

## AYURVEDIC MANAGEMENT OF LIVER DYSFUNCTION: A CLINICAL CASE REPORT

Acharya Manish<sup>1</sup>, Dr. Gitika Chaudhary<sup>\*2</sup>, Dr. Richa<sup>3</sup>, Dr. Navneet Kaur<sup>4</sup>, Dr. Tanu Rani<sup>5</sup>

<sup>1</sup>Director, Meditation Guru, Jeena Sikho Lifecare Limited, India.

<sup>2</sup>Senior Consultant, General Surgeon, BAMS, PGDIP, PGDGS, MS (Ayurveda), Jeena Sikho Lifecare Limited, India.

<sup>3</sup>Senior Research Officer, BAMS, PGDIP, CICR, CAIM, CMW, Jeena Sikho Lifecare Limited, India.

<sup>4</sup>Consultant, BAMS, PGDIP, Jeena Sikho Lifecare Limited Clinic Sangrur, Punjab, India.

<sup>5</sup>Research Associate, BAMS, Jeena Sikho Lifecare Limited, India.

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\*Corresponding Author: Dr. Gitika Chaudhary

Senior Consultant, General Surgeon, BAMS, PGDIP, PGDGS, MS (Ayurveda), Jeena Sikho Lifecare Limited, India.

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### ABSTRACT

**Background:** Liver diseases are prevalent and often present with a spectrum of clinical manifestations, ranging from digestive disturbances to systemic symptoms. The present case highlights the successful management of a 30-year-old male with abnormal liver function tests (LFTs) and associated symptoms, using an integrative approach of *Ayurveda*-based interventions. **Case Presentation:** A 30-year-old male presented with complaints of chronic constipation, bloating immediately after meals, decreased appetite, disturbed sleep, acidity, generalized body pain, and lethargy. Initial investigations revealed elevated bilirubin, SGOT, and SGPT levels, confirming hepatic dysfunction. Based on *Ayurvedic* principles, the patient was diagnosed with *Yakrit Vikara* (liver disorder) associated with *Agni Dushti* (digestive fire impairment) and *Vata-Pitta* imbalance. **Intervention and Outcome:** The patient was managed with a comprehensive *Ayurvedic* regimen, including *Ayurveda* formulations having ingredients such as *Kutki* (*Picrorhiza kurroa*), *Bhumyamalaki* (*Phyllanthus niruri*), and *Guduchi* (*Tinospora cordifolia*), dietary modifications emphasizing liver-friendly and digestion-supportive foods, and lifestyle adjustments incorporating regular meal timings, yoga, and *pranayama*. Over a treatment period of three months, there was significant clinical improvement, with resolution of symptoms and normalization of appetite, digestion, and sleep. Post-treatment LFT showed normalization of bilirubin, SGOT, and SGPT levels, indicating a marked improvement in liver function. **Conclusion:** This case demonstrates the efficacy of *Ayurveda* in managing liver dysfunction holistically through personalized interventions targeting the root cause of the disease. The outcomes emphasize the importance of integrating *Ayurveda*-based approaches into liver disease management for symptomatic relief and biochemical improvement.

**KEYWORDS:** *Ayurveda*, Liver Function Test, *Yakrit Vikara*, *Ayurvedic* Medicine, Diet and Lifestyle, Case Report.

### INTRODUCTION

Liver diseases are a significant global health concern, contributing to substantial morbidity and mortality rates.<sup>[1]</sup> The liver, being the central organ for metabolism, detoxification, and nutrient storage, is highly vulnerable to various pathological issues, including lifestyle factors, poor dietary habits, alcohol consumption, and viral infections.<sup>[2]</sup> Impaired liver function manifests through a variety of systemic and digestive symptoms, such as bloating, loss of appetite, constipation, and generalized lethargy, which often affect patients' quality of life.

Abnormalities in liver function tests (LFTs), such as elevated levels of bilirubin, SGOT (AST), and SGPT (ALT), are critical indicators of hepatic dysfunction and necessitate prompt intervention.<sup>[3]</sup>

*Ayurveda*, the traditional medical science of India, provides a holistic approach to health and disease management. With its emphasis on balancing the *doshas* (bioenergetic principles), optimizing *Agni* (digestive fire), and utilizing time-tested *Ayurvedic* formulations and dietary guidelines, *Ayurveda* offers an effective,

patient-centered alternative for managing liver disorders.<sup>[4]</sup>

In *Ayurveda*, liver diseases are primarily understood under the spectrum of *Yakrit Vikara* (liver disorders) and are closely associated with the imbalance of *Pitta Dosha*, which governs digestion and metabolism. The liver is considered a primary site of *Ranjaka Pitta*, responsible for the transformation and purification of blood.<sup>[5]</sup> Factors such as improper diet (*Viruddha Ahara*), irregular lifestyle, stress, and toxin accumulation (*Ama*) disrupt the balance of *Agni* (digestive fire) and vitiate *Pitta Dosha*, often accompanied by secondary involvement of *Vata Dosha*.<sup>[6]</sup> This leads to impaired digestion, metabolic disturbances, and systemic manifestations, including bloating, lethargy, and pain.

This case report presents the successful management of a 30-year-old male with abnormal LFTs and associated systemic and gastrointestinal symptoms, using *Ayurveda*-based interventions. The case highlights how *Ayurvedic* medicines, personalized dietary recommendations, and lifestyle modifications can restore liver function and alleviate symptoms, emphasizing the integrative potential of *Ayurveda* in liver disease management.

## CASE REPORT

A 30-year-old male presented to Jeena Sikho Lifecare Limited Clinic, Sangrur, Punjab on September 14, 2024. He complained of constipation, bloating immediately after meals, decreased appetite, disturbed sleep, acidity, generalized body pain, and lethargy. The patient's findings from the initial examination conducted on the first day are summarized in Table 1.

**Table 1: Examination Findings.**

Parameter	Findings
Blood Pressure	100/70 mm of Hg
Pulse Rate	75/min
Weight	45.64 kg
CNS	Conscious, Oriented to time, place and person.
Nadi	<i>Vata Predominant tridoshaj</i>
Mala	<i>Malavashtambha</i> (constipation)
Mutra	<i>Prakrit</i>
Jivha	<i>Saam</i> (coated)
Shabda	<i>Spashta</i>
Sparsha	<i>Anushna Sheeta</i>
Akriti	<i>Madhyam</i>
Drik	<i>Prakrit</i>
Kshudha	<i>Alpa</i>
Agni	<i>Mandya</i>
Nidra	<i>Khandit</i>

A comprehensive diagnostic investigation was conducted throughout the patient's treatment. The investigation findings are as follows.

## Parameter Result Reference/Interpretation.

Date of Test	September 28, 2024	
Hemoglobin (Hb)	13 g/Dl	Within normal limits
RBC Count	4.02 million/ $\mu$ L	Within normal limits
Platelet Count	1.22 lakh/ $\mu$ L (122,000/ $\mu$ L)	Within normal limits
Bilirubin	2.22 mg/dL	Elevated
SGOT (AST)	70 U/L	Elevated
SGPT (ALT)	110 U/L	Elevated
Hepatitis C	Non-reactive	Normal
Fibroscan – CAP	100	Within normal limits
Fibroscan – Elasticity (EkPa)	4.9 kPa	Within normal limits
Fibroscan - IQR/Med	11%	Within normal limits

## Medicinal Intervention

The *Ayurvedic* treatment strategy for this patient involved a comprehensive approach utilizing a combination of *Ayurvedic* formulations, including Dr. Shuddhi Powder, Amlapitta Har Powder, Dhatuposhak

Cap, Brahmi Vati, Yakrit Tonic, Relivon Powder, Sootshekhar Ras, Liv. Balance, and Mahashankh Vati.

Table 2 provides a detailed overview of these *Ayurvedic* medications, outlining their key ingredients and specific

therapeutic benefits. These medications support liver function and promote overall well-being.

**Table 2: Ayurvedic Medications, Ingredients, and Therapeutic Benefits in the Management of CKD.**

Medicine Name	Ingredients	Therapeutic Effects
<b>Dr Shuddhi Powder</b>	<b>Trikatu</b> , <b>Triphala</b> , <b>Nagarmotha</b> ( <i>Cyperus rotundus</i> ), <b>Vay Vidang</b> ( <i>Embelia ribes</i> ), <b>Chhoti Elaichi</b> ( <i>Elettaria cardamomum</i> ), <b>Tej Patta</b> ( <i>Cinnamomum tamala</i> ), <b>Laung</b> ( <i>Syzygium aromaticum</i> ), <b>Nishoth</b> ( <i>Operculina turpethum</i> ), <b>Sendha Namak</b> , <b>Dhaniya</b> ( <i>Coriandrum sativum</i> ), <b>Pipla Mool</b> ( <i>Piper longum</i> root), <b>Jeera</b> ( <i>Cuminum cyminum</i> ), <b>Nagkesar</b> ( <i>Mesua ferrea</i> ), <b>Amarvati</b> ( <i>Achyranthes aspera</i> ), <b>Anardana</b> ( <i>Punica granatum</i> ), <b>Badi Elaichi</b> ( <i>Amomum subulatum</i> ), <b>Hing</b> ( <i>Ferula assafoetida</i> ), <b>Kachnar</b> ( <i>Bauhinia variegata</i> ), <b>Ajmod</b> ( <i>Trachyspermum ammi</i> ), <b>Sazzikhar</b> , <b>Pushkarmool</b> ( <i>Inula racemosa</i> ), <b>Mishri</b> ( <i>Saccharum officinarum</i> )	Relief from Chronic Constipation. Reduction in Bloating and Gas Formation. Management of Acidity and Digestive Discomfort. Enhancing Digestive Fire ( <i>Agni</i> ) and Metabolism
<b>Amlapitta Har Powder</b>	<b>Shunthi</b> ( <i>Zingiber officinale</i> ), <b>Maricha</b> ( <i>Piper nigrum</i> ), <b>Pippali</b> ( <i>Piper longum</i> ), <b>Amalaki</b> ( <i>Phyllanthus emblica</i> ), <b>Bibhitaki</b> ( <i>Terminalia belerica</i> ), <b>Haritaki</b> ( <i>Terminalia chebula</i> ), <b>Musta</b> ( <i>Cyperus rotundus</i> ), <b>Sukshmaila</b> ( <i>Sida cordifolia</i> ), <b>Tvak patra</b> ( <i>Cinnamomum verum</i> ), <b>Vidanga</b> ( <i>Embelia ribes</i> ), <b>Bid lavana</b> ( <i>Sodium chloride</i> ), <b>Lavanga</b> ( <i>Syzygium aromaticum</i> ), <b>Trivita</b> ( <i>Tribulus terrestris</i> ), <b>Sharkara</b> ( <i>Saccharum officinarum</i> ).	Helps in the management of indigestion, acidity, liver disorders, GERD, vomiting, and nausea
<b>Dhatuposhak Cap</b>	<b>Chuna Shudh</b> ( <i>Calcium carbonate</i> ), <b>Shankh Bhasm</b> ( <i>Turbinella pyrum</i> ), <b>Mukta Shukti</b> ( <i>Pinctada margaritifera</i> or <i>Pinctada radiata</i> ), <b>Praval Pishti</b> ( <i>Corallium rubrum</i> ), <b>Kapardika</b> ( <i>Cypraea moneta</i> ), and <b>Loh</b> ( <i>Ferrum</i> or <i>Iron oxide</i> ).	It strengthens the body, manage nutritional deficiencies
<b>Brahmi Vati</b>	<b>Brahmi</b> ( <i>Bacopa monnieri</i> ), <b>Ras Sindur / Mercury</b> (Purified and processed mercury compound, traditionally used in <i>Rasashastra</i> ), <b>Shilajeet</b> ( <i>Asphaltum punjabianum</i> ), <b>Kalimirch</b> ( <i>Piper nigrum</i> ), <b>Vayavidang</b> ( <i>Embelia ribes</i> ), <b>Pippal</b> ( <i>Piper longum</i> ), <b>Abrak Bhasm</b> (Calcined Mica, i.e., processed mica ash), <b>Vang Bhasm</b> (Calcined Tin, i.e., processed tin ash).	Used in sleeplessness, reduce mental fatigue
<b>Yakrit Tonic</b>	<b>Lal Punarnava</b> ( <i>Boerhavia diffusa</i> ), <b>Safed Punarnava</b> ( <i>Boerhavia verticillata</i> ), <b>Bala</b> ( <i>Sida cordifolia</i> ), <b>Atibala</b> ( <i>Abutilon indicum</i> ), <b>Patha</b> ( <i>Cissampelos pareira</i> ), <b>Giloy</b> ( <i>Tinospora cordifolia</i> ), <b>Chitrak</b> ( <i>Plumbago zeylanica</i> ), <b>Kakoli</b> ( <i>Roscoeia procera</i> ), <b>Vasa</b> ( <i>Justicia adhatoda</i> ), <b>Nagarmotha</b> ( <i>Cyperus rotundus</i> ), <b>Ajwain</b> ( <i>Trachyspermum ammi</i> ), <b>Sonth</b> ( <i>Zingiber officinale</i> ), <b>Kali Mirch</b> ( <i>Piper nigrum</i> ), <b>Long</b> ( <i>Syzygium aromaticum</i> ), <b>Methi</b> ( <i>Trigonella foenum-graecum</i> ), <b>White Jeera</b> ( <i>Cuminum cyminum</i> ), <b>Roheda Chhal</b> ( <i>Tecomella undulata</i> ), <b>Dalchini</b> ( <i>Cinnamomum verum</i> ), <b>Tejpatta</b> ( <i>Cinnamomum tamala</i> ), <b>Badi Elaichi</b> ( <i>Amomum subulatum</i> ), <b>Chotti Elaichi</b> ( <i>Elettaria cardamomum</i> ), <b>Jaiphal</b> ( <i>Myristica fragrans</i> ), <b>Nagkesar</b> ( <i>Mesua ferrea</i> ), <b>Kankol</b> ( <i>Piper cubeba</i> ), <b>Multhi</b> ( <i>Glycyrrhiza glabra</i> ), <b>Laliki</b> ( <i>Ardisia solanacea</i> ), <b>Mahua</b> ( <i>Madhuca indica</i> ), <b>Shaker</b> ( <i>Saccharum officinarum</i> ), <b>Madhu</b> ( <i>Apis mellifera</i> - Honey), and <b>Water</b> ( $H_2O$ )	Liver Detoxification and Regeneration, improvement in Digestion and Gastrointestinal Function,
<b>Relivon Powder</b>	<b>Saverna Patri</b> ( <i>Luffa aegyptiaca</i> ), <b>Misreya</b> ( <i>Foeniculum vulgare</i> ), <b>Senda Namak</b> ( <i>Sodium chloride</i> ( $NaCl$ ) – Rock Salt), <b>Sonth</b> ( <i>Zingiber officinale</i> ), <b>Jang Harar</b> ( <i>Chebulic Myrobalan</i> ) and <b>Erand Oil</b> ( <i>Ricinus communis</i> )	Relief from Chronic Constipation improvement in Digestion and Gut Health, Support in Liver Detoxification, Regulation of <i>Pitta</i> and <i>Vata</i> Imbalance
<b>Sootshekhar Ras</b>	<b>Shudh Parad</b> (Purified Mercury), <b>Shudh Gandhak</b> (Purified Sulphur), <b>Raupya</b> (Silver – <i>Argentum</i> ), <b>Sonth</b>	Regulation of <i>Pitta Dosha</i> and Liver Function.

	( <i>Zingiber officinale</i> ), <b>Kali Mirch</b> ( <i>Piper nigrum</i> ), <b>Peepal</b> ( <i>Piper longum</i> ), <b>Shudh Dhatura</b> ( <i>Datura metel</i> ), <b>Tamra</b> (Copper – Cuprum), <b>Tankan</b> (Borax – Sodium borate), <b>Dalchini</b> ( <i>Cinnamomum zeylanicum</i> ), <b>Chhoti Elaichi</b> ( <i>Elettaria cardamomum</i> ), <b>Nagkesar</b> ( <i>Mesua ferrea</i> ), <b>Shankh</b> (Conch shell – <i>Turbinella pyrum</i> ), <b>Belgiri</b> ( <i>Aegle marmelos</i> ), <b>Kachoor</b> ( <i>Curcuma zedoaria</i> ), <b>Tejpata</b> ( <i>Cinnamomum tamala</i> ), <b>Bharangi</b> ( <i>Clerodendrum serratum</i> ).	Relief from Acidity and GERD. Support in Hepatoprotection and Detoxification. Improvement in Digestion and Metabolism.
<b>Liv. Balance</b>	<b>Bhumi Amla</b> ( <i>Phyllanthus niruri</i> ), <b>Punarnava</b> ( <i>Boerhavia diffusa</i> ), <b>Makoy</b> ( <i>Solanum nigrum</i> ), <b>Mandoor Bhasma</b> (Calcined Red Oxide of Iron), <b>Giloy</b> ( <i>Tinospora cordifolia</i> ), <b>Harad</b> ( <i>Terminalia chebula</i> ), <b>Bhringaraj</b> ( <i>Eclipta alba</i> or <i>Eclipta prostrata</i> ), <b>Kashni</b> ( <i>Cichorium intybus</i> ), <b>Dhania</b> ( <i>Coriandrum sativum</i> ), <b>Sonth</b> ( <i>Zingiber officinale</i> – dried ginger), <b>Bahera</b> ( <i>Terminalia bellirica</i> ), <b>Hansraj</b> ( <i>Adiantum lunulatum</i> ), <b>Kasmard</b> ( <i>Cassia occidentalis</i> ), <b>Khas</b> ( <i>Vetiveria zizanioides</i> ), <b>Pipli</b> ( <i>Piper longum</i> ), <b>Marich</b> ( <i>Piper nigrum</i> ), <b>Kankol</b> ( <i>Piper cubeba</i> ), <b>Sapta Chakra</b> ( <i>Salacia chinensis</i> )	Support in Hepatic Dysfunction and Liver Detoxification. Regulation of Cholesterol and Metabolic Health.
<b>Mahashankh Vati.</b>	<b>Pippli</b> ( <i>Piper longum</i> ), <b>Chitrak</b> ( <i>Plumbago zeylanica</i> ), <b>Danti</b> ( <i>Baliospermum montanum</i> ), <b>Shuddh Parad</b> (Purified Mercury – processed as per Ayurvedic standards), <b>Shuddh Gandhak</b> (Purified Sulphur), <b>Peepal</b> ( <i>Ficus religiosa</i> ), <b>Swarjika</b> (Sodium carbonate – Ayurvedic name for natural alkali), <b>Tankan</b> (Sodium borate or Borax), <b>Sendha Namak</b> (Halite – Natural Rock Salt / Sodium chloride), <b>Kala Namak</b> (Black Salt – Mineral-rich Sodium chloride with trace compounds), <b>Manihari Namak</b> (A type of decorative or traditional salt – source-specific, no unique scientific name), <b>Samunder Namak</b> (Sea Salt – Sodium chloride), <b>Sambhar Namak</b> (Sambhar Lake Salt – a type of Sodium chloride obtained from Sambhar Lake, Rajasthan), <b>Marich</b> ( <i>Piper nigrum</i> ), <b>Sonth</b> ( <i>Zingiber officinale</i> – dried ginger), <b>Vatsanabha</b> ( <i>Aconitum ferox</i> ) – used only after purification, <b>Ajwain</b> ( <i>Trachyspermum ammi</i> ), <b>Harar Chhoti</b> ( <i>Terminalia chebula</i> – small variety), <b>Hing</b> ( <i>Ferula assa-foetida</i> ), <b>Imli</b> ( <i>Tamarindus indica</i> ), <b>Yavk</b> ( <i>Hordeum vulgare</i> – Barley), <b>Shankh</b> (Conch shell – Calcium carbonate, used in bhasma form as Shankha Bhasma).	Managing digestive disturbances like hyperacidity, bloating, constipation, and indigestion

### Treatment Course on an Outpatient Basis

On September 14, 2024, the patient presented with complaints of constipation for the past three months, bloating immediately after meals, acidity, loss of appetite, disturbed sleep, generalized body pain, and lethargy. Based on the clinical assessment, 32 Herbs Tea was advised to support digestive health.

The prescribed Ayurvedic treatment regimen included.

- Dr. Shuddhi Powder – ½ teaspoon once daily (HS) (*Nishikala* with *Koshna Jala*)
- Amlapita Har Powder – ½ teaspoon twice daily (BD) (*Adhobhakta* with *Koshna Jala*)
- Dhatuposhak Vati – 1 tablet BD (*Adhobhakta* with *Koshna Jala*)
- Brahma Vati – 1 tablet BD (*Adhobhakta* with *Koshna Jala*)

- *Yakrit Tonic* – 2 teaspoons BD (*Adhobhakta* with *Koshna Jala*)

This treatment plan aimed to improve digestion, restore liver function, regulate metabolism, and alleviate the patient's symptoms holistically.

On September 28, 2024, the patient returned for a follow-up with improvements in bowel movements, reduced acidity, improved sleep, and absence of body pain. However, mild abdominal pain and decreased appetite persisted.

Based on the progress, the existing Ayurvedic treatment regimen was continued, with the addition of Liv. Balance (1 tablet BD) to further support liver function and enhance appetite.



On October 21, 2024, the patient returned for a follow-up with significant improvements, including reduced abdominal pain, normal bowel movements, improved appetite, and enhanced energy levels. However, the patient reported excessive bloating after meals.

To address the remaining symptoms and further support digestive and liver health, the following *Ayurvedic* medications were prescribed.

- Relivon Powder – ½ teaspoon HS (*Nishikala with Koshna Jala*)
- Sootshekhar Rasa – 1 tablet BD before meals (*Adhobhakta with Koshna Jala*)
- Liv. Balance – 1 tablet BD (*Adhobhakta with Koshna Jala*)
- Dhatuposhak Cap – 1 tablet BD (*Adhobhakta with Koshna Jala*)
- Yakrit Tonic – 2 teaspoons BD (*Adhobhakta with Koshna Jala*)
- Mahashankh Vati – 1 tablet BD (*Adhobhakta with Koshna Jala*)

This revised treatment plan aimed to reduce bloating, enhance digestion, and optimize liver function for overall well-being.

On November 15, 2024, the patient presented for a follow-up with reduced bloating and overall symptomatic improvement. While mild abdominal pain persisted, appetite showed improvement, and lethargy, burning sensation in the abdomen, and other complaints had decreased. Bowel movements remained normal.

Considering the progress, the existing treatment plan was continued with slight modifications, adjusting the medication regimen as necessary.

## RESULTS

A comprehensive treatment regimen incorporating *Ayurvedic* interventions yielded notable improvements in a 30-year-old male patient suffering from liver dysfunction. The patient presented with various symptoms, including chronic constipation, postprandial bloating, decreased appetite, disturbed sleep, acidity, generalized body pain, and lethargy. Initial laboratory investigations revealed elevated levels of bilirubin, SGOT (AST), and SGPT (ALT), indicating hepatic dysfunction.

Following *Ayurvedic* Treatment Plan that included *ayurvedic* formulations, dietary modifications, and lifestyle adjustments, significant clinical and biochemical improvements were observed.

Comparative analysis of liver function tests (LFTs) before and after treatment showed a marked reduction in bilirubin levels—total bilirubin decreased from 2.22 mg/dl to 1.18 mg/dl, direct bilirubin from 0.85 mg/dl to 0.39 mg/dl, and indirect bilirubin from 1.37 mg/dl to 0.79 mg/dl. SGOT levels improved from 70 U/L to 40.66 U/L, and SGPT levels decreased from 110 U/L to 44.38 U/L. Although alkaline phosphatase showed a slight increase from 66.06 U/L to 67.99 U/L, total protein levels remained stable, demonstrating the effectiveness of the integrative management approach.

The **Liver Function Test (LFT) results** before and after the treatment is presented in **Table 3**.

**Table 3: Comparative Analysis of Liver Function Test (LFT) Results Before and After Treatment.**

Liver Function Test (LFT)	Before (28/09/2024)	After (21/10/2024)
Bilirubin- Total	2.22 mg/dl	1.18 mg/dl
Bilirubin- Direct	0.85 mg/dl	0.39 mg/dl
Bilirubin- Indirect	1.37 mg/dl	0.79 mg/dl
SGOT/AST	70 U/L	40.66 U/L
SGOT/ALT	110 U/L	44.38 U/L
Alkaline Phosphatase	66.06 U/L	67.99 U/L
Total Protein	7.28 g/dl	7.26 g/dl
Albumin	4.03 g/dl	3.74 g/dl
Globulin	3.25 g/dl	3.52 g/dl
A/G Ratio	1.24	1.06
SGOT/SGPT	0.64	0.92

Symptomatically, the patient reported a significant reduction in bloating, improved appetite, and enhanced overall well-being. The patient reported normalization of bowel movements and a decrease in lethargy and abdominal discomfort. Follow-up assessments indicated stabilization of vital parameters, including blood pressure and pulse rate, further underscoring the positive impact of the treatment. The vital assessments presented in Table

4 highlight the positive impact of the integrative management approach on the patient's overall health, demonstrating both symptomatic relief and systemic stabilization.

	Before treatment	After treatment
Pain scoring	4/10	1/10
Sleep scoring	5/10	9/10

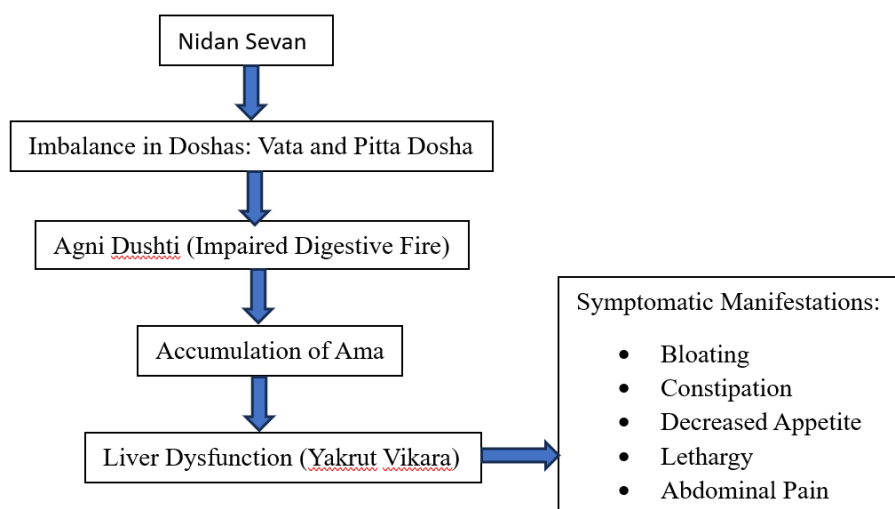
Table 4: Vital Assessments Reflecting the Impact of Integrative Management on Patient's Health.

Date	B.P.	Pulse Rate	Temp.	Weight
14/09/2024	110/70 mm of Hg	75/min	94°F	45.64 kg
28/09/2024	110/70 mm of Hg	65/min	94°F	45.0 kg
21/10/2024	100/60 mm of Hg	92/min	96°F	44.3 kg
15/11/2024	120/70 mm of Hg	76/min	95°F	44.0 kg

## DISCUSSION

This case report underscores the potential of *Ayurveda* as a viable approach to managing liver dysfunction, highlighting the interconnectedness of physiological and symptomatic manifestations associated with such conditions. The patient's presentation, characterized by

chronic constipation, bloating, reduced appetite, and lethargy, is consistent with the clinical profile observed in individuals with impaired liver function and *Agni Dushti* (digestive fire impairment) as per *Ayurvedic* understanding. *Samprapti* (Pathogenesis) of Liver Disorder in the Patient.



The management focuses on restoring the balance of *Pitta* and *Vata Dosha*, enhancing *Agni*, and eliminating *Ama* through the use of specific *Ayurvedic* formulations like *Kutki* (*Picrorhiza kurroa*)<sup>[7]</sup>, *Bhumyamalaki* (*Phyllanthus niruri*)<sup>[8]</sup>, and *Guduchi* (*Tinospora cordifolia*)<sup>[9]</sup>. Dietary modifications, emphasizing *Pachana* (digestive stimulants), along with lifestyle interventions<sup>[10]</sup>, help detoxify the liver and restore its optimal function holistically.

### Action of Ayurvedic Formulations

The *Ayurvedic* formulations used in the treatment, including Dr. Shuddhi Powder, Amlapitta Har Powder, and Dhatuposhak Cap, exhibit synergistic actions that collectively support liver health and enhance digestive function. **Dr. Shuddhi Powder**, composed of potent ingredients such as *Trikata*<sup>[11]</sup> (three spices), *Triphala*, and *Hing*, acts as a digestive stimulant, promoting gastrointestinal motility and alleviating symptoms of bloating and constipation. **Amlapitta Har Powder**, containing herbs like *Shunthi* (ginger) and *Pippali* (long pepper), is recognized for its carminative properties, effectively managing acidity and gastrointestinal discomfort while also supporting liver detoxification.<sup>[12]</sup>

**Dhatuposhak Cap** provide essential minerals that fortify overall health, enhancing metabolic processes and liver function through revitalization of the body's nutritional status. Additionally, **Brahmi Vati**, known for its cognitive-enhancing properties, supports mental clarity and reduces stress, which is crucial for managing liver health as emotional well-being has been linked to physiological processes.

The Yakrit Tonic, Relivon Powder, Sootashekhar ras, Liv. Balance, and Mahashankh Vati are also pivotal in restoring liver function and promoting holistic health. **Yakrit Tonic** features ingredients like *Bhumyamalaki* (*Phyllanthus niruri*) which are historically utilized for their hepatoprotective effects, facilitating liver regeneration and detoxification. **Relivon Powder**, enriched with various components, aids in enhancing appetite and improving digestive efficiency, which are essential for patients with liver-related ailments.<sup>[13]</sup> **Sootashekhar** and **Mahashankh Vati** contain a blend of herbs that not only alleviate digestive disorders but also soothe the liver's metabolic stress through their anti-inflammatory properties.<sup>[14]</sup> **Liv. Balance**, formulated specifically to support liver health, incorporates

ingredients that promote bile secretion and assist in metabolic detoxification. Together, these formulations exemplify the holistic, integrative approach of *Ayurveda*, targeting the root causes of liver dysfunction while facilitating systemic balance and revitalization.

The successful management of the patient's condition using a personalized *Ayurvedic* regimen reinforces the therapeutic value of integrating traditional practices into contemporary medical frameworks. The significant biochemical improvements observed in liver function tests—particularly the reductions in bilirubin, SGOT, and SGPT levels.

Moreover, the concomitant dietary modifications and lifestyle adjustments emphasized the holistic nature of *Ayurvedic* therapy, addressing not only the physiological aspects of liver health but also the lifestyle factors that contribute to its dysfunction. Incorporating practices such as regular meal timings, yoga, and pranayama, which promote digestive health and balance the *doshas*, illustrates an integrative approach that aligns with modern principles of wellness and preventive care.

### NEED FOR FURTHER RESEARCH

The positive outcomes of this case warrant further investigation into the broader applicability of *Ayurvedic* practices for liver disorders. Future studies, particularly randomized controlled trials, are essential to establish robust efficacy data and explore the mechanisms underlying the observed improvements. Additionally, understanding patient compliance and the psychosocial dimensions of *Ayurvedic* interventions could enrich our comprehension of their effectiveness.

While this case report presents promising results, it is imperative to acknowledge the need for systematic evaluations and standardized protocols within *Ayurvedic* practices to enhance their acceptance and application in clinical settings. The integration of rigorous scientific methodologies with traditional knowledge can pave the way for a comprehensive understanding of *Ayurveda's* role in liver disease management and its potential contribution to global health paradigms.

### CONCLUSION

#### Symptomatic Improvement

The patient exhibited marked clinical recovery during the treatment period, with a significant reduction in bloating, improved appetite, enhanced energy levels, and normalization of bowel movements. Mild abdominal discomfort was effectively managed, while lethargy diminished notably. Sleep quality improved from a score of 5/10 before treatment to 9/10 after treatment, and pain scores reduced from 4/10 to 1/10. Vital parameters, including blood pressure and pulse rate, remained stable, reflecting systemic benefits in addition to symptomatic relief.

#### Investigational Improvement

Liver Function Tests (LFTs) demonstrated substantial biochemical normalization. Total bilirubin reduced from 2.22 mg/dl to 1.18 mg/dl, direct bilirubin from 0.85 mg/dl to 0.39 mg/dl, and indirect bilirubin from 1.37 mg/dl to 0.79 mg/dl. SGOT levels declined from 70 U/L to 40.66 U/L, while SGPT decreased from 110 U/L to 44.38 U/L, indicating improved hepatic function. Other parameters, such as total protein, albumin, and alkaline phosphatase, remained within a stable range, further supporting the effectiveness of the regimen.

The combined symptomatic and investigational improvements reinforce the importance of incorporating *Ayurvedic* therapies in managing liver dysfunction.

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