ISSN 1998 – 409X

CASE STUDY

Role of Ayurveda and Siddha interventions in the management of *Kamala* (Jaundice): A case report

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Abstract

Introduction: Jaundice is a condition characterized by yellowish discoloration of body tissues due to elevated bilirubin level. In Ayurveda, this condition is clinically correlated with *Kamala*. **Methods:** A 70-year-old male patient presented to outpatient department with complaints of yellowish discoloration of the body, anorexia, generalized weakness, loss of appetite, constipation since 1 week, and also elevated bilirubin of 13 mg/dL, suggestive of jaundice. *Samana Chikitsa* (Balancing therapy) was administered using Ayurvedic and Siddha formulations with predominant *Tikta rasa* (Bitter Taste), *Pitta Kapha Dosha Samana* (Balances Pitta Kapha), Deepana-Pachana (Digestion and Metabolism), and Hepatoprotective action. **Result:** Significant improvement was noticed in the subjective and objective parameters and on 38th day of treatment. A reduction in serum bilirubin levels was documented from 13 mg/dL to 0.94 mg/dL. **Discussion:** The interventions showed improvement in clinical symptoms and liver function parameters, possibly through *Pitta-Kapha shamana, Deepana-Pachana*, and hepatoprotective actions. **Conclusion:** This case suggests that an integrative Ayurvedic and Siddha approach may provide supportive benefit in the management of Kamala (Jaundice). However, controlled clinical studies are required to establish efficacy and safety.

Key words: Ayurveda, Jaundice, Kamala, Siddha

INTRODUCTION

Jaundice, or hyperbilirubinemia, is characterized by a yellowish discoloration of body tissues caused by the accumulation of excess bilirubin. Under physiological conditions, serum bilirubin levels remain <1 mg/dL.[1] Elevated serum bilirubin leads disturbances in its metabolism such as overproduction, impaired hepatic uptake, defective conjugation, or reduced excretion. It may result from pre-hepatic, hepatic, or post-hepatic causes, representing a wide spectrum of underlying pathological conditions. The prevalence of jaundice differs among patient populations, with newborns and the elderly being more commonly affected. Clinically, it manifests as yellow discoloration of the skin, sclera, and mucous membranes.[2,3] In Ayurveda, jaundice is correlated with *Kamala*, described as a complication of *Pandu Roga* (Anemia). When *Pandu Rogi* continued to consume *Pitta* aggravating diet leads to manifestation of *Kamala.*[4]

According to Ayurvedic treatise, Kamala is classified into two major types: *Shakhashrita Kamala* and *Koshtashrita Kamala*. With disease progression, it becomes deep-seated and may lead to the development of *Kumbha Kamala*, a chronic and severe form that is considered difficult to manage therapeutically.[5] *Acharya Charaka* mentioned *Mridu Virechana* (mild purgation therapy) with *Tikta rasa* (bitter) drugs should be done in the management of *Kamala.*[6] Therapeutic interventions should be used according to *dosha* imbalance. This case study describes the management of an elderly patient diagnosed with *Kamala*.

CASE REPORT

Patient Information

A 70-year-old male patient presented to the outpatient department of SKM Chikitchaalaya Siddha and Ayurveda Hospital, Erode,

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Received: 17-05-2026
Revised: 23-08-2026
Accepted: 02-09-2026

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Tamil Nadu, on January 12, 2026 (OPD No.:23/756), with chief complaints of yellowish discoloration of the skin, eyes, nails, and urine, along with loss of appetite, abdominal pain, lassitude, mild constipation, and fever for the past 7 days.

The patient was apparently healthy 1 week before presentation. He developed a febrile sensation and self-medicated with paracetamol 650 mg twice daily for two days. Subsequently, he noticed mild yellowish discoloration of nails, sclera, and skin, which was associated with anorexia, aversion to food, irregular bowel movements, and pain in the right upper quadrant of the abdomen.

There was no history of alcohol consumption or recent travel. The patient had no known history of diabetes mellitus, hypertension, or any other chronic illness, no history of previous surgeries, and no similar illness was reported among family members.

Thereafter, the patient consulted a folk practitioner and was advised to take the *Kalka* (Paste) of *Bhumyamalaki* (*Phyllanthus niruri* L.) plant 10 g with 100 mL of goat's milk on an empty stomach. He followed this regimen from January 08, 2026, to January 10, 2026, but had not felt satisfactory relief. The patient then presented to our hospital for Ayurvedic management on January 12, 2026, and continued until February 19, 2026, for a total duration of 38 days.

Clinical Findings

On examination, the patient was weak, lethargic, afebrile, well-oriented, and responding to commands. Sclera was deep yellow. Yellowish discoloration was observed on skin and nails also. Pulse rate was 74/min, blood pressure measured 130/70 mmHg, and oral temperature was 98.5°F, afebrile. The respiratory system revealed clear breath sounds on auscultation and the cardiovascular system showed audible S1 and S2 heart sounds. Per abdominal examination, on inspection, the abdomen appeared normal with no visible distension. On palpation, there was no local rise of temperature. Slight tenderness was noted in the right upper quadrant. No palpable mass was detected; on percussion, the percussion note was tympanic; on auscultation, bowel sounds were normal. Other systemic examinations had no significant findings.

Personal history revealed that he has loss of appetite since 7 days. His bowel was irregular and constipated. Urination frequency was reported as 4–5 times during the daytime and 1–2 times at night. Sleep was occasionally disturbed on certain days.

Ayurvedic *Ashtavidha Pariksha* (Eight folds of examination) revealed, *Nadi* (Pulse): 76/min; *Mala* (Stool): Constipated and slightly clay colored; *Mutra* (Urine): Yellowish in color; *Jihva* (Tongue): *Malavrita* (Coated tongue); *Shabdha* (Voice): *Prakruta* (Normal); *Sparsha* (touch) was *Anushnasheeta* (not too cold not too hot); *Drik* (eyesight) was normal, but *Pita varna* (yellowish discoloration) over the sclera; and *Akruti* (body stature) was *Madhyama* (normal).

Time Line

The time line events mentioned on Table 1.

Diagnostic Assessment

Based on the patient's, clinical presentations such as yellowish discoloration of the skin, eyes, nails, and urine with investigation report showing high levels of total serum bilirubin (13.0 mg/dL), indirect bilirubin level (03.0 mg/dL), and direct bilirubin level (10.0 mg/dL). It was diagnosed as Jaundice. According to Ayurveda, signs and symptoms such as yellowish color of eyes, urine, and skin, *Agnimandya* (suppression of power of digestion), *Daurbalya* (weakness), *Aruchi* (anorexia), pain in the right upper quadrant of abdomen, *Vibandha* (Constipation), and clay colored stool were present in this case. Thus, based on these symptoms, it is *Shakhashrita Kamala*[7] was confirmed.

Therapeutic Intervention

The patient was managed at outpatient levels. The patient was provided Ayurveda and Siddha medicines for internal administration, along with a personalized *Pathya–Apathya* (~wholesome and unwholesome) diet [Table 2].

Follow-up and Outcomes

On each follow-up, the patient was evaluated using subjective criteria [Table 3 and Graph 1], along with objective parameters [Figure 1] such as total bilirubin, direct, and indirect bilirubin and gamma-glutamyl transferase (GGT). Before treatment, there was an increased level of serum total bilirubin (12.9 mg/dL), serum indirect bilirubin (2.8 mg/dL), serum direct bilirubin (10.1 mg/dL), and GGT (162 µ/L) in the investigation data [Graphs 2 and 3].

DISCUSSION

Probable Mode of Action

Kamala is described as a *Pittaja Nanatmaja Vyadhi*[10] (diseases caused by vitiated *Pitta Dosha*) and also as a *Rakta Pradoshaja Vyadhi*[11] (diseases resulting from vitiation of *Rakta Dhatu*). According to Ayurvedic principles, *Pittavirechana* plays a key role in its management.[6] Since the liver is primarily responsible for bilirubin metabolism and excretion, drugs with the *Pittavirechana* and *Yakrit Prasadana* (Hepatoprotective) will be helpful.[12]

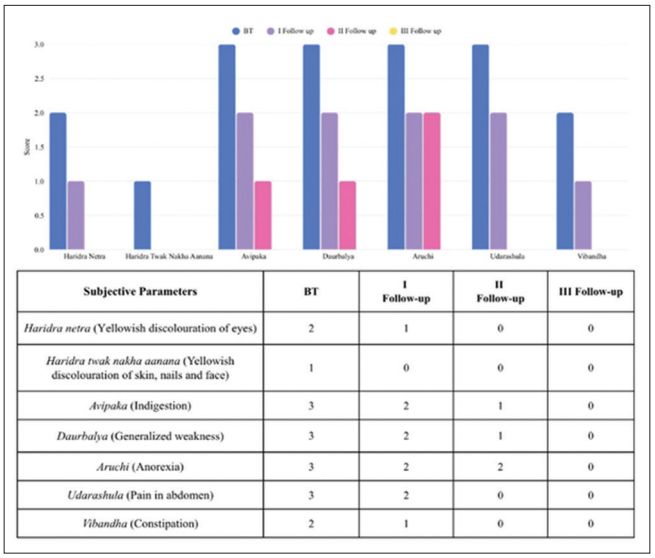
Table 1: Time line

January 05, 2026	Patient developed febrile and initiated Paracetamol Tablet 650 mg.
January 08, 2026	Discontinued Paracetamol 650 mg administration. Initiated internal administration of *Bhumyamalaki kalka* with goat's milk.
January 09, 2026	Laboratory investigations revealed total serum bilirubin (13.0 mg/dL), indirect bilirubin level (03.0 mg/dL), and direct bilirubin level (10.0 mg/dL)
January 12, 2026	Initiated therapeutic Intervention and advised pathya – apathya Laboratory investigations revealed – total bilirubin: 12.9 mg/dL; bilirubin direct: 10.1 mg/dL; bilirubin indirect: 2.8 mg/dL; and GGT: 162.0 µ/L
January 23, 2026	1st follow-up, laboratory investigation revealed – total bilirubin: 4.58 mg/dL; bilirubin direct: 2.41 mg/dL; bilirubin indirect: 2.17 mg/dL; and GGT: 154.0 µ/L *Mandoorathi kudineer* and *Pravala bhasma* added in the treatment
January 29, 2026	2nd follow-up. Relief in symptom. Yellowish discoloration of sclera, skin, and nails – absent. Lab investigation revealed – Total bilirubin: 3.68 mg/dL; bilirubin direct: 2.25 mg/dL; bilirubin indirect: 1.43 mg/dL; and GGT: 105.0 µ/L. Same treatment continued due to symptomatic relief.
February 13, 2026	3rd follow-up. No fresh complaints/ complications lab investigation revealed – Total bilirubin: 1.86 mg/dL; bilirubin direct: 0.90 mg/dL; bilirubin indirect: 0.96 mg/dL; and GGT: 55.0 µ/L.
February 19, 2026	Laboratory investigation revealed – total bilirubin: 0.94 mg/dL; bilirubin direct: 0.18 mg/dL; bilirubin indirect: 0.76 mg/dL; and GGT: 53.0 µ/L.

*GGT: Gamma-glutamyl transferase

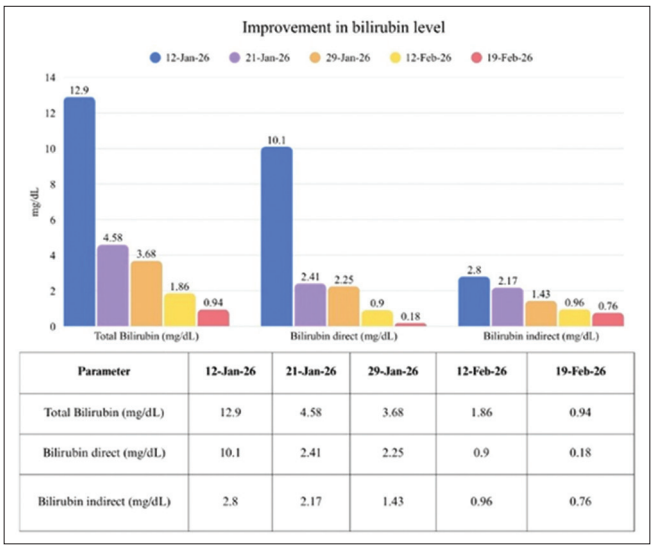
In the present case, considering the age of patient *Samana Chikitsa* adopted for reversing the *Kamala* (Jaundice) with diet regulation. In the initial line of management, formulations possessing *Tikta rasa pradhana*, *Pitta Kapha Dosha Samana*, *Deepana-Pachana*, *Kamalahara*, and *Yakrit Visheshatwa* were administered.

Guduchyadi Kashayam (GK) and *Patolakaturohinyadi Kashayam* (PKK) were administered in the 1st line of treatment. GK is formulated with *Guduchi* (*Tinospora cordifolia* Willd.), *Padmaka* (*Prunus cerasoides* D.), *Nimba* (*Azadirachta indica* A. Juss), *Dhanyaka* (*Coriandrum sativum* Linn), and *Raktachandana* (*Pterocarpus santalinus* Linn.). These drugs having following properties *Tikta*



Subjective Parameters	BT	I Follow-up	II Follow-up	III Follow-up
Haridra netra (Yellowish discolouration of eyes)	2	1	0	0
Haridra twak nakha aanana (Yellowish discolouration of skin, nails and face)	1	0	0	0
Avipaka (Indigestion)	3	2	1	0
Daurbalya (Generalized weakness)	3	2	1	0
Aruchi (Anorexia)	3	2	2	0
Udarashula (Pain in abdomen)	3	2	0	0
Vibandha (Constipation)	2	1	0	0

Graph 1: Changes in subjective parameter scores during treatment



Parameter	12-Jan-26	21-Jan-26	29-Jan-26	12-Feb-26	19-Feb-26
Total Bilirubin (mg/dL)	12.9	4.58	3.68	1.86	0.94
Bilirubin direct (mg/dL)	10.1	2.41	2.25	0.9	0.18
Bilirubin indirect (mg/dL)	2.8	2.17	1.43	0.96	0.76

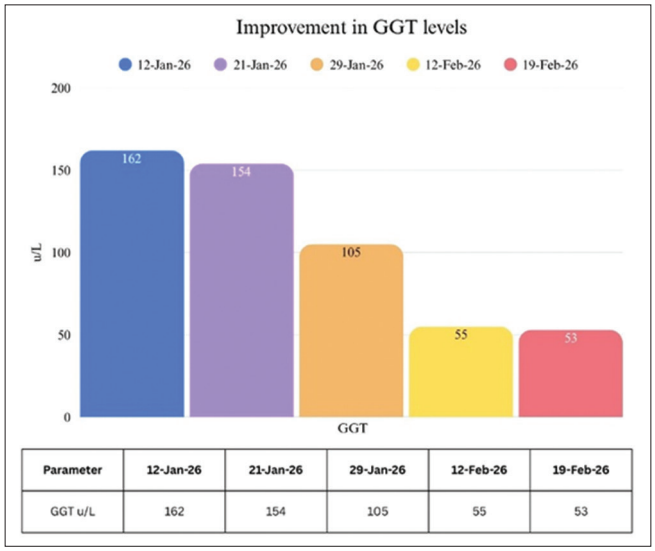
Graph 2: Improvement in Bilirubin level during treatment

Kashaya rasa pradhana, *Pitta Kaphahara*, and *Agnikrit* (improves digestive fire).[13] The active phyto-constituents of this formulation shows anti-viral, anti-bacterial, antioxidant, anti-inflammatory, and hepatoprotective properties.[14] PKK contains *Patola* (*Trichosanthes diocia* Roxb.), *Katurohini* (*Picrorhiza kurroa* Royal ex Benth.), *Chandana* (*Santalum album* L.), *Madhusrava* (*Marsdenia tenacissima* R. Br.), *Guduci* (*T. cordifolia*), and *Patha* (*Cissampelos pareria* L.). It exhibits *TiktaKashayarasa*, *Laghu-Ruksha guna*, and *Kapha Pitta Samana*. It acts on the *Agni*, pacifies *Vami* (nausea), *Arochaka* (Anorexia), *Visha hara* (Detoxifying), *Kamala hara,* and also as *Pitta Rechaka* by facilitating the elimination of *Pitta*.[15] Kadam *et al*. reported that PKK possess significant hepatoprotective activity, attributed to its potent antioxidant and anti-inflammatory properties along with improved liver function parameters and protection against hepatic injury.[16]

Table 2: Treatment protocol

Date	Medicines	Dose and frequency
January 12–January 23, 2026	*Guduchyadi Kashayam*+*Patolakaturohinyadi Kashayam*	15 mL *kashayam* mixed with 45 mL luke warm water, twice a day before food.
January 12–February 19, 2026	*Bhumi Amalaki* Tablet	2 tablets twice a day before food
January 12–January 29, 2026	*Arogyavardhini Vati*	1 tablet thrice a day after food
January 23–February 19, 2026	Heptowin tablet	2 tablet twice a day after food
January 23–February 13, 2026	*Mandoorathi Kudineer**	15 mL once at empty stomach
January 23–February 13, 2026	*Pravala bhasma*	250 mg at night after food
Pathya–Apathya (Wholesome and unwholesome) diet		
January 23–February 19, 2026	• Homemade food as per hunger. • Include *Mudhga* (green gram), *Masoor dal* (lentils), *Kulatha* (Horse gram), *Godhuma* (wheat), *Shali* (rice), *Yava* (Barley), *Patola* (*Trichosanthes dioica*), *Kushmanda* (*Benincasa hispida*), *Amla* (*Emblica officinalis*), and *Takra* (Buttermilk) • Avoid curd, bakery items, cold drinks, and salty-spicy-fried-oily foods	

*Preparation of *Mandurathi Kudineer**: Soak 5 g of coarsely powdered MK *churna* in 80 mL of water in a mud pot overnight. The mixture is boiled filtered in the morning, and 15 mL of MK administered on an empty stomach



Graph 3: Improvement in GGT (Gamma-Glutamyl Transferase)level during treatment

Arogyavardhini vati (AV)[17] is a herbomineral formulation, it possesses *Amapachana, Kshut Pravartini,* and *Malashodhana*. Its ingredients, *Tamra Bhasma* (incinerated copper), *Guggulu*, *Katuki*, and *Triphala,* are having *Lekhana* (weight-reducing), *Dipana* (improving digestion and metabolism), and *Medadoshahara* (correcting lipid metabolism and transportation) action.[18] In addition, *Gandhaka* (Sulfur), *Katuki* (*P. kurroa*), and *Nimba* (*A. indica*), which possess proven hepato-protective, anti-inflammatory, and immunomodulatory properties.[19] AV contains *Katuki* as a major constituent, and its hepatoprotective activity has been attributed to the combined membrane-stabilizing, antioxidant, and hypolipidemic properties of the formulation.[20]

Heptowin tablet a Siddha proprietary herbomineral formulation developed based on Classical Siddha preparations *Karisalai Karpam* and *Lauha bhasma*. It contains *P. niruri* L., *Eclipta prostrata*, *Swertia chirata*, *P. kurroa*, *Boerhavia diffusa*, *Emblica officinalis*, *Embelia ribes*, *Terminalia chebula*, *Glycyrrhiza glabra*, *Cichorium incubus*, *Zingiber officinale*, *Tephrosia purpurea*, and *Aloe vera* and incinerated Iron. Sen *et al*. revealed that *Karisalai Karpam* possess significant hepatoprotective and antioxidant activity against acetaminophen–induced hepatic damage in rats. It exhibited dose-dependent action by significantly reducing elevated liver markers and markedly increasing antioxidant enzyme level.[21] Pawar and Belge reported that *Lauha Bhasma* possess significant hepatoprotective activity against D-galactosamine-induced toxicity in HepG2 cell lines by improving cell viability and protecting hepatocytes from toxic injury.[22]

Bhumyamalaki tablet is also administered and orally has been observed to possess efficient *pittasamaka*, *Ruchya*, anti-viral, and anti-bacterial properties.[23,24] It is commonly used in traditional medicine for various liver disorders, including *Kamala* (jaundice). The antioxidative properties of *P. niruri* Linn. are seen due to abundant flavonoids, tannins, lignans, and terpenes, which lead to a hepatoprotective effect. These substances aid in protecting the liver cells from harm brought by several things, including toxins, alcohol, viral infections, and oxidative stress.[25,26] Its aqueous extract has been shown to stimulate murine lymphocyte activation and proliferation, as reported by Nworu *et al*.[27] This helps attenuate hepatic inflammation, thereby supporting the restoration of normal liver function and reducing jaundice-associated symptoms.[26]

Mandurathi Kudineer is a siddha classical formulation that has been frequently used to treat liver diseases. It contains *ShoditaMandura* (Puridied Ferric oxide), *Mangifera indica*, *Wedelia calendulacea*, *P. niruri*, *Astercantha longifolia*, and *Cuminum cyminum*.[28] It has analgesic, anti-inflammatory, antioxidant, hepatoprotective activity, and stimulate liver secretory capacity.[29-32]

Table 3: Assessment criteria for subjective parameters[8,9]

Criteria	Description	Score
Haridra Netra (Yellowish discoloration of eyes)	Normal color of sclera	0
	Yellowish-white color of sclera	1
	Yellow color of sclera	2
	Dark yellow color of sclera	3
	Greenish yellow color of sclera	4
Haridra Twak Nakha Aanana (Yellowish discoloration of skin, nails, and face)	Normal complexion of skin, nails, and face	0
	Yellowish white color of skin, nails, and face	1
	Yellowish color of skin, nails, and face	2
	Dark yellow color of skin, nails, and face	3
	Greenish yellow color of skin, nails, and face	4
Avipaka (Indigestion)	Able to digest any kind of vegetable	0
	Able to digest normal food	1
	Able to digest light food but difficulty in digestion of normal food	2
	Unable to digest light food	3
Daurbalya (Generalized weakness)	No weakness	0
	Weakness after doing some extra work other than daily routine work.	1
	Weakness after doing normal daily routine work	2
	Weakness without doing anything	3
Aruchi (anorexia)	Take a full diet on a proper gap	0
	Take moderate diet on proper gap between meals	1
	Decreased amount of diet and the increased gap between the meals	2
	Unable to consume a minimum amount of diet on at least 2 meal time	3
	Unable to consume a minimum amount of diet in a whole day	4
Udarashula (Pain in abdomen)	No pain	0
	Mild/occasional pain which need not any medication	1
	Pain (abdomen) for <½ h and relieved after intake of sweet cold drinks, food, antacid, milk, etc.	2
	Abdominal pain due to ingestion of food and relieves after digestion of food or by vomiting	3
	Severe unbearable pain which does not subside any measure and the patient awake in the night	4
	Unbearable pain associated with frequent vomiting and hematemesis	5
Vibandha (Constipation)	1 time/day	0
	1 time/2 day	1
	1 time/3 day	2
	1 time/4 day	3
	1 time/5 day	4
	1 time/6 day	5
	1 time/7 day	6

Pravala Bhasma (PB) (incinerated coral) described in Rasatantra Sara Evum Siddha Prayoga Sangraha mentioned that its oral administration is helpful in pacifying *Pitta Prakopa*, *Yakrit roga*, and *Kamala roga samana.* It acts as a Rasayana (rejuvenative) by supporting hepatic function and restores metabolic balance.[33]

The planned treatment protocol produced significant improvement in both the symptomatic relief and objective parameters of the patient. Initially, the treatment was focused on achieving *Pitta-Kapha shamana, Deepana-Pachana*, and *Srotoshodhana*. Although *Charaka Samhita* advocates *Virechana* as the primary line of management in *Kamala*,

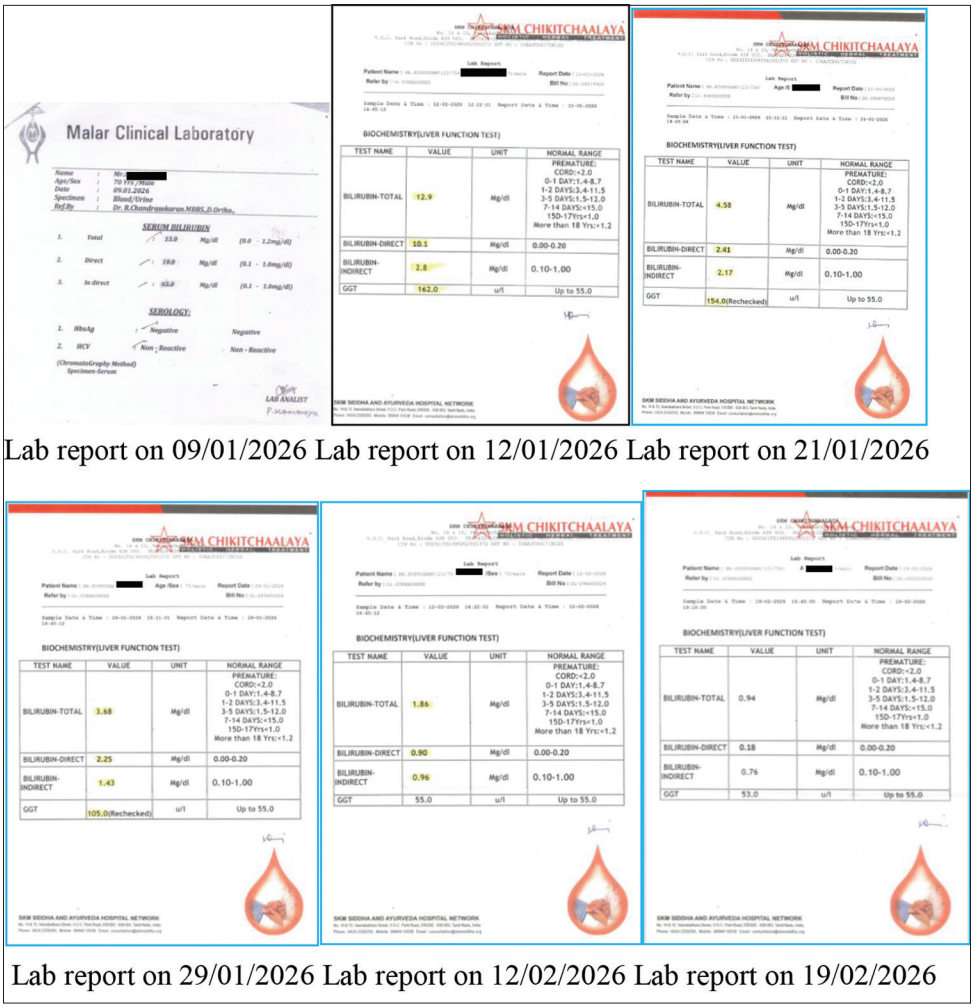


Figure 1: Investigation reports

the present treatment plan was designed after considering the patient's advanced age, as well as the *Roga* and *Rogi Bala*.

However, the formulation contained *Katuki*, which possesses *bhedhana* (expels accumulated *doshas*) property and thereby facilitates the expulsion of aggravated *Pitta Dosha*. During the second follow-up, the addition of *Mandoorathi Kudineer* and PB resulted in improvement of *Agni*, reduction in *Aruchi*, and overall clinical improvement in the patient. Progressive reduction in total bilirubin and GGT levels, along with resolution of jaundice-related symptoms by the 39th day, suggested favorable clinical response to the integrative treatment approach.

CONCLUSION

According to the results of the current case report has proven the efficacy of *Samana Chikitsa* with drugs having *Tikta rasa*, *Pitta Kapha hara*, *Agni deepana*, *Srotoshodhana, Rechana,* and hepatoprotective action helps in managing *Kamala* (Jaundice) as these are safe, economical, and without any adverse effects. However, this is a single-case observation; further, controlled case studies are required to validate these findings.

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Source of Support: Nil. **Conflicts of Interest:** None declared.