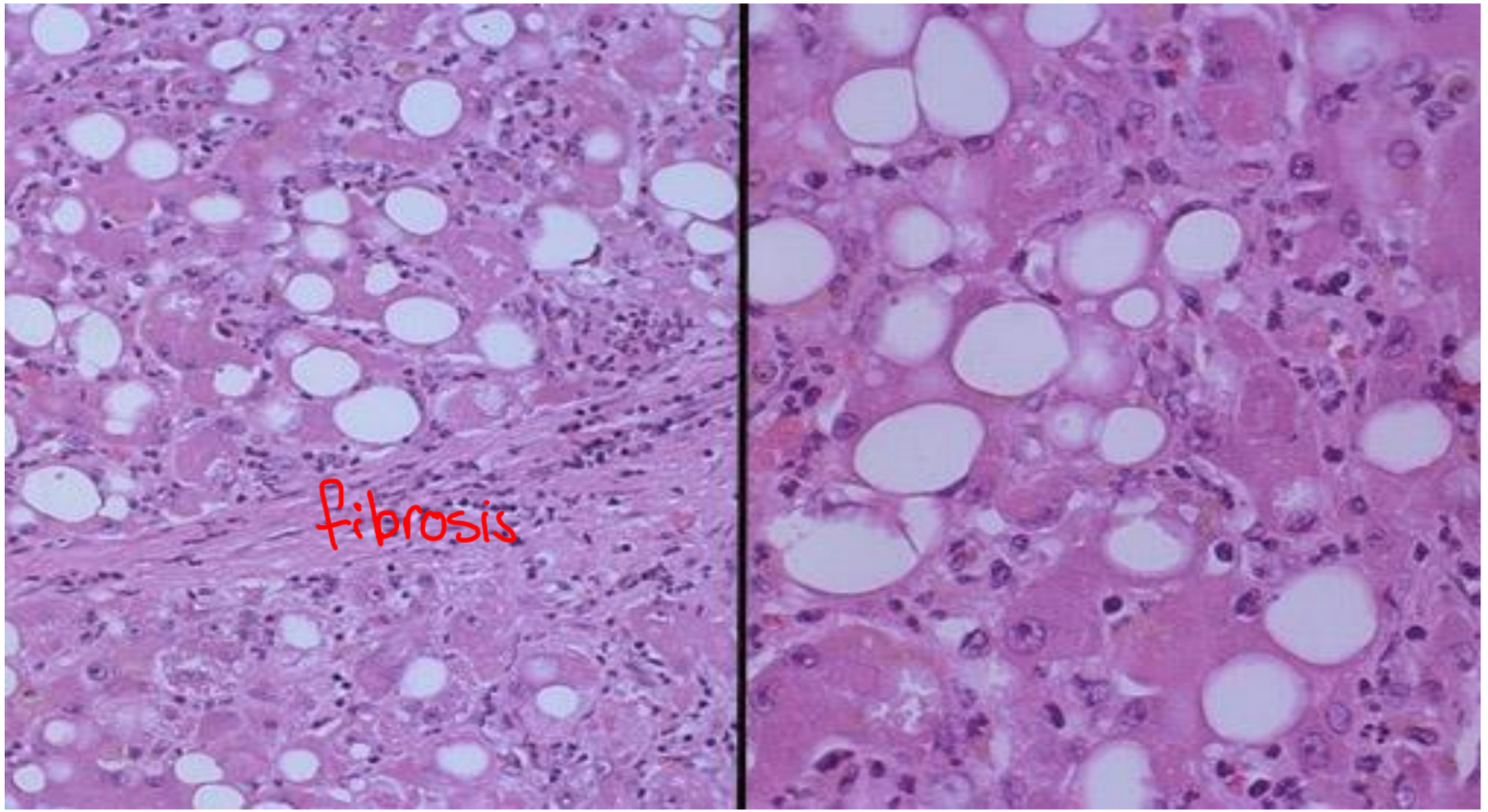
5-Cholestasis

These patients develop cholestasis due to retention of bile products within the hepatocytes, which is abnormal. Since bile contains many enzymes, its accumulation contributes further to hepatocyte damage.

6-Mild deposition of hemosiderin in hepatocytes & kupffer cells

This is the liver in an alcoholic hepatitis patients, as we mentioned all alcoholics have fatty infiltration which appears as clear fat globules.

Left side: Fibrosis is seen in the middle, indicating progression of the disease process and suggesting that the condition is chronic. If fibrosis continues to develop, it can progress to cirrhosis. At this stage, reversibility becomes almost impossible.



Right side: At higher magnification, the regions that appear empty are actually filled with fat. The fat was dissolved during tissue processing. This finding represents steatosis.

The combination of **fibrosis**, **fatty infiltration**, and **inflammatory cell infiltration** indicates **hepatitis**. These findings can be seen in conditions such as Hepatitis C, diabetes, and metabolic diseases.

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NOTES:

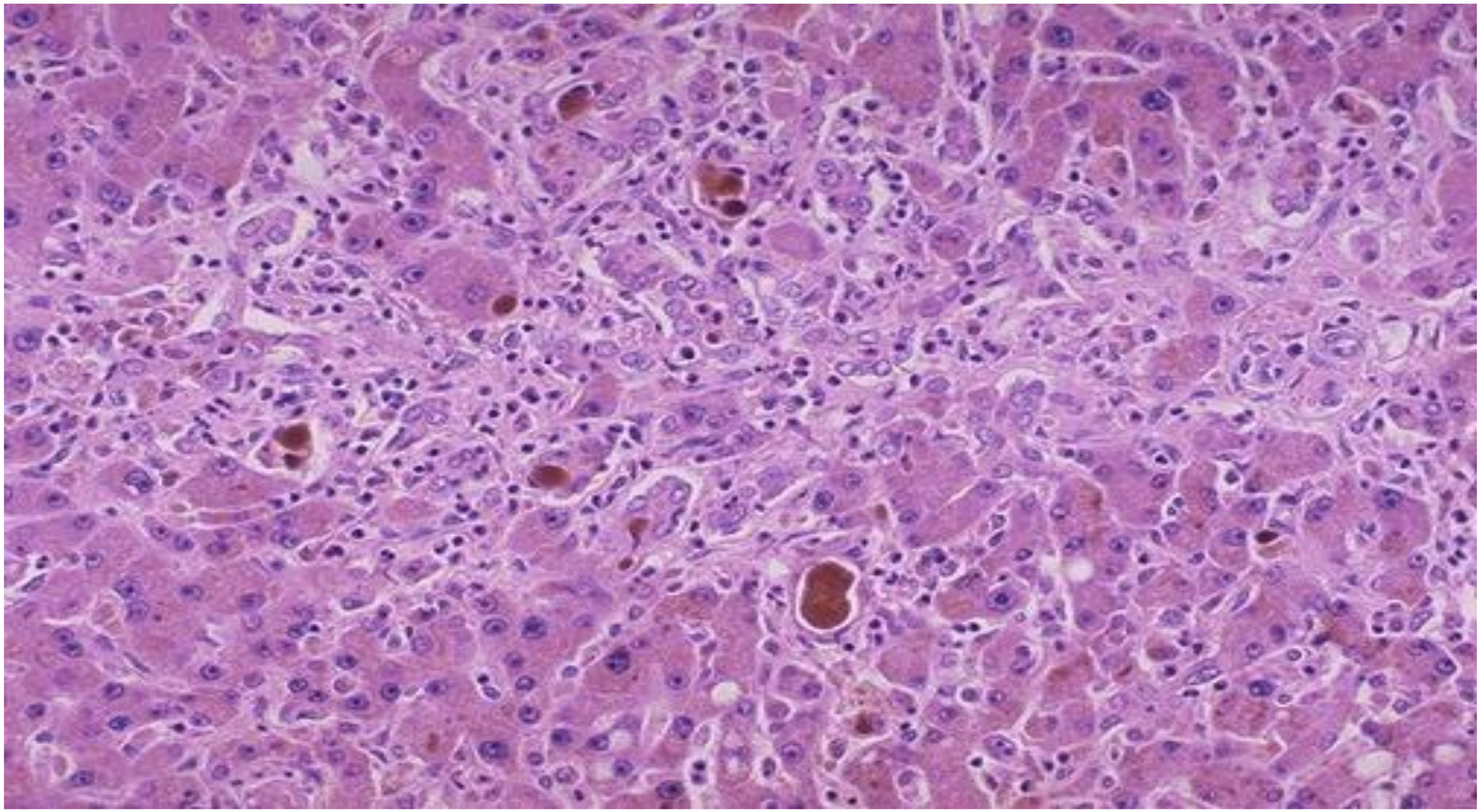
- Fatty infiltration does not necessarily indicate alcoholic liver disease; assuming this is an incorrect way of thinking.
- Hepatitis and steatosis can occur independently, and they are not sequential steps in disease development. A patient may show all the features of alcoholic hepatitis from the beginning. Microscopically, fatty infiltration is commonly seen, so it may be easily identified. A patient may already have cirrhosis without a known history, and in such cases the underlying cause of the cirrhosis should be investigated. Therefore, these findings are not stages of liver damage, and any of them may occur independently.
- In cases of cirrhosis, all possible differential diagnoses (DDx) should be considered and then systematically excluded.

Right side: At higher magnification, the regions that appear empty are actually filled with fat. The fat was dissolved during tissue processing. This finding represents steatosis.

The combination of **fibrosis**, **fatty infiltration**, and **inflammatory cell infiltration** indicates **hepatitis**. These findings can be seen in conditions such as Hepatitis C, diabetes, and metabolic diseases.

Dark brown pigments within the cytoplasm indicate *cholestasis*.

Cholestasis is not limited to hepatocytes only; it is also present within the bile canaliculi. Notice that the bile canaliculi are obstructed by bile material that resembles a thrombus, this occurs due to cholestasis.



In the upper right area, some hepatocytes show brownish bile pigment within their cytoplasm due to bile retention (cholestasis).

In this picture, the cholestasis is severe and is associated with a degree of biliary system obstruction, making the cholestatic changes very obvious.

Alcoholic cirrhosis

-Usually it develops slowly

-Initially the liver is enlarged yellow but over years it becomes brown shrunken non-fatty organ s.t < l kg in wt.

-Micronodular → mixed micro & macronodular

-Laennec cirrhosis = scar tissue

-Bile stasis

-Mallory bodies are only rarely evident at this stage

-Irreversible

-It can devolop rapidly in the presence of alcoholic hepatitis (within 1-2 yrs).

☆ **REMEMBER:**

Cirrhosis, regardless of its primary cause, is a disease that develops over time. It is a slow, progressive process. For example, a person who drinks alcohol for one year will not develop cirrhosis, because it is a chronic condition that requires a long period to develop.

* explanation in next slide :)

The type of cirrhosis seen in alcoholic liver disease is micronodular cirrhosis, meaning that small nodules are formed.

However, in chronic cases after a long period of time, the liver may become progressively replaced by fibrous tissue instead of forming normal nodules (which are areas of parenchyma surrounded by fibrous tissue). Eventually, all the remaining nodules are replaced by fibrous tissue. In this situation, the liver may decrease in size (shrinkage) and become a hard organ with no remaining function. This is called Laennec cirrhosis.

Mallory-Hyaline bodies are always present in this stage because the hepatocytes are collapsed and damaged, leading to the appearance of Mallory bodies.

It cannot be treated, and the patient will live the rest of their life with cirrhosis and its complications. Irreversibility begins once fibrosis becomes evident in the liver. However, in cirrhosis, there is an organized pattern of fibrosis, and its complications produce the characteristic form of cirrhosis, which is the same regardless of the underlying cause.

It develops over years, and the damage is greater if the patient has predisposing factors. For example, if episodes (bouts) of hepatitis are more frequent, the damage is accelerated, and the development of cirrhosis becomes faster.

This is the classical appearance of a liver with cirrhosis. Cirrhosis is characterized by the formation of nodules. These nodules are small in size, **less than 3 mm** in diameter (micronodules). In micronodular cirrhosis, the process is **diffuse**, meaning all parts of the liver show the same nodular pattern. The smooth surface of the liver is lost, and on sectioning, the nodules can be seen throughout the tissue.

Ethanol metabolism

Ethanol → acetaldehyde

CH3 CH2OH → CH3 C=O
H

↑

-Alcohol dehydrogenase
(stomach + liver)
-Cytochrome P-450
-Catalase (liver)

-

Ethanol is toxic mainly because it **disrupts lipid metabolism**. After entering the body, ethanol is metabolized by several enzyme systems. The most important one is alcohol dehydrogenase, which converts ethanol into acetaldehyde. This conversion is also supported by the cytochrome P-450 system and the catalase enzyme.

Acetaldehyde → Acetic acid

↑

Aldehyde dehydrogenase

- After absorption ethanol is distributed as Acetic acid in all tissues & fluid in direct proportion to blood level
- Women have lower levels of gastric alcohol dehydrogenase activity than men & they may develop higher blood Levels than men after drinking the same quantity of ethanol.

Acetic acid is a form that can be detected in different sites, including tissue, fluid, and breath. It is the substance usually measured in breath tests, and its level is proportional to the blood level of ethanol. This is why it can be used to estimate the amount of ethanol in the body.

It should be remembered that women are more susceptible to alcohol-induced injury than men when consuming the same amount of alcohol. This is due to higher levels of uptake and reduced gastric metabolism because they have lower gastric enzyme activity, resulting in slower metabolism and therefore greater injury.

- less than 10% of absorbed ethanol is excreted unchanged in urine sweat & breathe **without metabolism**

-There is genetic polymorphism in aldehyde dehydrogenase that affect ethanol metabolism

e.g 50% of chinese , vietnamase & Japanese have lowered enzyme activity due to point mutation of the enzyme. → accumulation of acetaldehyde → facial flushing, tachycardia & hyperventilation.

There is variation in response to ethanol, which is related to the activity of enzymes, especially aldehyde dehydrogenase. In Asian populations, reduced activity of this enzyme leads to vasodilation.

↓ **Enzyme activity** ↓ **Metabolism** ↑ **Duration of exposure to acetaldehyde** ↑ **Clinical manifestations.**

Pathogenesis of alcoholic liver disease

- -Short term ingestion of 80gm of ethanol/day (8bears) → mild reversible hepatic changes (fatty liver)
- -Long term ingestion (10-20yrs) of 160gm of ethanol per day → severe hepatic injury
- -50 - 60gm/day → borderline effect
- -Women are more susceptible to hepatic injury due to ↓gastric metabolism of ethanol .
- -Only 8 - 20% of alcoholics develop cirrhosis

The pathogenesis of these liver changes, particularly fatty changes common in alcoholics, is related to interference with fat metabolism. Ethanol disrupts multiple pathways of lipid metabolism, leading to an increased availability of free fatty acids and small lipid molecules in the circulation. When these increase, deposition occurs in different organs, with the liver being the primary site. Although deposition can occur in other organs, the liver is the main affected organ.

Mechanism of ethanol toxicity

1 <u>Fatty change</u>

a. Shunting of lipid catabolism toward lipid bio-synthesis due to excess production of NADH over NAD in cystol & mitochondria

b. Acetaldehyde forms adducts with tubulin & ↓ function of microtubules → ↓ in lipoprotein transport from liver

c. ↑ peripheral catabolism of fat → ↑ FFA delivery to the liver

d. ↓ sec. of lipoproteins from hepatocytes

e. ↓ oxidation of FFA by mitochondria

2-Induction of cytochrome P-450 enhances the metabolism of drugs to toxic metabolites (e.g acetominophen)

Mechanism of ethanol toxicity

Ethanol forms adducts (complexes) with tubulin, a protein present in the cell. This decreases the function of microtubules, which are responsible for lipoprotein transport.

What are lipoproteins?
Lipoproteins are molecules that carry fat. Without the formation of these complexes within hepatocytes, fat cannot be properly utilized or excreted into the circulation for use by different organs, which contributes to fatty infiltration of the liver.

In addition, due to hepatocyte damage, lipoprotein synthesis is reduced, which further worsens the same problem.

There is also decreased oxidation of free fatty acids by mitochondria. The mitochondrial membrane resembles the cytoplasmic membrane and can be damaged by exposure to ethanol, leading to reduced oxidative function.
The cytochrome system is induced by ethanol metabolism. This enzyme system can cause cellular damage and increase the metabolism of other chemicals into toxic metabolites, which further contributes to liver injury.

Mechanism of ethanol toxicity

3. ↑free radicals production due to (+) of cytochrome P-4so leads to membrane & protein damage

4. Alcohol directly affect microtubular & mitochondrial function & membrane fluidity

5.Acetaldehyde causes lipid peroxidation & antigenic alteration of hepatocytes → immune attack

6. Superimposed HCV infection causes acceleration of liver injury (HCV hepatitis occurs in 30% of alcoholics)

Mechanism of ethanol toxicity

Free radicals are produced due to induction of enzyme activity secondary to inflammation. Cellular damage also leads to the release of free radicals, which are toxic molecules capable of attacking cells and DNA, causing further injury.

Ethanol itself can impair mitochondrial function because it is a toxic substance, and it can alter membrane permeability.

There may also be antigen-antigen interactions involving proteins on cell surfaces, which can be affected by ethanol-induced damage. Once these antigens are altered, they stimulate the immune system, which is normally self-tolerant to the body's own antigens, meaning it does not attack self-tissues under normal conditions.

Thus, ethanol → alteration of antigens → immune system activation.

These individuals are also more prone to HCV infection, which is transmitted through injections. HCV itself causes damage and inflammation and is known to be associated with more severe liver injury and an increased risk of chronic infection, which further contributes to hepatocyte damage.

Mechanism of ethanol toxicity

7. Alcohol → release of bacterial endotoxins into portal circulation from the gut → inflammation of the liver

The normal gut flora can reach the liver and contribute to inflammation.

8. Alcohol → regional hypoxia in the liver due to release of endothelins which are potent vasoconstrictors → ↓ hepatic sinusoidal perfusion

Alcohol can cause hypoxia and vasoconstriction, leading to hypoxic injury, which primarily damages cells, including hepatocytes in this case.

9. Alteration of cytokine regulation TNF is a major effector of injury IL6 IL8 IL18

The inflammatory process involves different chemical mediators, including interleukins, tumor necrosis factors, and enzymes. All of these contribute to hepatocyte injury, which explains why ethanol exposure is toxic to the liver.

Clinical features

-Hepatic steatosis (reversible)

↑ liver

↑ liver enz.

Severe hepatic dysfunction is unusual

-Alcoholic hepatitis

. 15-20 yr. of excessive drinking

. Non-specific symptoms, malaise, anorexia, wt. loss

↑ liver & spleen

↑ LFT

Each bout of hepatitis →10-20% risk of death

→ cirrhosis in 1/3 in few yrs.

-Cirrhosis

Portal hypertension

Clinical features

- Manifestations are related to loss of the function of hepatocytes.
- Fatty infiltration is usually asymptomatic; however, the liver enlarges depending on the severity.
- If these patients – for any reason – make liver function test it is going to be abnormal particularly the enzymes, this indicates that hepatocytes are damaged because the enzymes are present within the cytoplasm of hepatocytes and are released when they are damaged and that's why their levels are increased, in any liver function test if transaminases in their different types are elevated we should think of this seriously because most likely there is damage in the liver.
- Liver is increased in size, however alcoholic patients with hepatitis show more symptoms usually damage occurs after excessive alcoholic hepatitis bouts and this is due to sudden severe uptake, after years these patients develop severe damage of the liver, the function of the liver is abnormal, the risk of death of patients with each bout is increased and so developing cirrhosis.
- Cirrhosis: once cirrhosis is developed it is the same in complications regardless to the cause, the most important complication is portal hypertension which is the one responsible for all complications & malfunction of the liver. Only if the patient is present for the first time with cirrhosis we may need and be able to investigate the possible cause, but it doesn't add anything clinically.

- **Causes of death in alcoholic liver disease**

1- hepatic failure

- Development of hepatic failure is the main cause of death.

2- Massive GI bleeding

- Bleeding is an important complication of liver disease. There are two main causes of bleeding:
  1) Decreased synthesis of coagulation factors in the liver.
  2) Patients with cirrhosis develop **vascular varices** (dilatation of blood vessels that are prone to rupture and may rupture spontaneously), which is associated with bleeding. The upper gastrointestinal tract is the most common site of bleeding.
  - ✓ Even if cirrhotic patients appear clinically stable or acceptable, their condition may progress to hepatic failure, which can be fatal.

- **Causes of death in alcoholic liver disease**

3- Infections

4- Hepatorenal syndrome

The development of hepatorenal syndrome, which involves kidney failure, is a very serious complication.

5- HCC in 3-6% of cases

Patients with cirrhosis have an increased risk of developing hepatocellular carcinoma (HCC), a primary liver cancer, in about 5% of cases. In patients with both cirrhosis and cancer, the malignancy reduces life expectancy.

رسالة من الفريق العلمي:

أَمَا واللهِ لَو عَلِمَ الأنامُ
لِما خُلِقوا لَمَا غَفَلُوا ونَامُوا

لَقَد خُلِقوا لِمَا لو أبصَرَتهُ
عيونُ قلوبِهِم تَاهُوا وهَامُوا

مماتٌ ثُمَّ قبرٌ ثُمَّ حَشرٌ
وتَوبِيخٌ وأَهوَالٌ عِظَامُ

لِيَومِ الحَشرِ قد عَمِلَت رِجَالٌ
فَصَلُّوا مِن مَخَافَتِهِ وصَامُوا

ونَحنُ إذا أُمِرنَا أو نُهِينَا
كَأَهلِ الكَهفِ أَيقَاظٌ نِيَامُ

قال شيخ الإسلام ابن تيمية رحمه الله تعالى:" وضدّ الغفلة التذكر، والتذكر لآياته سبحانه وتعالى: يُوجب العلم بها، وحضورها في القلب، وهو موجبٌ لاتباعها ".وهذا الذّكر الّذي تزول به الغفلة وأمر الله به في الغدوّ والآصال، يشمل الذّكر في الصّلاة وخارجها.قال أبو القاسم ابن جزي رحمه الله تعالى:" (بِالْغُدُوِّ وَالْآصالِ) أي في الصّباح والعشيّ... قيل: المراد صلاة الصّبح والعصر، وقيل: فرض الخمس، والأظهر الإطلاق ".فأقلّ ما على المسلم أن يأتيَ به من الذّكر الّذي يزيل عنه وصف الغفلة؛ أن يأتيَ بالصّلوات الخمس في تضرُّعٍ وخُشوعٍ، وخوفٍ وطمعٍ، فمن قام بهذا فقد حقّق ذكر الله تعالى الّذي يُزيل عنه تمامَ الغفلة، ويورثه تذكّر الله تعالى في غالب أحواله فلا يُقدِمُ على محرّمٍ ولا يقصّر في واجبٍ.قال الله تعالى: (وَأَقِمِ الصَّلَاةَ إِنَّ الصَّلَاةَ تَنْهَى عَنِ الْفَحْشَاءِ وَالْمُنْكَرِ وَلَذِكْرُ اللَّهِ أَكْبَرُ وَاللَّهُ يَعْلَمُ مَا تَصْنَعُونَ) العنكبوت/45.

وحرصه على الصّلوات الخمس، وعنايته بها: من شأنه أن يعينَه على أن يحافظَ يوميًّا على قدرٍ يوميٍّ من تلاوةِ القرآن الكريم في الصّلاة، فيتناوله حديث عَبْدِ اللهِ بْنِ عَمْرِو بْنِ الْعَاصِ، قَالَ: قَالَ رَسُولُ اللَّهِ صَلَّى اللهُ عَلَيْهِ وَسَلَّمَ: (مَنْ قَامَ بِعَشْرِ آيَاتٍ لَمْ يُكْتَبْ مِنَ الغَافِلِينَ...) رواه أبو داود (1398).

For any feedback, scan the code or click on it.

Corrections from previous versions:

Versions	Slide # and Place of Error	Before Correction	After Correction
V0 → V1			
V1 → V2			