



Review Article

## CHRONIC LIVER DISEASE (CLD) - AN INDIAN KNOWLEDGE SYSTEM REVIEW

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### ABSTRACT

India has two recognized systems of medicine: Ayurveda and Allopathy. There is also a system of healing in the form of Yog, breathing exercises, postures and meditation that has been in use since 3000 BCE is practiced. Non-communicable diseases have become prevalent in modern India due to unhealthy dietary habits and lifestyle changes. Alcoholic and non-alcoholic liver disease is caused by excessive alcohol consumption, uncontrolled dietary and behavioural regimen over a long period of time. Ingested alcohol and other pathological factor alters metabolism, producing acetaldehyde and damaging the liver. First, liver cells become clogged with fatty droplets, leading to liver inflammation called hepatitis. Subsequent excessive consumption of unplanned diet and irregular lifestyle leads to cirrhosis. In this disease some liver cells die and then abnormal regeneration occurs, resulting in the formation of multiple nodules and extensive fibrosis. These disease leads to poor liver function followed by body wasting and ascites. Treatment through Indian Knowledge System like Ayurvedic medicine and Panchakarma procedure gives better effect and better results. Use of hepato protectors, liver stimulants and Rasayana medicines. Choalaganges, Tikta, Madhura Rasayukta medicines, Mootral medicines and protein supplements have proven to be effective in treating liver disease. The one most important protocol to treat liver disease is the miraculous procedure called Panchakarma (bio-purification) plays magical role to manage liver disease. This article will focus on the role of Indian Knowledge System in treating liver disease.

### INTRODUCTION

In rural India, Ayurvedic, folk and practical therapies are predominant in the treatment of jaundice, a precursor of liver disease. However, Ayurveda is a traditional and skilled form of treatment, and its safety and efficacy in treating liver diseases has been proven over centuries. Ayurvedic medicines used for liver diseases are less toxic compared to modern medicine, and currently available drug therapies for liver diseases have greater systemic toxicity. Therefore, doctors hesitate to prescribe allopathic drugs for long-term use. Hence, despite the increasing prevalence of liver diseases in Ayurvedic hospitals and

clinics, and the allopathic doctors prescribing liver tonics, there are numerous Ayurvedic liver preparations/liver tonics available in the market. However, there are problems with standardization of Ayurvedic preparations, and there are too few randomized placebo-controlled clinical trials to prove their efficacy. More than 50% of people in our country still turn to Ayurveda and herbal medicine for liver diseases. Ayurvedic herbs and products contain bioactive molecules that protect the liver from oxidative stress, promote viral clearance, block fibrogenesis, have anti-inflammatory, immune-modulatory and liver regenerative properties, and can inhibit tumor growth in vitro and in vivo studies. Liver disease is any illness of the liver. The liver is a large organ and the largest gland located in the upper right abdomen, which aids in digestion and removes toxins from the blood. Abnormalities in the structure and function of the liver are called liver diseases. Structural abnormalities manifest as hepatitis, cirrhosis, cysts,

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tumors, and malignancies, while functional abnormalities manifest as destruction of red blood cells (RBCs), reduced serum albumin, platelets, and clotting factors. Both abnormalities manifest as symptoms such as jaundice, loss of appetite, abdominal pain, weight loss, and swelling in the legs. When the liver is damaged, it regenerates new cells on its own. If the damage persists, cirrhosis occurs and causes permanent damage to liver tissue. There are many types of liver disease, caused by viruses, drugs or chemicals, obesity, diabetes, or attacks by the patient's own immune system. If left untreated, the disease can become life-threatening and cause permanent damage to the liver and bile duct parenchyma. Liver disease is responsible for approximately 2 million deaths worldwide annually, 1 million of which are due to complications of cirrhosis and 1 million due to viral hepatitis and hepatocellular carcinoma. Currently, cirrhosis is the 11th leading cause of death worldwide, and liver cancer is the 16th leading cause of death, together accounting for 3.5% of deaths worldwide. Cirrhosis is one of the 20 leading causes of years of life lost and years of life lost due to disability, accounting for 1.6% and 2.1% of the global burden, respectively. Approximately 2 billion people worldwide consume alcohol, and more than 75 million people have been diagnosed with alcohol use disorder and are at risk of developing alcohol-related liver disease. Approximately 2 billion adults are obese or overweight, and more than 400 million have diabetes, both of which are risk factors for non-alcoholic fatty liver disease and hepato-cellular carcinoma. The global prevalence of viral hepatitis remains high, while drug-induced liver injury continues to increase as the leading cause of acute hepatitis.[4] Autopsy studies suggest that the prevalence of cirrhosis worldwide ranges between 4.5% and 9.5% of the total population. The prevalence of fatty liver disease and NASH in the Indian population is around 14%.

Descriptions of the liver are found in the Vedas, Sushruta Samhita, Charaka Samhita and Astan Hridaya. In the Vedas, the liver is called "*Takhima*" or "*Yakna*". Other synonyms of liver can be found in ancient texts: *Kalakanda*, *Jyotisthana*, *Yakritkanda*, *Yakritpinda*, *Raktadhara* and *Raktashaya*. Sushruta explains that the nutrition of the fetus depends on Ahara Rasa, which is usually classified as a maternal factor, and Vayu, which is present in the *Jyotisthana* and responsible for cell division. Ahara Rasa is first accepted by the *Jyotisthana* and further nourishes the entire body. Thus, *Jyotisthana* is recognized as the "Liver". Acharya Vagbhata used the word "*Yakritkanda*" to describe diseases affecting the liver lobes. In Ashtanga Hridaya, the main function of *Yakrit* is to transform Rasa Dhatu into Rakta Dhatu. Ranjana of Rasa Dhatu. *Yakrit* is

developed or produced from *Matrijabhava* (mother body). Generally, diseases in Ayurveda are named according to functional abnormalities like *Jvara*, *Kasa*, *Swasa*, *Atisara*, *Hikka*, *Prameha* etc. whereas *Yakrit Roga*, *Grahani*, *Hrud Roga* are named according to morphological and anatomical abnormalities. In Ayurveda, diseases of anatomical units (*Dhatu*) manifest themselves either in the form of *Vrudhi* (increase in a certain amount) or *Ksyaya* (decrease in a certain amount) as follows: For example, *Rasa Vrudhi*, *Rasa Ksyaya*, *Rakta Vrudhi*, *Rakta Ksyaya*, *Mamsa Vrudhi*, *Mamsa Ksyaya* etc. Similarly, *Yakrit* manifests as *Yakrit Vridhi* (liver enlargement) and *Yakrit Kshaya* (liver cirrhosis). Sushruta was the first to give the proper name *Yakrit-Daryudhara* to *Yakrit-Vridhi* and *Yakrit-Kshaya* is described in *Vaisaya Ratnavali*. Hepatology in modern medicine is highly developed and various classifications of liver diseases have been described, but Ayurveda is limited to *Yakrit-Daryudhara* and *Yakrit-Kshaya*. The complications of *Yakrit-Daryudhara* and *Yakrit-Kshaya* are *Kamala*, *Kumbha Kamala*, *Harimaka*, *Panakhi*, *Arasa* etc but are described in separate chapters in Ayurveda. Hence, the knowledge gap in Ayurvedic classification of liver diseases can be resolved from the modern medical perspective through well-founded consensus research. Ayurvedic physicians treat *Yakrit Roga* (CLD) according to the principles of *Udara Roga* (abdominal disorders). In cases of *Shakya Srita Kamala* and *Pittaja Yakrit Vridhi*, Panchakarma treatment is recommended. *Virechan* (pharmacological laxative treatment) is the best of all *Sodhana* treatments in *Yakrit Vikara*. More than 60% of jaundice patients in our country prefer to see a traditional healer for treatment. Seeff et al. found that 41% of outpatients diagnosed with liver disease had used herbal medicines in the past. For diseases of the liver and gallbladder, medicinal plants with *Rechana* (laxative), *Mutrala* (diuretic), *Vata samaka*, *Agnivardhaka* (carminative), *Amah*, *Medha* and *Kapha nasak* properties are suitable. *Picrorrhiza kurroa*, andrographoids - *Andrographis paniculata*, *phyllanthin* - *Phyllanthus niruri*, wedelolactone- *Eclipta alba*, glycyrrhizin- *Glycyrrhiza glabra*. Curcuminoids (turmeric) are bioactive compounds from Ayurvedic herbs that have shown potential hepatoprotective action in animal models. A milk diet is recommended for many liver diseases. Hence, Ayurvedic hepatology can be treated separately not only for treating physicians but also for Ayurvedic students and pupils. Real clinical scenarios, practical focus, advice on medical history, methods of examination and laboratory testing, evidence on drug therapy for various liver diseases are provided.

## Ayurvedic understanding of liver diseases

In Ayurvedic philosophy, *Tridosha (Vata, Pitta, Kapha)*, *Sapta Dhatu (Rasa, Rakta, Mansa, Medha, Asthi, Maja)* and *Trimala (Mutra, Prisha, Swet)* are considered as the basic building blocks of the body and their balance and imbalance determine the state of the body known as health (*Swata*) and disease (*Vikara*). The three humors are the functional units of the body and *Sapta Dhatu* is the structural unit of the body. *Ahara* and *Dhatu* waste products are the mechanisms that require proper excretion to maintain homeostasis. According to Ayurvedic classics, the liver is called *Yakrit*. *Yakrit* is the seat of *Ranjaka Pitta*, which transforms *Rasa Dhatu* into *Rakta Dhatu*. It is the *Mulasthan* (place of origin) of the *Raktavahasrotas*. It is also associated with the *Raktavahi* and *Mamsavahi Dhamani*. *Yakrit* is an important *Koshtanga* (abdominal organ). In Ayurveda, diseases of anatomical units (*Dhatu*) manifest either as *Vrudhi* (increase in a certain amount) or *Ksyaya* (decrease in a certain amount) as follows: *Rasa Vrudhi, Rasa Ksyaya, Rakta Vrudhi, Rakta Ksyaya, Mamsa Vrudhi, Mamsa Ksyaya* etc. Similarly, *Yakrit* manifests as *Yakrit Vrudhi* (enlargement of the liver) and *Yakrit Kshaya* (cirrhosis of the liver). Sushruta was the first to give the proper name *Yakritdaludhara* to *Yakrit Vridhi*, while *Yakrit Kshaya* is narrated in the *Vaisaya Ratnavali*. *Yakrit Vikaras* (liver diseases) are treated with *Udara Roga* (abdominal diseases). *Yakrit* is mentioned in *Charaka Samhita* for the treatment of *Pridhara* (splenomegaly). Often this may be due to the occurrence of splenic hepatomegaly. The *Pradhasthi* of *Yakrit* on the right side of the body is *Yakrit Dardhara* mentioned in *Sushruta Samhita*. But apart from the *Sira Veda* for the right arm, no specific treatment is mentioned. *Yakrit Vikaras* (liver diseases) when the structural and physiological integrity of the liver is compromised are described in detail in *Charaka, Susrurta, Astanga Hrudaya* and *Bhavaprakash Samhitas*. These diseases are *Pittaja Pandu, Kamala* and its types, *Yakritdra, Yakrit Bidradhi, Raktapitta, Jaladhara, Madhatyaya* and *Pittaja Jwara*.

A detailed description of *Yakrit Roga* along with its classification and symptoms is given in *Yakrit Vridhi* of *Bhavaprakash*. *Yakrit Vridhi* is divided into *Chuta* (expulsion from place due to accidents) and *Achyuta* (due to *Rasadi dhatu* and *Rasa, Rakta* and *Mansa vaha srotas*). *Rasa Pradsaja* diseases like *Jwara, Pandu, Hridroga* etc can lead to *Shota, Kamala* and *Yakrit Roga*. *Lakshanas* like *Kamala, Pandu, Shota* and *Raktapitta* are frequently found in the description of *Pittaja, Kaphaja, Sannipaja, Vishama* and *Dhatgata Jvaras*. The symptoms and signs of *Yakultdaryudhara* are the same as those of *Prihodhara*, for both organs are *Mula* of and liver and spleen are said to have

similar functions. Classics describe five types of *Plehodosa (Panca Plehadrasah)* in a manner similar to *Yakrit*, which can make *Gata Dosa*. *Ashtanga Sangraha* describes three types of *Prihodara* (*Attadarya Sangraha Nidhana, 12:29*), and thus three types of *Yakritdra* can be enumerated. Recently, *Krimi* (pathogens) and *Medha* (fat cells) are considered to be the causes of *Yakit Vikara*. Hence, *Krimi Yakrit Roga* and *Medaja Yakrit Roga* are recommended.

## Liver diseases at Glance as per Contemporary Medicine

Hepatology is a rapidly evolving specialty that will continue to grow and excite clinicians for decades to come. The liver is considered one of the busiest organs in the body, and most of its functions are carried out by hepatocytes. The liver metabolizes carbohydrates, proteins, fats, thyroxine (to active triiodothyronine), bilirubin, insulin, drugs, hormones (e.g. prednisone to prednisolone), aldosterone, and vitamins. It also synthesizes plasma proteins (e.g. albumin), clotting factors (e.g. fibrinogen), cholesterol, glucose, bile, amino acids, and urea. It stores fat-soluble vitamins (A, D, E, K) and glycogen, and regulates blood glucose levels. The liver's most important function is immunity (the liver contains more than half of the macrophages in the body). Many students ask about the difference between liver disease and liver failure. Liver disease refers to any condition that causes inflammation or damage to the liver. Liver disease can affect the overall function of the liver. Liver failure is the complete or partial loss of liver function. This can occur due to damage caused by liver disease, most commonly cirrhosis. There are more than 100 types of liver disease, depending on the cause and pathogen. Increased liver mass is a very common liver disease. B. Hepatitis (inflammation of the liver). It can be caused by infectious agents (viruses, bacteria, parasites), better known as infectious hepatitis. This hepatitis can also be caused by toxins (alcohol), drugs, fats, autoimmune, and genetic. Alcoholic liver disease is a liver condition caused by excessive alcohol consumption, resulting in alcoholic hepatitis and alcoholic cirrhosis. Some antibiotics and other liver-damaging drugs, including Ayurvedic medicines, can cause drug-induced liver injury (DILI) or drug-induced hepatitis. Fatty liver disease (steatosis) due to obesity, diabetes, or metabolic syndrome is a reversible condition in which large triglyceride vacuoles accumulate in liver cells. Non-alcoholic fatty liver disease is a group of diseases associated with obesity and metabolic syndrome. Inherited liver diseases that cause liver damage include hemochromatosis and Wilson's disease, which cause iron to accumulate in the body. Liver damage is also a clinical feature of alpha-1 antitrypsin deficiency and glycogen storage disease



type II. Gilbert syndrome is an inherited disorder of bilirubin metabolism that occurs in a small percentage of the population and can cause mild jaundice. A reduction in liver mass manifests as cirrhosis, in which connective tissue (fibrosis) forms in place of necrotic liver parenchyma due to a variety of causes, including viral hepatitis, excessive alcohol intake, and other liver toxicities. Cirrhosis leads to chronic liver failure. Primary hepatocellular carcinoma (HCC) most commonly develops as hepatocellular carcinoma or cholangio-carcinoma. This is a rare form of liver disease that includes hemangiosarcoma and angiosarcoma of the liver. Many cases of liver cancer are secondary to metastatic primary cancers in other organs, such as the digestive tract, kidneys, or lungs. Primary biliary cirrhosis is a severe autoimmune disease of the bile capillaries. Primary sclerosing

cholangitis is a severe chronic inflammatory disease of the bile ducts, possibly of autoimmune nature. Budd-Chiari syndrome is a clinical picture caused by vascular obstruction of the hepatic veins.

Liver disease can be classified as acute or chronic. Acute liver disease is considered if symptoms began less than six months ago. In most cases, these are self-limited episodes of inflammation or damage to liver cells that resolve without further complications. Rarely, the damage can be severe enough to affect the entire liver, leading to acute liver failure. These cases have a high mortality rate and may require a liver transplant. Patients whose symptoms of liver disease last for more than six months have chronic liver disease. This occurs when long-term damage to liver cells causes permanent structural changes to the liver.

**Various Stages of Liver diseases**

Cause	Effect	Symptom
Inflammation	Liver enlarged or inflamed	No symptom
Fibrosis	Liver scar	No symptom, reversible
Cirrhosis	Severe scar	Symptom appeared, liver failure
End stage Liver	Function deteriorated	Ascites, hepatic encephalopathy
Liver cancer	Multiplication of unhealthy cells	Liver failure

**Types of Yakrit vikara (CLD) in different Ayurveda text**

Name of Yakrit Vikara	Name of Ayurveda text	Types
<i>Yakrit vridhi</i>	Bhavaprakash	<i>Raktaja, Vataja, Pittaja, Kaphaja</i> (4 types)
<i>Yakritdalyudara</i>	Astanga samgraha	<i>Vataja, Pittaja, Kaphaja</i>
<i>Yakrit gata dosa</i>	Charaka Samhita	<i>Vata, Pitta, Kapha, Sannipataja, Raktaja</i>
<i>Yakritodara</i>	Charaka Samhita	-
<i>Yakrit Vidradhi</i>	Susruta Samhita	<i>Vata, Pitta, Kapha, Sannipataja, Kshataja, Raktaja</i>

**Signs and Symptoms of Yakrit-vriddhi (Hepatomegaly)**

Enlargement of the *Yakrit* (liver) is called *Yakrit Vriddhi* and has the symptoms of *Kapha* and *Pitta Dosa*. In addition, the patient may suffer from *Manda Jivara* (mild fever), *Manda Agni* (decreased digestive power), *Kushina Bala* (weakness) and *Athi Pandu* (extreme anemia) (Bhavaprakaga, *Madhya Kanda, Chikitsa Prakarana*, 33:2, 3). Bhavaprakash describes four types of *Priha Vridhis*, from which we can derive the symptoms and signs of the four types of *Yakrit Vridhis*, namely *Raktaja Yakrit Vriddhi*, *Pittaja Yakrit Vriddhi*, *Kaphaja Yakrit Vriddhi* and *Vataja Yakrit Vriddhi* as follows:

**Raktaja Yakult Vridhi:** Symptoms of *Yakult Vridhi* type *Raktaja* include *Krama* (fatigue), *Brahma* (dizziness), *Vidhaha* (burning sensation), *Vaivarnya* (discoloration), *Gata gaurava* (feeling of heaviness in

the body), *Moha* (unconsciousness) and *Raktdhara* (abdominal bleeding).

**Pittaja Yakult Vrdhi:** Symptoms and signs like *Jvara* (fever), *Pipatha* (thirst), *Dhaha* (burning sensation), *Moha* (unconsciousness) and *Pithagatra* (yellowing of the body) can be attributed to *Pittaja Yakult Vrdhi*.

**Kaphaja Yakult Vrdhi:** A thick (*Sthala*), hard (*Katina*), heavy (*Gaurava*) enlarged liver and slight pain (*Yakult*) around the liver are the signs and *Aruchi* (loss of appetite) is a symptom of *Kaphaja Yakult Vrdhi*.

**Vataja Yakult Vrdhi:** A patient with *Vataja Yakult Vrdhi* suffers from *Udavartha* and may feel pain all over the liver. Patients with the disease also experience stiffness of *Kosta* (*Nityamanada Kota*) on a daily basis. *Vaivarna* (yellowing of the skin) and *Pitta Gatrata* (yellowing of the skin) appear in the *Raktaja*

and *Pittaja Yakrit Vridhi*, but the word *Kamala* does not appear in the *Yakrit Vridhi*.

### **Yakritdallyudara (Hepato cellular changes)**

The signs and symptoms of *Plihodara* have been described in detail in all the Ayurvedic texts. As the symptoms and signs of *Yakrddalyudara* are the same as that of *Plihodara*, therefore following symptoms and signs may also be constructed for *Yakrddalyudara* on the basis of *Plihodara*.

### **Kamala (Jaundice)**

*Kamala* is one of the most frequently found clinical entities in Ayurvedic literature. Many Ayurvedic practitioners and students consider *Kamala* as a *Yakrit Roga*, but there is no direct pathological association with *Yakrit Vikara* (liver disease). Charaka mentions the appearance of *Kamala* in new-borns. *Kamala* is not a disease of *Rakta Dhatu* (*Sonitaja Roga*), but *Kamala Roga* appears when there is diseased *Pitta Dosa* in *Rakta Dhatu*. The word *Kamala* is interpreted as: "*Kutshitam Mala Yasmin Roge Sa Kamala Roga*". Indeed, continued metabolic activity in the body results in the production of various waste products. Some of these products may have a positive effect on the body, while others may not. All these products of systemic metabolism can be considered as *Mala*. From this, it can be concluded that *mala* is not necessarily a waste product in the Ayurvedic sense that must be excreted immediately. For this reason, *mala* has been given the status of a *Dhatu*, which is considered to support the living organism. Normally, complex metabolic activities constantly produce *mala* (decomposition products). As mentioned earlier, *Dhatrupa Malas* are beneficial to the body and do not need to be eliminated immediately. They have a certain physiological function in excretion. However, if these beads accumulate in excess or change into a harmful form, they are considered as "*Kutsita beads*" and need to be removed immediately. If such changed *Malas* are not eliminated from the body, they become the cause of *Kamala Roga*. Bilirubin is a waste product of hemoglobin metabolism. It is constantly produced in the body, and even a normal organism contains a certain amount of this active ingredient. At this stage it is not considered "*Kutsita*". However, if the bile concentration increases abnormally due to overproduction or impaired excretion, a pathology called *Kamala* occurs. *Mala*, related to *Kamala* (jaundice), means stercobilinogen in the digestive tract, urobilinogen in the urinary tract, and bilirubin in the systemic circulation. This coincides with the clinical symptoms observed in the form of yellowing of blood, urine, or stool, depending on the type of disease. The main etiology of *Kamala* is excessive lifestyle and dietary factors which cause *Pandu* or anemia and

excessive use of factors which stimulate *Pitta* in patients with *Pandu Roga* (anemia). Charaka states that *Kapasamuchita Vayu* displaces *Pitta* from its usual place, thereby creating *Shakasrita Kamala*. It is also said that *Shakasrita Kamala* occurs when the passage of *Pitta* is blocked by *Kapha*. Therefore, in treating this disease, it is recommended to first treat *Kapha* to remove the blockage in the passage of *Pitta*. Various *Kamala Rogas* are mentioned in various Ayurvedic texts. When a patient of *Pandu Roga* develops body colour like *Harita* (greenish), *Pitha* (yellowish) etc. besides other symptoms, the disease is said to be called *Harimaka*. Chakrapani Datta explained that *Rangalaka*, *Panaki* and *Arasa* in *Sushruta Samhita* are synonyms of *Harimaka*. Clinical signs and symptoms of *Kamala* are mentioned in Ayurvedic texts.

### **Clinical features as per Contemporary Medicine**

Fatigue, loss of appetite, and weight loss are common symptoms of liver disease. Patients with an enlarged liver may experience abdominal pain and tenderness, and those with chronic liver disease may experience swelling in the abdomen and lower body due to fluid retention. Many of the clinical features of chronic liver disease are related to the liver's inability to function normally.

- 1. Jaundice** is the most common symptom. In adults, jaundice is usually characterized by a yellowing of the skin and whites of the eyes when serum bilirubin levels exceed 50µmol/L. Jaundice can occur with acute or chronic liver disease and is not a sign of liver function.
- 2. Pale stool** is a sign of cholestasis. Normally, bile is secreted into the intestine, where it is absorbed into the stool, changing its color. When cholestasis occurs, less bile is secreted, causing the stool to become pale in color.
- 3. Dark urine** is caused by cholestasis and the inability to excrete water-soluble conjugated bilirubin in the stool. The body compensates by increasing bilirubin excretion from the kidneys.
- 4. Spider nevi** are small vascular malformations (arteriovenous shunts) that occur on the skin and hands. They are not specific to liver disease but may indicate liver dysfunction. Palmar erythema (red palms) also commonly occurs with chronic liver disease.
- 5. Bruising and bleeding** may occur. Patients with chronic liver disease may have increased bleeding from the gums and mouth and may bruise easily. This is primarily related to abnormal blood clotting caused by a decreased ability of the liver to synthesize clotting factors.
- 6. Hepatic Encephalopathy (HE)** is a neuropsychiatric syndrome occurring in patients

with significant liver dysfunction. Features of HE include inability to concentrate, confusion, changes in sleep patterns, and asterixis (also called "hepatic lobes"), characterized by hand tremors and an inability to hold the wrist outstretched when holding the hand outstretched. The exact etiology of HE is unknown, but this complex syndrome is generally believed to result from the inability of the liver to remove toxins originating from the gut. It has also been suggested that patients with HE have an altered blood-brain barrier, allowing high concentrations of systemic toxins to circulate and enter the central nervous system. Ammonia, produced by protein breakdown in the gut, is normally metabolized to urea in the liver and has long been thought to be the primary toxin. However, it should be noted that there is little correlation between blood ammonia levels and the severity of HE, suggesting an indirect effect. Based on the patient's clinical characteristics, HE is classified into four stages according to severity.

**7. Portal hypertension** is a disease in which pressure in the portal venous system increases as a result of increased resistance to blood flow through the damaged liver. Collateral veins form and may bleed due to increased blood flow and pressure inside (see "Varices" below).

**8. Splenomegaly** may be caused by increased pressure in the portal venous system and indicates portal hypertension due to cirrhosis. Varices Esophageal and gastric varices are abnormally dilated collateral vessels in the esophagus or stomach that develop as a result of portal hypertension or portal vein obstruction. These varices allow blood to bypass the liver, reducing portal vein pressure or avoiding obstruction. If pressure in the vessels becomes too high, they may rupture, causing massive bleeding.

**9. Gynecomastia-** In men with liver disease, gynecomastia may occur because cirrhosis of the liver makes them unable to metabolize estrogen. In women of childbearing age, this effect on sex hormones may reduce fertility.

**10. Pruritus** is a symptom of chronic liver disease. High concentrations of bile salts can build up on the skin, causing itching. This often occurs in cholestatic diseases and can severely impair the patient's quality of life.

**11. Ascites** is a condition in which excess fluid accumulates in the abdominal cavity, causing abdominal swelling. Mild ascites is difficult to detect, unlike severe ascites, which causes abdominal distension. Ascites is the most common complication of cirrhosis. Its occurrence is mainly related to the inability to excrete sufficient sodium in the urine, resulting in a positive sodium balance. There is evidence that splanchnic vasodilation due to portal hypertension reduces effective blood volume, leading to activation of the sympathetic nervous system and the renin-angiotensin-aldosterone system. This leads to retention of sodium and water in the kidneys, resulting in the formation of ascites and edema. Patients with ascites commonly complain of increased abdominal heaviness and pressure, as well as shortness of breath due to mechanical action on the diaphragm. Ascites can also be caused by diseases such as malnutrition and heart failure.

**12. Hepatic failure** is a condition where liver lost its function. It is life threatening conditions which needs emergency care. The first symptom nausea, loss of appetite, fatigue and diarrhea then it progresses to confused, disoriented extremely sleepy, coma and death.

#### ***Santarpana janya or Apatarpana janya Yakrit vikara with modern correlation***

S.N	<i>Santapana janya</i>	Modern correlation	<i>Apatapna janya</i>	Modern correlation
1	<i>Vataja Yakrit Vridhi</i>	Steatohepatitis	<i>Vataja Yakrit Kshyaya</i>	Initial stage of fibrosis
2	<i>Kaphaja Yakrit Vridhi</i>	NAFLD	<i>Kaphaja Yakrit Kshyaya</i>	Cirrhosis liver
3	<i>Medaja Yakrit Vridhi</i>	NAFLD	<i>Medaja Yakrit Kshyaya</i>	Cirrhosis liver
4	<i>Pittaj Yakrit vridhi</i>	NASH	<i>Pittaj Yakrit Kshyaya</i>	Hepatic cirrhosis
5	<i>Madhyaja Yakrit vridhi</i>	ALD	<i>Madhyaja Yakrit Kshyaya</i>	Alcoholic cirrhosis
6	<i>Sannipatika Yakrit vridhi</i>	HCC	<i>Tridosaja Yakrit Kshyaya</i>	HCC
7	<i>Amaja yakritvridhi</i>	Metabolic hepatitis	<i>Amaja yakrit Kshyaya</i>	Metabolic cirrhosis
8	<i>Asatmyaja Yakrit vridhi</i>	Auto immune hepatitis	<i>Asatmyaja Yakrit vKshyaya</i>	Auto immuno cirrhosis
9	<i>Krimija Yakrit vridhi</i>	Infective Hepatitis	<i>Krimija Yakrit Kshyaya</i>	Infective Cirrhosis
10	<i>Visaja Yakrit vridhi</i>	Drug induced hepatitis	<i>Visaja Yakrit kshyaya</i>	Drug induced cirrhosis



11	-----		<i>Yakrit vidradhi</i>	Hepatic abscess
12	---		<i>Yakrit granthi</i>	Hepatic cyst
13	-----		<i>Kamala</i>	Jaundice

### Samprapti of Yakrit Roga (Ayurvedic Pathophysiology of Chronic Liver disorders)

*Yakrit Vridhi* is a pathological process caused by disturbance of *Dosa*, reduction of *Agni*, generation of *Ama*, inhibition of *Srota* and alteration of the properties of *Dosa* and *Dhatu* by *Swabhava Satmya Viparya*. Excessive intake of *Madhya* increases *Pitta* due to its *Agneya Guna*, reduces *Apa Dhatu*, taints *Vata* and reduces the size of the mass in the liver (*Yakrit Kusha*). *Crime* can directly clog the sewer. When the *Ushna Guna* of *Pachaka Pitta* in the stomach is tainted, the work of *Ranjaka Pitta* in the liver is disturbed. This can be due to *Pitta Vridhi Aara* or excessive intake of alcohol. When the *Pitta* level in the liver is high, *Kapha* (water content) evaporates and damages the liver structure, causing degeneration and dryness of the liver. Sometimes, it can be blocked by *Ama* or the properties of *Dosa* can be altered by *Swabhava Satmya Viparyaya*. Dry air of *Yakrit* leads to further disorder of *Vata*. *Putrid Vata* can cause further damage to the liver through *Yakrit dosa*, altering the liver parenchyma and causing *Yakrit Kshaya* (liver cirrhosis).

Generally, people with *Kaphaja Prakriti* (a type of genetic and epigenetic factor) are more likely to consume excess fat and develop *Sthaulya* (obesity). *Sthaulya* (obesity) coupled with *Sneha Ahara* (fatty eating habits) and lack of exercise leads to an increase in *Avada Medha* (blood fats), which first affects *Kayagni* and then *Medagni Vaishamy* (alteration of fat metabolism). Malfunctioning of *Kayagni* increases *Durmeda* (FFA) and reduces the power of *Medagni*. This affects *Dawaguni* and all three *Doshas* are

stimulated and localized in the liver. Hence *Yakrit Vikara* is *Tridosaja*. *Snigdha Guna* increases, *Ushna Guna* decreases and *Kapha* production in the liver increases. Deposition of *Kapha* and *Dhurmeda* first leads to *Yakrit Vridhi*, where all the symptoms of *Kapha* become visible and our *Acharyas* describe this as *Kaphaja Udhara*, or what is called fatty liver (pure NAFLD). Further accumulation of *Dhurmeda* results in the production of *Kleda*. This *Kleda* along with *Yakri medha* (liver FFA) causes *Sopa* (inflammation of liver) in *Yakri*, which after *Dhatu paka* results in *Dhatu rupantara* (parenchymal changes in hepatic stellate cells). This condition is associated with NASH (non-alcoholic steatohepatitis). As *Yakri medha* (liver FFA) directly blocks the sinuses and sinus nodes in *Yakri*, portal hypertension and cholangitis occur. As a result, the bile ducts inside and outside the liver are blocked, bile accumulates and jaundice occurs. Further accumulation of *Pitta* further triggers the *Ushna* (heat) and *Drava* (fluid) properties of *Pitta*, which results in *Dhatu rupantara* (fibrosis), which results in *Yakri kusha* (cirrhosis of the liver), which results in *Yakri dhardhara* (hepatocellular carcinoma), or both. It is said in Ayurvedic literature that all *Udara roga* (bile diseases) are transformed into *Jala dhara*. When the entire spinal canal is affected, various complications may occur, such as: portal hypertension, variceal bleeding, hepatic encephalopathy, hepatorenal syndrome, ascites, etc.

### Clinical Diagnosis and Assessment of Chronic Liver diseases

Suspected Liver disease	Laboratory tests
Hepatitis	Hepatic function panel includes serum bilirubin, Aspartate transaminase (AST)/SGOT, Alanine transaminase (ALT)/SGPT, Alkaline phosphatase (ALP), serum proteins
Bleeding disorder	Prothombin time, platelet count
Viral hepatitis	CBC, hepatitis A virus (HAV) IgM, hepatitis B virus (HBV) core antibody IgM, HBV surface antigen (HBsAg), HCV antibodies. RT-PCR
Alcoholic liver diseases	Gamma Glutamyltransferase (GGT).
Metabolic liver diseases	Hb%, iron, copper, total iron binding capacity, and ferritin.
Auto immune liver diseases	Anti-nuclear anti body (ANA)/smooth muscle antibody (SMA), antibodies to LKM (Liver kidney microsomal antibodies), anti-bodies to SLA (Soluble liver antibodies) and immuno globin G.

Diagnosis and evaluation of liver disease can be made through a careful medical history, physical examination, and laboratory tests. Initial evaluation is

performed with liver function tests and liver ultrasound. Liver ultrasound allows visualization of the bile ducts and structures of the liver, thus ruling out

obstructive lesions. Evaluation of liver function also includes regular liver function tests (LFTs), including serum bilirubin, aspartate transaminase (AST)/SGOT, alanine transaminase (ALT)/SGPT, alkaline phosphatase (ALP), and gamma glutamyl transferase (GGT). These markers provide a relatively crude measure of liver function. Generally, serum values greater than twice the upper limit of normal are considered significant changes. Additional testing based on the results of the initial screening may include prothrombin time (PT), serum albumin, hepatitis B antibody (HBC), viral antibodies, hepatitis B surface antigen (HBsAg), hepatitis A virus (HAV) IgM, CBC, iron, copper, total iron binding capacity and ferritin. Autoimmune panel includes antinuclear antibodies (ANA)/smooth muscle antibodies (SMA), LKM antibodies (liver-kidney microsomal antibodies), SLA antibodies (soluble liver antibodies), and immunoglobulin G.

Sometimes acute deterioration superimposed on chronic liver disease, comprising acute-on-chronic liver failure (ACLF). ACLF is a distinct entity that was recently defined on the basis of acute decompensation, organ failure, and high short-term mortality. Various scoring systems have been proposed to assess the severity of Liver disorders and to predict prognosis in these patients. These are Child-Pugh score and MELD score. The age, bilirubin, international normalized ratio (INR), and creatinine score (ABIC) was proposed to risk stratify patients with CLD into low, intermediate, and high risk of death.

### Common Ayurvedic Therapeutic approaches

Ayurvedic treatment of liver diseases depends on the involvement of *Dosas* and *Srotas* with proper diagnosis. *Kaphaja*, *Madhyaja* and *Medhaja Yakrit Vridhi* can be treated by lifestyle changes, abstinence, weight loss through diet and exercise, and careful monitoring of liver function. Similarly, in early stage *Yakrit Kusha* (cirrhosis of the liver), liver damage can be minimized by treating the underlying cause with anti-inflammatory and immunomodulatory herbs, minerals and herbal-mineral preparations. Certain medicines can relieve symptoms such as itching, fatigue and pain. Milk diet and nutritional supplements may be prescribed to counter malnutrition and reduce bone weakening.

To reduce mortality, it is necessary to treat complications such as excess fluid accumulation in the body, portal hypertension, infections, upper and lower gastrointestinal bleeding, hyponatremia, renal and hepatic failure, hemorrhoids, and increased risk of cancer. In Ayurveda, specific treatments are planned for liver cells to slow or reverse the progression of fibrosis. Preliminary reports on Ayurvedic drugs to

reverse liver fibrosis have shown promising results. Ayurvedic drugs are also effective in decompensate cirrhosis. Ayurvedic herbs exhibit a wide range of biological activities, including hepatoprotection, promoting cholestasis, alleviating liver fibrosis, preventing NAFLD, and inhibiting liver cancer through anti-inflammatory, anti-oxidant, and immune-modulatory mechanisms. Ayurvedic formulations reduce liver cancer invasion, metastatic adhesions and induction of apoptosis in hepatocellular carcinoma. Ayurvedic medicines significantly increase platelets in thrombocytopenia in alcoholic liver disease and provide good results in chronic liver disease (CLD). Case study reports have shown that composite Ayurvedic treatment is excellent in treating *Asatmyaja* or *Swabhava Satmya Viparyaya Yakrit Vikara* (autoimmune liver disease).

*Snehana* and *Swedana* are effective in pruritus in CLD. *Nitya Virechana* may be recommended for patients with cirrhosis under close observation and strict electrolyte evaluation. *Vamana* was performed in Wilson's disease as it can improve metabolic disorders. According to Ayurveda, nutrition is an important factor in the treatment of liver diseases. As the liver contains Pitta, *Pittanasaka ahara* (fruits and vegetables) is recommended. Salty and acidic foods should be avoided as they increase Pitta. Milk is a complete food that contains all nutrients and is easy to digest. *Gogruta* (cow ghee) made from cottage cheese can reduce Pitta and increase Agni. *Mamsa Rasa* can be taken as a protein supplement for chronic liver disease by non-vegetarian patients. Fluid intake should be limited to 800-1200ml. *Takra* and *Rajamunda* are the best diets to balance Pitta in the stomach and reduce acidity. Patients with chronic liver disease have low or very low Agni and should eat small amounts (snacks, mini meals) 6-8 times a day. Having meals during the night is also advisable.

According to Ayurveda, exercise and yoga are also important factors in the treatment of liver disease. Exercise has already proven to be useful in both the prevention and treatment of NAFLD. Yoga exercises, due to their unique properties, have an important impact on the physical and mental stability of CLD. Yoga provides a largely untapped yet widely available resource for the treatment of liver diseases such as diabetes. Practicing yoga promotes a calmer and happier mind, improves liver function, and therefore improves overall health and creates a relaxed attitude towards life. *Pranayama*, *Kapalabhati*, *Pachimamotasana*, *Ardhamatsyendrasana*, *Dhanurasana*, *Mandukasana* are effective in NAFLD and other CLDs. Many Ayurvedic practitioners prefer decoctions of freshly prepared Ayurvedic herbs. These herbs are



highly effective and provide excellent biological effects on models.

Ayurvedic formulations such as *Pharatrikadi Kasaya*, *Potala Katulohinyadi Kasaya*, *Varnadi Kasaya*, *Indukantha Kasaya*, *Suta Sekhara Rasa*, *Agni Kumar Rasa*, *Sanjeevani Vati*, *Arogya Vardhini Rasa* have been used successfully in Non-alcoholic Fatty Liver Disease (NAFLD). *Lokanath Rasa*, *Siddha Makardhwaja*, *Punnavadi Kasaya*, *Potala Kathu Lohinyadi Kasaya*, *Vardhamana Pippali Yoga*, *Panchagovya Ghritha*, *Paurasaki Avaleha* and *Gomutra Haritaki* are also prescribed for cirrhosis of the liver. *Takra* and *Saindhava Ravana* are used for hyponatremia. *Vata Chintamani Rasa* is used for hepatic encephalopathy grade I, II and III. External preparations like *Moha Masa Taila* and *Marichadi Abhyana* are used for sarcopenia and pruritus and *Chandanadi Taila* is used for burning sensation. Hence *Panchakarma* therapy, *Rasayana* therapy, dietary therapy, Ayurvedic Yoga therapy with integrative approach and emergency treatment of liver failure are better solutions for holistic treatment of liver diseases (*Yakrit Roga*).

#### CONCLUSION

Modern medicine is still struggling to find cures for many of its liver diseases, such as metabolic dysfunction associated steatotic liver disease (MASLD, formerly (NAFLD), cirrhosis, chronic hepatitis B, and many more. The 5000-year-old system of medicine means Ayurveda or Indian Knowledge System approaches followed by the world's oldest traditions and culture, has a plethora of remedies for many liver

diseases and may offer some of its rich tradition in helping to find cures for some of the incurable liver diseases of modern medicine. Chronic liver disease can be better treated by Ayurvedic medicines. Use of hepatoprotective and hepatic stimulants proved beneficial in the treatment of CLD. The liver functions improved and the complications of CLD got reduced in severity. The general strength of the patient improved after treatment.

#### REFERENCES

1. Vaidya H. Chikitsa Chandrodaya. Madhura: Haridas and Company Ltd; 11<sup>th</sup> edition; 7<sup>th</sup> Vol. 2013. p. 908.
2. Sharma AK. Kayachikitsa, Part II. Delhi: Chaukhamba Orientalia; 2013. p. 950.
3. Vaishya S. Vanga sena. Mumbai: Khemaraja Srikrishnadas Prakashana; 1996. p. 1096.
4. Acharya S. Researches in Ayurveda. Manipal: Shripathi Acharya; 2010. p. 140.
5. Srinivasulu M. Clinical Diagnosis in Ayurveda. Delhi: Chaukhamba Sanskrit Prathishtan; 2013. p. 612.
6. Nadakarni KM. Indian Materia Medica. Mumbai: Popular prakashan private Ltd; 2002. Vol 2. p. 968.
7. Rastogi RP, Mehrotra BN. Compendium of Indian Medicinal plants. Lucknow: CDRI, New Delhi: NISC; 1960 - 1969. Vol I. p. 515.
8. Shastri RD. Chikitsadarsha Sampurna. Varanasi: Chaukhamba Vishwa Bharathi; 1980. 5<sup>th</sup> edition. p. 230.

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