



Cirrhosis of Liver in Ayurveda With Special Reference to Yakrit Vikara

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ABSTRACT

Introduction

Liver disorders include varied spectrum of disorders which includes all the conditions from acute to chronic . The liver disorders include viral hepatitis, cirrhosis , chronic liver disease, metabolic liver disease, liver cancer etc.

Cirrhosis, called "Yakrit vriddhi" in Ayurveda often associated with imbalance in pitta Dosha mainly effects metabolism and digestion. Cirrhosis is a chronic liver disease characterized by widespread fibrosis and nodular regeneration that disrupts the liver's structure and function, often resulting from chronic liver injury.

Methods

Compilation of information is done by using Relevant textbooks on the clinical pathophysiology of liver disorders and databases such as PubMed, Google Scholar, Scopus.

Result

Cirrhosis is a significant global health issue, contributing to substantial morbidity and mortality. The incidence and prevalence vary widely across regions due to differences in underlying causes such as viral hepatitis, alcohol consumption patterns, and healthcare access. The pathophysiology of liver cirrhosis in Ayurveda includes Pitta-induced inflammation and fibrosis in the liver, obstructing bile flow and impairing detoxification. This causes tissue damage (dhatu kshaya) and liver dysfunction.

Discussion

Cirrhosis of liver is a chronic disease in which there is diffuse destruction and fibrotic regeneration. Multiple cells play a role in liver cirrhosis, including hepatocytes and sinusoidal lining cells such as hepatic stellate cells (HSCs), sinusoidal endothelial cells (SECs), and Kupffer cells (KCs). Symptoms of cirrhosis vary depending on the stage of diagnosis, effectiveness of treatment, and patient compliance. . Diagnostic approaches include imaging studies, liver function tests, and liver biopsy. Management involves treating underlying causes, managing complications, and considering liver transplantation in advanced cases.

Ayurvedic management of cirrhosis focus on pacifying aggravated Pitta Dosha through many herbs and rasoushadhi which aids for detoxification and have Rasayana effect on liver.

KEY WORDS: Cirrhosis, Yakrit vriddhi, stellate cells, fibrosis, *Dhatu Kshaya*

INTRODUCTION

Cirrhosis (derived from the Greek word *scirrhus*, which means orange or tawny).¹ It is a slow progressing disease in which healthy liver tissue is replaced with scar tissue, eventually preventing the liver from functioning properly.² The commonest causes of cirrhosis world wide are alcohol abuse and viral hepatitis (B and C). One of the Leading cause of death according to ALF.

DEFINITION

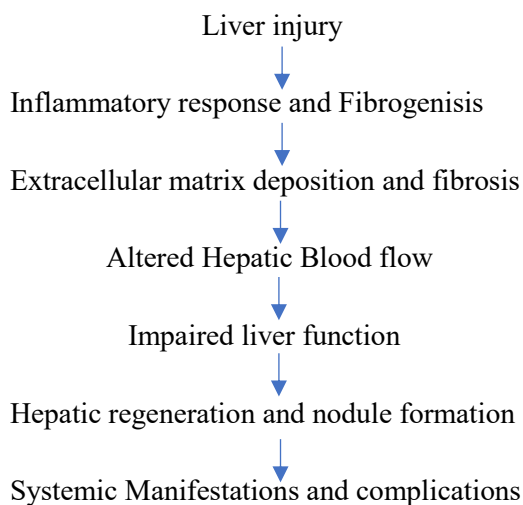
Cirrhosis of liver is a diffuse process characterized by Liver necrosis and Fibrosis.³ It's a conversion of Normal liver architecture into structurally abnormal nodules that lack normal lobular organization⁴. Its the end stage of Liver disease.

Its characterized by – Bridging fibrous septa and Parenchymal nodules.⁵ Disruption of the architecture of the entire Liver. It's a degenerative disease where *Dhatu kshaya* or *Yakrut kshaya* is seen. Cirrhosis, in Ayurveda, represents an advanced stage of *Yakrut Vikara*.

CAUSATIVE FACTORS⁶

- Infective- Viral Hepatitis B And Viral Hepatitis C
- Drug Induced- Methotextrate, 5 Flurouracil , Methyldopa, Sulphonamides.
- Metabolic Liver Disease- Wilson Disease, Cystic Fibrosis, Glycogen Storage Disorders
- Auto Immune- Autoimmune Hepatitis, Primary Biliary Cirrhosis, Primary Biliary Cholangitis
- Hepatic Venous Outflow Tract Obstruction- Bud Chiari Syndrome And Veno Occulsive Disorders.
- Cryptogenic

PATHOPHYSIOLOGY OF LIVER CIRRHOSIS⁷



CLINICAL FEATURES:⁸

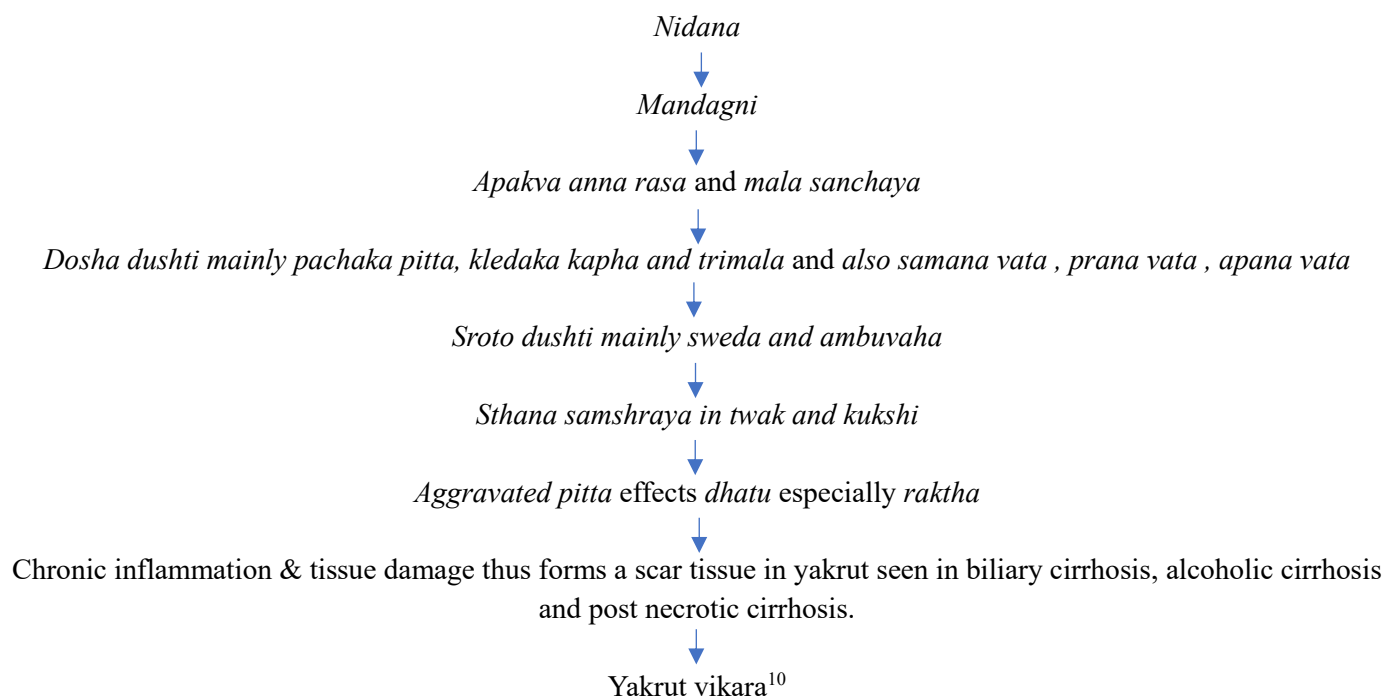
Cirrhosis is asymptomatic and often has no signs or symptoms until liver damage is extensive. Signs and symptoms may include:

1. Weakness and fatigability
2. Spider angiomas (naevi) and palmar erythema are seen in alcoholics
3. Anaemia
4. Ascites
5. Weight loss
6. Encephalopathy
7. Gastrointestinal bleeding

STAGES OF LIVER CIRRHOSIS⁹

STAGE	HISTOLOGY	CLINICAL FEATURE
COMPENSATED	<ul style="list-style-type: none"> • Presence of fibrous septa and regenerative nodules. • Minimal architectural distortion. 	<ul style="list-style-type: none"> • Asymptomatic or mild symptoms. • Liver function tests may show mild abnormalities.
DECOMPENSATED	<ul style="list-style-type: none"> • Increasing fibrosis and nodularity. • Maximum architectural distortion. 	<ul style="list-style-type: none"> • Presence of complications such as ascites, hepatic encephalopathy, variceal bleeding, jaundice, or hepatorenal syndrome.
END STAGE OF LIVER CIRRHOSIS	<ul style="list-style-type: none"> • Extensive fibrosis and regenerative nodules. • Severe architectural distortion. • Shrunken liver (nodular liver cirrhosis). 	<ul style="list-style-type: none"> • Profound liver failure with severe jaundice, marked coagulopathy, and hepatic encephalopathy. • High risk of complications such as spontaneous bacterial peritonitis (SBP), hepatorenal syndrome, and hepatocellular carcinoma (HCC). • Poor prognosis

AYURVEDIC INSIGHT



SYMPTOMS OF CIRRHOSIS OF LIVER

PITTODARA¹¹

Pitta combined with *Vata* and *Kapha* cause sagha in channels and *Agnimandya*. As a result, there are symptoms like burning feelings, fever, thirst, dizziness, fainting, and a foul taste in the mouth, as well as an appearance of a green-yellow tinge in the urine and faeces. The abdomen is delicate to the touch and prone to irritation, with prominent blue, yellow, green, or coppery lines. If not treated appropriately, it suppurates easily.

PLEEHODARA AND YAKRUTODARA¹²

The spleen, located on the left side of the abdomen, becomes displaced and enlarges because of excessive food consumption, excessive travel, and vehicle operation. strenuous exercise, over indulgence in sex, lifting heavy weights, walking a long distance, and emaciation caused by excessive administration of emetic therapy or by suffering from

chronic diseases. The spleen also gets enlarged because of the increase in the quantity of blood as a result of increase in the quantity of *Rasa*. At the start of the enlargement process, the spleen becomes stone hard [Palpation] feels like a tortoise. *Pihodara* develops as a result of the condition's gradual expansion over the *Kukshi* (sides and lower abdomen) and *Agni Adhithana* (pancreas) if treatment is neglected

JALODARA¹³

According to Acharya Charak Jalodara is an incurable disease. It is one of the complication of hepatic cirrhosis, according to modern medical science, and it can be linked to *Jalodara*. Some of the symptoms include *Aruchi* (anorexia), *Pipasa Vridhi* (excessive thirst), *Shool* (abdominal pain), *Shwaskrichchta* (dyspnoea), *Kaas* (cough) *Dorbalya* (weakness), *Udara Utsedha* (abdominal distension) *Samparivrita Nabhi* (Everted Umbilicus), *Hrida Spandan* (palpitation), Unable to walk, *Drati Shubyati Kampate* (shifting dullness).

Here, the cirrhosis of liver is having same classical symptoms as already mentioned by our Acharyas

DIAGNOSIS¹⁴

1. Liver Function Tests (LFTs)- Serum bilirubin, Serum albumin, Prothrombin time (PT)
2. Imaging Tests- Ultrasound, CT scan, MRI
3. Biopsy- Liver biopsy
4. Blood Test-Viral hepatitis serologies, Autoimmune markers
5. Endoscopy- Esophagogastroduodenoscopy (EGD)
6. Non-invasive Tests - FibroScan (Transient Elastography)
7. Blood biomarkers Tests like FibroTest and ELF (Enhanced Liver Fibrosis)

THE CHILD-TURCOTTE-PUGH (CTP) SCORE

CLINICAL VARIABLE	1 point	2 points	3 points
Encephalopathy	None	Grade 1-2 (or precipitant-induced)	Grade 3-4 (or chronic)
Ascites	None	Mild/Moderate (diuretic-responsive)	Severe (diuretic-refractory)
Bilirubin (mg/dL) in PBC or PSC	< 2	2-3	> 3
Albumin (g/dL)	> 3.5	2.8-3.5	< 2.8
Prothrombin Time (sec prolonged) or INR	< 1.7	4 4-6 1.7-2.3	> 6 > 2.3

DISCUSSION

Mandagni or *Agni dushti* is the main cause of all the diseases. How *Agni bala* is reduced in Varsha ritu the same way because of *Agni Dushti Tridosha* gets hampered. Thus the aggravated *Dohsa* further effects the *Srotas* thus become the reason for manifestation of the disease.

Prana and *agni* are considered to be the vitals of life. But when there is manifestation of disease due to perpetual *Nidana* the normal cellular life gets destroyed. Normal function of *Pachaka pitta* and *Apana vata* get altered.

Thus formed *aama/ mala*; their further derangement and *sanchaya* will pose to be an important factor for the *Samprapti*. Based on *Dosha Pradhanatha* the symptoms vary from person to person. Thus, liver cirrhosis is grossly understood as *Yakrit vikara* and can be correlated to *Pittodara* or *Yakritodara* or *Jalodara* based on the *Samprapti*.¹⁵

TREATMENT OF CIRRHOSIS OF LIVER ACCORDING TO MODERN

Alcoholic Cirrhosis	Complete abstinence from Alcohol Predinasonone and Pentoxifylline in severe cases
Biliary Cirrhosis	Ursodeoxycholic acid(10-15mg/kg), Steroids, Azathioprine(50mgtab), Colchicine (500microgram)
Variceal Bleeding	Beta-Blockers, Endoscopic Therapy: Procedures like band ligation or sclerotherapy
Non-alcoholic Fatty Liver Disease (NAFLD)	Weight Loss and Lifestyle Changes and Management of Metabolic Syndrome
Ascites	Diuretics: Drugs like spironolactone and furosemide and Paracentesis
Hepatic Encephalopathy	Lactulose: A laxative that helps reduce ammonia levels in the gut, thereby improving symptoms. Rifaximin: An antibiotic that can also help reduce ammonia-producing bacteria in the intestines.
Liver Transplantation	<ul style="list-style-type: none"> Indications: Severe cirrhosis with liver failure or complications that can't be managed effectively with other treatments.

CHIKITSA ACCORDING TO AYURVEDA

Chikitsa in Ayurveda for *Udara roga* include *Agnideepana*, *Nitya Virechana* and *Yakrituttejjak* dravyas . As there is dosha dushti , specially Pitta, *Virechana* is the line of treatment .Since *Srotorodha* or the obstruction to srotas , *Srotoshodhana* has to be done by using the *Teekshna* and *Ushna gunas* dravyas .

KASHAYA /SWARASA	Amruttotara Kashaya /Bringaraja + Draksha swarasa /Dashamula Gulucyadi Kashaya /Patola katurohinyadi Kashaya
ARISHTA/ASAVA	Kumaryasava /Chitrakasava /Gandirasava
CHURNA	Avipattikara churna / Narayana churna / sudarshana churna
GULIKA/VATI	Chandraprabha vati/siva Gulika/gokshuradi guggulu
GRHITA	Guggulu tikthaka grhita/mahatikthaka grhita
LEHYA	Amalakki rasayana/vidaryadi leha/dashamula haritaki leha
BHASMA	Annabedhi sindhuram/swarnamakshika Bhasma
DHATU/LOHA PREPARATION	Dhatri loha/yakridri vati/vardhamana pippali rasyana

CONCLUSION

In Ayurveda, *Udara roga* is not only limited to accumulation of fluid in peritoneal cavity but also includes gaseous Distention, Hepatosplenomegaly of Varied etiology , Intestinal obstruction , Perforation and in advanced stage even Cirrhosis .Special emphasis via a treatment is given keeping in mind the areas including cause, pathology, site involved, signs and symptoms.

The origin and cause of the disease is saptavida vyadhi. Hence proper understanding of Samutthana vishesha i.e. understanding the etiological factors will help in proper diagnosis which plays an important role in promotive, preventive, curative aspects. Thus, understanding the pathophysiology is crucial for effective diagnosis and management of liver disorders.

Ultimate outcome of *Udara roga* when not treated leads to *Jalodara* which has exact clinical manifestation as that of Cirrhosis. Following *Pathya* and knowing what is *Apathya* will keep the person away from all sorts of disease and their dreadful complication.

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