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RESEARCH ARTICLE

AYURVEDIC PERSPECTIVE AND CLINICAL STRATEGIES IN THE MANAGEMENT OF CHRONIC LIVER DISORDERS: A REVIEW

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Abstract: Chronic Liver Disease (CLD) represents a major global and national health burden, with an increasing prevalence in India driven by metabolic, viral, alcoholic, and drug-induced etiologies. Among these, Non-Alcoholic Fatty Liver Disease (NAFLD) has emerged as the leading cause, affecting nearly one-third of the Indian population. Pathophysiologically, CLD is characterized by chronic hepatic inflammation, oxidative stress, and progressive fibrosis leading to cirrhosis and hepatic failure. From the Ayurvedic standpoint, the Yakṛt—the seat of Rañjaka Pitta and Raktavaha Srotas Mūla Sthāna—plays a pivotal role in the transformation of Rasa Dhātu into Rakta Dhātu. Chronic liver pathology can thus be interpreted as Pitta Dushti (metabolic and inflammatory imbalance), Vāta Anubandha (degenerative changes), and Kapha Sanchaya (fibrotic and structural alteration), culminating in Yakṛt Dushti. Classical references describe hepatic disorders under entities such as Kamala, Kumbhakamala, Pittaja Udara, and Madatyaya, paralleling modern hepatic conditions like hepatitis, cirrhosis, and ascites. Ayurvedic management emphasizes Doṣa-Duṣya Samprāpti Vighatana through Śodhana (especially Virechana and Basti), Śamana, Rasāyana therapy, and Pathya-Apathya regimens aimed at restoring Agni and balancing Pitta and Rakta Dhātu. Herbal formulations such as Punarnavādi Kaṣāya, Arogyavardhinī Vaṭi, Bṛṅgarājāsava, Rohitakāriṣṭa and Various flower formulations as explained in Raktapitta are highlighted for their hepatoprotective actions. Integration of Ayurvedic pathophysiology with modern hepatology offers a promising framework for preventive, promotive, and therapeutic strategies in CLD. This review synthesizes epidemiological, pathophysiological, and therapeutic insights from both systems, highlighting gaps and directions for future integrative liver research.

Keywords: Chronic Liver Disease, Non-Alcoholic Fatty Liver Disease, *Yakṛt*, *Rañjaka Pitta*, *Raktavaha Srotas*, *Kamala*, *Virechana*, *Rasāyana*, Ayurveda, hepatoprotection.

INTRODUCTION

Chronic liver disease (CLD) is now recognised as a major public health challenge globally and in India. In the Indian context, the burden is increasing due to multiple aetiologies spanning metabolic, viral, alcoholic and drug-induced causes. Among these, non-alcoholic fatty liver disease (NAFLD) has emerged as the most prevalent form. Studies from India report an estimated pooled prevalence of NAFLD in adults of 38.6% (95 % CI 32.0-45.5) and among children 35.4 % (95 % CI 18.2-54.7). [i] Other analyses indicate a range of approximately 9 % to 32 % in the general Indian adult population. [ii] [iii] In addition, Indian meta-analyses comment on a wide variation across studies, owing to heterogeneity of population, diagnostic tools and referral biases.[iv] Beyond NAFLD, alcohol-related liver disease continues to contribute significantly to cirrhosis in India, and viral hepatitis (hepatitis B and C) as well as drug-induced liver injury add further layers to the burden of CLD.

Pathophysiologically, CLD is defined as a progressive hepatic injury enduring six months or more, during which repeated or sustained insults lead to fibrosis (scarring) and ultimately cirrhosis. [v] Clinical manifestations may range from mild, non-specific symptoms such as fatigue, nausea or mild jaundice, to advanced complications including portal hypertension, ascites, hepatic encephalopathy and liver failure. The key pathologic hallmark in chronic liver disease is persistent inflammation (driven by metabolic, viral or toxic insults), activation of hepatic stellate cells, deposition of extracellular matrix leading to fibrosis, regenerative nodules and architectural disruption of the liver resulting in cirrhosis. In early stages fibrosis may be reversible, but once cirrhosis sets in, functional hepatocyte mass declines and complications ensue. This mechanistic understanding underscores the urgency of early detection and intervention.

From an Ayurvedic perspective, the hepatic system is conceptualised in terms of the organ termed Yakṛt, which is one of the fifteen koṣṭhaṅgas (abdominal organs) and regarded as the major site of Rañjaka Pitta[vi] and the root of rakta-vahā srotas mūla sthaana[vii] and of raktadhārā kālā.[viii] Then Yakṛt is described as mātṛjā avayava[ix] and śonitajā avayava [x]which emphasises its origin and close association with the blood (rakta) tissue. In classical texts, disorders of Yakṛt are included under headings such as Yakṛt-vr̥ddhi (hepatomegaly) and Yakṛt-kṣhaya (atrophy/cirrhosis) and also among ṛaktapitta and kamala (jaundice) categories. Accordingly, the Ayurvedic functional physiology of

Yakṛt emphasises its role in transforming rasa dhātu into rakta dhātu via the action of ranjaka pitta, storing and distributing blood, and regulating channels (srotas) of rakta and mamsa. [xi]The pathogenesis of chronic liver disease from an Ayurvedic lens can be viewed as the vitiation of Pitta (inflammation/metabolism), Vata (degeneration/regeneration impairment) and Kapha (stagnation/structural change) — a tridośic involvement culminating in structural and functional disruption of Yakṛt, akin to modern-day cirrhosis.

Despite rising prevalence and seriousness of chronic liver disease, a number of research gaps remain. First, although epidemiological data are mounting for NAFLD and metabolic liver disorders in India, many studies are hospital-based, focus on high-risk groups, and use heterogeneous diagnostic criteria limiting generalisability.[xii] Second, the translation of Ayurvedic concepts (e.g., Yakṛt-vr̥ddhi, Raktavaha srotas dushti) into operational clinical constructs and biomarkers remains under-explored. Third, while conventional hepatology emphasises pharmacotherapy, lifestyle and metabolic control, there is limited systematic review of Ayurvedic therapeutic strategies (Shodhana, Shamana, Rasayana) in chronic liver disorders, particularly in the Indian context. Fourth, integrative models combining Ayurvedic and modern hepatology remain scant. Therefore, a comprehensive review that synthesises Ayurvedic perspective, correlates with contemporary pathophysiology, and outlines clinical strategies is timely and warranted.

In view of this, the present review aims to (i) summarise the epidemiological burden of chronic liver disorders in India, (ii) map the pathophysiology of CLD from both modern and Ayurvedic paradigms, (iii) collate clinical strategies from Ayurveda (including diet, lifestyle, Panchakarma, herbal interventions) relevant to CLD, and (iv) identify gaps and propose future research directions. In doing so, it seeks to provide an integrated framework for practitioners of Ayurveda and modern hepatology to approach chronic liver disorders.

Non-Alcoholic Fatty Liver Disease (NAFLD) and Pathogenesis of Chronic Liver Disease (CLD)

Non-Alcoholic Fatty Liver Disease (NAFLD), often termed "Fatty Liver," is characterized by the accumulation of macrovesicular fat within hepatocytes (hepatic steatosis) without significant alcohol intake or viral hepatitis. In its initial stages, NAFLD manifests as simple steatosis—deposition of fat droplets in hepatocytes—but with progression, inflammation and hepatocellular injury ensue, leading to non-alcoholic steatohepatitis (NASH), fibrosis, and ultimately cirrhosis. The central mechanism involves persistent insulin resistance and hyperinsulinemia, which promote continuous synthesis and reduced oxidation of triglycerides. This metabolic dysregulation causes excessive lipid accumulation in hepatocytes, mitochondrial dysfunction, oxidative stress, and subsequent inflammatory cytokine release, initiating hepatocellular injury and fibrogenesis.

As the disease advances, the fibrotic process and nodular regeneration alter the hepatic architecture, increasing intrahepatic vascular resistance and resulting in portal hypertension—a state where blood flow through the portal vein is impeded. This elevated portal pressure leads to severe complications such as the development of varices, ascites, and splenomegaly. With progressive fibrosis, the liver's synthetic and detoxification capacities become impaired, leading to hypoalbuminemia, coagulopathy, and accumulation of toxic metabolites such as ammonia. The inability of the liver to effectively eliminate these toxins contributes to hepatic encephalopathy, characterized by neuropsychiatric disturbances ranging from mild confusion to coma.

The pathogenesis of CLD, therefore, represents a continuum of hepatic insult and repair imbalance, where chronic inflammation (predominantly Pitta-mediated), degenerative changes (Vata involvement), and regenerative fibrosis (Kapha component) culminate in irreversible architectural distortion of the liver. Understanding this sequence highlights key therapeutic targets—reducing metabolic stress and inflammation, enhancing hepatic regeneration, and preventing fibrogenesis—which align closely with Ayurvedic treatment principles emphasizing *dosha samyata*, *ama pachana*, *rasayana chikitsa*, and protection of *yakrut* as the vital organ of *raktavaha srotas*.

Pathogenesis of Liver Disorders: An Ayurvedic Perspective

The Ayurvedic understanding of disease pathogenesis (*Samprapti*) provides a multidimensional framework that integrates causative factors (*Nidana*), site of manifestation (*Adhisthana*), and the nature of the disease process (*Vikara Prakriti*). *Charaka Samhita* describes this fundamental triad as *Trividha Boddhya Samgraha — Samutthana Visheshah* (etiological factors and origin), *Sthananthargata* (locus of disease), and *Vikaraprakriti* (pathological expression). Understanding these aspects enables the physician to plan *Karma* (therapeutic interventions) appropriately and rationally.[xiii]

1. *Samutthana Visheshah* (Etiological Basis)

The *Samutthana Visheshah* of liver disorders primarily involves the aggravation of *Pitta dosha*—the principal *dosha* governing *Agni* (metabolic fire), *Ranjana* (haemopoiesis), and *Paka kriya* (biotransformation). Excessive intake of *Pitta-prakopaka ahara-vihara*, such as alcohol, spicy and fried foods, irregular diet, psychological stress, and chronic infections, leads to *Pitta dushti*. Additionally, *Vata* vitiation occurs due to physical and emotional strain, viral or autoimmune causes, while *Kapha* aggravation results from sedentary lifestyle, obesity, and excessive intake of heavy,

unctuous foods. *Rakta dushti* also plays a critical role as mentioned in *Vidhi Shonitiya Adhyaya*, linking hepatocellular dysfunction to deranged *Raktavaha srotas* physiology.[xiv]

2. *Sthananthargata* (Localization of Dosha Imbalance)

Once vitiated, *doshas* localize at the *Sthana* of *Ranjaka Pitta*[xv], the primary site being *Yakrut* (liver) and *Pleeha* (spleen). Both these organs are described as *Rakta-vaha srotasa moola sthana*[xvi], signifying their fundamental role in *Rakta dhatu* metabolism. Alterations in *Ranjaka pitta* and *Rakta dhatvagni* disrupt *Rasa-Rakta parinama* (nutrient and blood tissue metabolism), leading to toxic accumulation (*Ama*) and subsequent pathological manifestations.

Ayurvedic texts describe that disorders dominated by *Pitta* and *Kapha Doshas* arise from the *Amashaya*. As mentioned in Ashtnag Hridaya[xvii], the *Amashaya*, along with the *Yakrit* and *Pleeha*, serves as the site of *Ranjaka Pitta*. [xviii] This highlights the intrinsic connection between the gastrointestinal tract and the liver — a concept that closely parallels the modern understanding of the gut–liver axis in hepatology.

The *Sthana Samshraya* or localization of *vitiated doshas* in the *Yakrut* leads to structural and functional alterations analogous to hepatocellular injury and fibrosis in chronic liver disease (CLD).

3. Vikaraprakriti (Nature of Pathological Process)

From an Ayurvedic pathological standpoint, *Chronic Liver Disorders (CLD)* are predominantly *Pittaja Vyadhi*, often associated with *Vata* and *Kapha anubandha*. The *dosha-dushya samurchchana* at the hepatic site manifests as follows:

- ***Pittaja dominance:*** Pitta influences and enforces its *ushna, teekshna, sukshma* properties over *yakrt* [xix] and manifests *daha, ushna, paka, sweda, klama, haridra-varnata* of skin, nails, eyes, urine, and stool — features characteristic of *Kamala*[xx], *Pittaja Jvara*[xxi] and *Pittaja Udara*.[xxii]
- ***Vata anubandha:*** Vata influences and enforces its *ruksha, laghu, vishada* properties over *yakrt* which leads to cellular degeneration, fibrosis, and functional deterioration reflected in *rukshata, shoola, bhramsha, stambha,* and *sankocha,* [xxiii]similar to cirrhotic and decompensated states.
- ***Kapha anubandha:*** Kapha influences and enforces its *Snigdha, guru, sthira, picchila, Shukla* properties over *yakrt* which results in *medo-rasa sangraha, snigdha, guru,* and *manda vyapara* in *rasa* and *rakta dhatus*, corresponding to steatosis and Non-Alcoholic Fatty Liver Disease (NAFLD).[xxiv]

RESULTS AND OBSERVATIONS:

***Dosha-Dhatu-Guna* Correlation in Hepatic Pathology**

Dosha	**Dominant *Guna***	**Affected *Dhatu***	**Clinical Correlate**
Pitta	*Ushna, Tikshna, Visra, Peeta varna*	*Rakta*	Acute and Chronic Hepatitis
Kapha	*Snigdha, Picchila, Guru, Sthula*	*Rasa, Rakta, Meda*	NAFLD, Chronic Hepatitis
Tridosha (Vata-Pitta pradhana)	Combined *Ruksha, Ushna, Snigdha, Guru*	*Rasa, Rakta, Mamsa, Meda*	Liver Cirrhosis
Pitta (Vata-Kapha anubandhi)	*Drava, Kleda*	*Udaka, Rakta, Mamsa*	Ascites
Tridosha (Raja-Tama anubandha)	*Rajas, Tamas*	*Rasa, Rakta, Sannyavaha srotas*	Hepatic Encephalopathy

Classical References of Liver Disorders in Ayurvedic Texts

The *Ayurvedic Samhitas* do not describe liver diseases as a separate nosological entity; however, multiple clinical conditions described across *Charaka Samhita* and other classical texts correspond closely to hepatic dysfunction seen in modern hepatology. The disorders involving *Yakrit* and *Pleeha* are primarily found under the descriptions of *Pittaja Vyadhis* such as *Kamala*, *Pandu*, *Raktapitta*, *Udara*, *Atisara*, *Visarpa*, and *Madatyaya*. The *Trividha Boddhya Samgraha* principle guides us to study such conditions by identifying their *Samutthana Visheshah*, *Sthana*, and *Vikaraprakriti*.[xxv]

In clinical practice, liver-related disorders may present in the OPD of an *Ayurvedic Chikitsaka* under broad categories such as:

- Raised bilirubin levels (*Haridra–Harita varnata* of *Tvak*, *Netra*, *Nakha*, *Mutra*, *Purisha*)
- Signs of disturbed digestion and metabolism (*Agnimandya*, *Ama utpatti*, *Rasa-Rakta dushti*)

Raised Bilirubin and *Haridra–Harita Varnata* in Classical Texts

Elevated serum bilirubin corresponds to the *Haridra–Harita varnata* (yellowish-green discoloration) described in various *Pittaja* and *Sannipataja* conditions. These include the following textual references:

Condition (Classical)	Reference (Charaka Samhita)	Key Features / Modern Correlate
Pittaja Jvara	*Ch. Ni. 1/24*	*Haridra–harita varnata* of eyes, nails, urine, stool, skin; high-grade fever, nausea, burning sensation — correlates with acute hepatitis or febrile jaundice.
Sannipataja Jvara	*Ch. Ch. 3/98*	Severe *Pittaja jvara* with *Haridra mutra netratva*, *daha*, *trishna*, *bhrama* — may represent fulminant hepatic failure or systemic inflammatory states.
Asadhya Raktapitta	*Ch. Ch. 4/20*	*Haridra-neela-harita-tamra varna* of blood; *kshina vyakti* — comparable to coagulopathy, thrombocytopenia, and bleeding tendencies in chronic liver disease.
Pittaja Udara	*Ch. Ch. 13/28*	*Neela–peeta–haridra–harita varna* of abdominal veins, *daha*, *svidya*, *klam*, *mridu sparsha* — correlates with ascites due to hepatic fibrosis or cirrhosis.
Pittaja Arsha	*Ch. Ch. 14/14*	*Peeta nakha–netra–twak–mutra–purisha* with *pipasā*, *jvara*, *tamak*, *bhojanadvesha* — suggests portal hypertension and hemorrhoids in chronic hepatitis.
Pandu Roga (Samanya Samprapti)	*Ch. Ch. 16/11–12*	*Pandu–haridra–harita varna* of skin — comparable to hemolytic anemia and unconjugated hyperbilirubinemia (e.g., Gilbert's, Crigler–Najjar).
Kamala	*Ch. Ch. 16/34–35*	*Peeta–harita varna*, *jvara*, *daha*, *trishna*, *moorchha*, *peeta mutra–shakrit* — corresponds to acute viral hepatitis or obstructive jaundice.
Pittaja Atisara	*Ch. Ch. 19/6*	*Haridra–harita–nila varna* of stool, *trishna*, *daha*, *moorchha* — resembles infective diarrhea with hepatobiliary involvement.
Sannipataja Atisara	*Ch. Ch. 19/9*	*Haridra–harita–nila–anjishtha varna* of stool, *vedana* — suggests inflammatory bowel disease with metabolic disturbance.
Pittaja Visarpa	*Ch. Ch. 21/32*	*Haridra–harita netra–mutra–varchas* with *daha*, *jvara*, *moorchha*, *bhrama* — comparable to infective hepatitis with septicemia or hepatic encephalopathy.
Pittaja Madatyaya	*Ch. Ch. 24/94*	*Harita varna* of body, *trishna*, *daha*, *atisara*, *bhrama* — features of alcoholic hepatitis and Alcohol-associated Liver Disease (ALD).
Pittāvṛta Apāna	*Ch. Ch. 28/230*	*Haridra mutra–varchas*, *tapa gudamedhra yoḥ*, *rajas ativartana* — denotes obstructive hepatopathy or cholestasis with menstrual irregularity.

Representative Classical Descriptions

These descriptions indicate that *Haridra–Harita varnata*, *trishna*, *daha*, *atisara*, *moorchha*, *bhrama*, and *pandu* are consistent diagnostic indicators (*Lakshanas*) of *Yakrut dushti* and *Pittaja vyadhi*. Collectively, they outline the Ayurvedic pathogenesis of hepatic disorders involving *Pitta dushti*, *Rakta vaha srotodushti*, and *Ama utpatti*. The detailed symptomatology documented by *Acharya Charaka* aligns remarkably with the clinical presentations of modern hepatopathies ranging from steatosis and hepatitis to cirrhosis and hepatic encephalopathy.

Representative Disease Correlations and Ayurvedic Textual References

According to classical Ayurvedic texts, chronic liver disorders and their complications such as ascites (*Udara*), hepatosplenomegaly, and portal hypertension correspond to multiple clinical entities described in *Charaka Samhita*, *Sushruta Samhita*, and other treatises. The following conditions share close pathological resemblance with modern hepatic disorders:

Here's your content neatly organized into a table format for better readability and reference:

Classical Condition	Reference (Samhita)	Classical Description (Sanskrit)	Classical Translation / Meaning	Clinical Correlation (Modern Interpretation)
Pittaja Jvara	*Charaka Nidanasthana 1/24*	*…haritahāridratvaṁ nakha-netra-vadana-mūtra-purīṣa-tvacām…*	Yellowish discoloration of nails, eyes, face, urine, stool, and skin — diagnostic of *Pittaja Jvara*.	High-grade febrile illness with raised bilirubin — seen in acute hepatitis, biliary obstruction, or infectious diseases like yellow fever and leptospirosis.
Sannipataja Jvara	*Charaka Chikitsasthana 3/98*	*hāridra-mūtra-netratvaṁ dāhas-triṣṇā bhramo'ruchiḥ*	Yellow coloration of urine and eyes, burning sensation, thirst, giddiness, anorexia.	Reflects severe hepatic and systemic inflammatory states.
Asādhyā Raktapitta	*Charaka Chikitsasthana 4/20*	*hāridra-nīla-harita-tāmrair varṇair upadrutam*	Multi-colored discoloration due to derangement of *Rakta Dhatu* and *Pitta Dushti*.	Mimics advanced coagulopathic states and jaundice seen in Chronic Liver Diseases (CLD).
Pittaja Udara	*Charaka Chikitsasthana 13/28*	*…dahyate, dūyate, svidyate…mṛdu sparśaṁ kṣipra pākaṁ ca bhavati; etat pittaudaram iti vidyāt.*	Describes abdominal distension with burning, tenderness, and rapid fluid accumulation.	Corresponds to ascitic decompensation in hepatic disorders.
Pittaja Madatyaya	*Charaka Chikitsasthana 24/94*	*vidyād dharita-varṇasya pitta-prāyaṁ madātyayam*	Alcohol-induced *Pitta* aggravation leading to yellow-green discoloration and systemic symptoms.	Analogous to alcoholic hepatitis and hepatic steatosis.

Classical Disease Entity	Textual Reference	Modern Correlation
Kamala	*Charaka Chikitsa 16*	Acute or chronic hepatitis, hepatomegaly, splenomegaly
Kumbhakamala	*Charaka Chikitsa 16/17*	Chronic hepatitis, post-hepatitic sequelae
Udara	*Charaka Chikitsa 13*	Ascites, portal hypertension, hepatosplenomegaly
Shotha	*Charaka Sutra 12*	Ascites, pedal edema, hepatosplenomegaly
Gulma	*Charaka Chikitsa 5*	Abdominal tumor, abscess, cystic pathology, venous obstruction (portal/splenic vein thrombosis)
Madatyaya	*Charaka Chikitsa 24*	Alcoholic liver disease, *Vatavyadhi*, *Vataj Grahani*
Pandu	*Charaka Chikitsa 16*	Hemolytic anemia, splenomegaly, hepatomegaly
Pittaja Jvara	*Charaka Nidana 1/24*	Acute infective hepatitis
Grahani	*Charaka Chikitsa 15*	Digestive/metabolic dysfunctions
Raktapitta	*Charaka Chikitsa 4/20*	Bleeding disorders, esophageal varices, portal hypertension
Pittaja Arsha	*Charaka Chikitsa 14*	Inflamed hemorrhoids associated with hepatic congestion
Mada, Moorchha, Sanyasa	*Charaka Sutra 24*	Hepatic encephalopathy
Vatarakta	*Charaka Chikitsa 29*	Obstructive vascular pathology such as portal/splenic vein thrombosis

DISCUSSION

Ayurvedic Treatment Pathway for Chronic Liver Disorders (CLDs) and Related Complications such as Ascites

Principles of Treatment

The treatment of chronic liver disorders in Ayurveda is based on *Dosha–Dushya Samprapti Vighatana* and aims to restore the *Agni*, correct *Pitta Dushti*, and support *Rakta* and *Mamsa Dhatu*. The following are the core treatment principles derived from *Vidhi Shonitiya Adhyaya, Raktapitta, Gulma, Udara, Shotha, Grahani, Pandu, Kamla* and *Kumbhakamala Chikitsa*.

1. Shodhana Chikitsa (Bio-purificatory Measures)

- Virechana Karma: Primary line of purification for Pitta Dushti and hepatic detoxification.
  - Nitya Virechana: Administration of Arogyavardhini Vati, Kampillaka Churna, or milk-based gentle purgation.
  - Ksheera Virechana: Daily administration of Go Ksheera (1–1.5 L/day) in Udara Roga.
  - Mridu Virechana: Decoction of Indravaruni, Triphala, and Nishottara (80 ml OD/BD).
  - Teekshna Virechana: Icchabhedi Rasa for patients with good physical strength.
  - Kashayam for Virechana: Gandharva Hastyadi Kashaya, Aragvadha Kapila Vati.
- Basti Chikitsa: Mentioned in Vidhi Shonitiya Adhyaya and Kumbhakamala Chikitsa for chronic Pittaja and Raktaja disorders.
  - Yapana Basti and Ksheera Basti are recommended in Kumbhakamala and Udara Roga for hepatic nourishment and Vata-Pitta balance.

2. Shamana Chikitsa (Palliative Measures)

- Shadvidha Upakrama: Langhana and Rukshana are indicated initially; Snehana or Brimhana is instituted later based on Agni Bala and hepatic strength. Swedana and Ushna–Teekshna drugs are to be used cautiously or avoided.
  In advanced or depleted conditions, Santarpana (nourishing therapy) is preferred.

Formulations Used in CLD and Ascites

a. Choorna (Powders)

- Avipattikara Churna (Pitta-Virechaka, Nishottara dominant)
  - Narayana Churna [xxvi]
  - Hingvadi Churna[xxvii]
  - Vyoshadi Sattu Churna [xxviii]

Single drugs: Indravaruni, Nishottara, Pippali, Punarnava, Guduchi, Haridra, Triphala, Amalaki, Bhringaraja, Sharapunkha, Rohitaka, Kirat Tikta, Kutaki.

b. Kashaya (Decoctions)

Punarnavadi, Patola Katurohinyadi, Varunadi, Chitraka Granthikadi, Vasa Guduchyadi, Manjishthadi, Chirubilwadi Kashaya.

c. Rasa Kalpa (Herbo-Mineral Preparations)

Arogyavardhini Vati, Pravala Panchamruta Rasa, Chandraprabha Vati, Shankha Vati, Chandrakala Rasa, Pravala Pishti, Gandhaka Rasayana, Panchamruta Parpati. *d. Asava–Arishta-* Pippalyasava, Rohitakarishta, Bhringarajasava, Drakshasava. *Ghrita Kalpa-* Pancha Tikta Ghrita, Triphala Ghrita, Dadimadi Ghrita. *f. Loha Kalpa-* Navayasa Loha, Punarnava Mandura, Kautajadi Loha (Pandu Adhikara). *g. Rasayana Dravya-* Shilajatu, Pippali — *for rejuvenation, hepatoprotection, and restoration of* Agni*h. Pushpa varga prayoga*

In Charaka Samhita, particularly in the Raktapitta Chikitsa Adhyaya, numerous Pushpa Varga Dravyas (flower-based herbs) are mentioned for their Pittashamaka, Raktaprasadaka, and Raktasthambhaka properties. These include Kamala (Nelumbo nucifera), Utpala / Nilotpala (Nymphaea stellata), Madhuka (Madhuca longifolia), Dhataki (Woodfordia fruticosa), Priyangu (Callicarpa macrophylla), Kovidara (Bauhinia variegata), Palasha (Butea monosperma), Kadamba (Neolamarckia cadamba), Gambhari (Gmelina arborea), Dadima (Punica granatum), Malati (Jasminum grandiflorum), Gulab (Rosa centifolia), Shirish (Albizia lebbeck), and others. These Pushpa Dravyas, by virtue of their Sheeta Veerya, Tikta-Madhura Rasa, and Raktapittahara actions, help pacify aggravated Pitta and purify *Rakta Dhatu*. Hence, they can be effectively utilized in the management of Chronic Liver Diseases *(CLD)* where Pittaja Dushti, Rakta Dushti, and Ama Sanchaya play a crucial role in the pathogenesis. Their hepatoprotective, anti-inflammatory, and antioxidant potential as per modern pharmacology further supports their therapeutic use in CLD management. Anti haemorrhagic activity of Dadima pushpa (Punica granatum)[xxix], procoagulant properties of Chinese Rose (Rosa chinensis) [xxx] and hepatoprotective effects of Zandu or Marigold (Tagetes erecta)[xxxi] are well studied and documented. [xxxii]

Pathya–Apathya (Dietary Regimen)

Ksheera: Daily intake of 2–3 liters of cow's milk in ascitic conditions for Mridu Virechana and nutrition. *Gomutra:* Useful in Kapha Pradhana CLD and NAFLD during winter in strong individuals. *Takra:* Indicated in *Agnimandya and Udara Roga*, preferably in winter after removal of butter. Salt Restriction: Complete avoidance

of salt in ascites. Fluid Restriction: Water intake should be minimal or completely withheld in advanced ascitic stages.

Integration with Modern Supportive Care
For patients requiring concurrent modern therapy, the following may be continued under supervision:

- **Diuretics:**
  Tab Dytor Plus 10 (Torasemide 10 mg + Spironolactone 50 mg), or
  Tab Lasilactone 50 (Spironolactone 50 mg + Furosemide 20 mg), or
  Tab Lasix 40 (Furosemide 40 mg).
  These help reduce fluid overload while maintaining electrolyte balance.
- **Supplementation:** Vitamin B12, Vitamin C.
- **Injection Vitamin K:** Indicated if PT–INR is elevated or platelet count is low.

CONCLUSION

- Chronic liver disease (CLD) represents a growing health concern in India, driven by the rising prevalence of NAFLD, alcohol-related disorders, viral hepatitis, and metabolic dysfunction. Modern hepatology views CLD as a continuum of inflammation, oxidative stress, and fibrotic remodeling that culminates in cirrhosis and liver failure. Ayurveda, meanwhile, conceptualizes hepatic disorders under the framework of *Yakṛt dushti*, *Raktavaha srotodushti*, and *Pittaja vyadhi*, with vitiation of *Pitta* (metabolic and inflammatory), *Vata* (degenerative), and *Kapha* (stagnant and fibrotic) doshas.

The Ayurvedic approach emphasizes *Samprapti Vighatana* (breaking the pathogenesis) through *Shodhana* (Virechana, Basti), *Shamana* (palliative herbs and formulations), and *Rasayana Chikitsa* (rejuvenation and hepatoprotection), along with strict dietary and lifestyle regulation. Use of various formulations from flowers, Classical formulations such as *Arogyavardhini Vati*, *Punarnavadi Kashaya*, *Bhringarajasava* and *Navayasa Loha* have demonstrated hepatoprotective and detoxifying potential in both traditional use and emerging pharmacological evidence.

An integrative framework combining Ayurvedic and modern hepatology—focusing on early diagnosis, metabolic correction, detoxification, and hepatic regeneration—holds great promise for the management of CLD. Future research should focus on correlating Ayurvedic diagnostic constructs with modern biomarkers, standardizing clinical protocols, and conducting evidence-based trials to validate the classical therapeutic principles of *Yakrut Rakshana* (liver protection) and *Raktavaha Srotas Shodhana*.

Thus, Ayurveda offers a holistic and rational approach for preventing, managing, and potentially reversing the early stages of chronic liver disease through *Agni-sandharana*, *Dosha-samyata*, and *Rasayana chikitsa*—reaffirming its relevance in contemporary hepatology.

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