Ayurvedic Management of Kamala: A Case Study on Hepatocellular Jaundice

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Abstract—**Introduction–Rakta is regarded as the essence of life (Jiva or Prana) in living beings. In its natural state (Prakruta Avastha), it supports vitality, a healthy complexion, joy, and long life. When imbalanced, it can cause disorders such as Pandu and Kamala. In Kamala Roga, there is discoloration of the skin, changes in bowel movements (Mala Pravrutti), and buildup of Mala Roopi Pitta.**

PATIENT DETAILS – A 3-year-2-month-old female patient with clinical symptoms of Kamla with complaints of yellowish discoloration of both eyes and yellowish discoloration of urine for 4 days. Associated with pain in the whole abdomen, pain in the legs, vomiting after every meal, and reduced appetite for 2 days was selected for the study.

THERAPEUTIC INTERVENTION – The patient underwent treatment with Ayurvedic oral medications, along with advised Pathya (wholesome diet and lifestyle) and restrictions of Apathya (unwholesome practices) for 15 days.

RESULT - Significant improvements were observed in both clinical symptoms and laboratory findings, including a marked reduction in yellowish discoloration of the eyes and urine, improved appetite, decreased weakness, and lowered serum bilirubin levels, all showing statistical significance.

CONCLUSION - The management of Kamala and its complications, along with drugs, diet, and lifestyle, has been mentioned in Ayurvedic classics. Based on the Samprapti, treatment aims to remove Kapha obstruction and restore the normal pathway of Ranjaka Pitta. This helps normalize stool color and relieve Kamala symptoms, proving the effectiveness of Ayurvedic medicines in its management.

Index Terms—**Rakta, Kapha, Kamala, Pathya, Apathya, Ayurvedic, Ranjaka Pitta**

I. INTRODUCTION

The word Jaundice is a derivative of the French word 'Jaune', which means 'yellow'. Jaundice is defined as a yellowing of skin, mucous membranes, and sclera due to the deposition of yellow-orange bile pigment, i.e., bilirubin [1]. Symptoms include yellowing of skin and eyes, dark yellow coloured urine, pale-colored stools, fatigue, abdominal pain (especially in post-hepatic jaundice), and sometimes itching (cholestatic jaundice).

In Ayurveda, jaundice is described as Kamala and is considered a disease primarily caused by an imbalance of Pitta dosha, particularly Ranjaka Pitta, which is responsible for liver and blood-related functions. Kamala roga is divided into two parts (Shakha ashrita and Kostha ashrita), and Hepatocellular jaundice is very similar to Kostha ashrita kamla. According to Acharya Charak, Kamla is considered as Pittaja Nanatmaja Vyadhi [2] and Raktapradoshaja Vyadhi[3], and he also described Kamala as the advanced stage of Pandu Roga. When Pandu Rogi, who was cured of Pandu, continues to take Pitta Vardhak Aahar, this causes excessive aggravation of Pitta Dosha, which further leads to Kamala [4]. Acharya Sushruta has considered Kamala as a separate disease, and it may also be due to further complications of Panduroga. When a patient of Panduroga or a person affected with other diseases consumes Amla, Tikshna, etc. Pitta Vardhak Ahara, which may lead to the initiation of Kamala [5]. It is a disease of the Raktavaha Srotas, and Yakrut (liver) and Pleeha (spleen) are the Moola of Raktavaha Srotas [6].

PATIENT INFORMATION - A 3-year-2-month-old female patient from Bahadarabad, Haridwar, visited the Kaumarbhritya Outpatient Department (OPD) on 03 Feb 2025 (O.P.D registration no. – B 322/ 3355) with chief complaints of yellowish discoloration of both eyes, yellowish discoloration of urine, pain in the whole abdomen and legs, vomiting after every meal with reduced appetite.

HISTORY OF PRESENT ILLNESS- According to the patient's attendant, she was asymptomatic 4 days ago. Then they suddenly noticed yellowish discoloration of both of her eyes and urine. Then after 2 days, she experienced pain in her whole abdomen & legs. Her appetite was also reduced. There were episodes of vomiting after every meal. Then on 2nd Feb 2025, with this complaint, they went to an allopathic hospital in Haridwar, from where she took allopathic medication but didn't get any relief. Then on 3rd Feb 2025, they came to Rishikul Ayurvedic Medical College for further management. She had neither a history of drug allergy, autoimmune disorder, nor addiction.

II. BASELINE FINDINGS

The patient's general condition was average, with a weight of 11.75 kg, a height of 93 cm, a body mass index of 18.5 kg/m², and mid-upper arm circumferences of both arms at 13.5 cm. The patient's vitals were 98.7°F of temperature, 80 beats/min of pulse rate, 23 breaths/min of respiratory rate, and 100/68 mmHg of blood pressure.

On systemic examination, the patient was conscious and well oriented; on auscultation of the heart, S1, S2 were heard, the chest was clear with air entry to lungs bilaterally equal, and gastro-intestinal system examination showed that the abdomen was soft, non-tender with normal bowel sound.

III. CLINICAL FINDINGS

Physical examination – The patient was examined according to Ayurvedic Pariksha, and findings were summarized in Table 1

.

Table 1: Physical examination according to Ayurvedic Pariksha:

Ashtavidhapariksha (eight-fold examination)	Dashavidha pariksha (ten-fold examination)
Nadi: Vata Pradhan Pitta Anubandhi Mutra: Peetabh Varn, Aavritti- 4-5 times Mala: Shushka, Niram, Aavritti – 2 times Jivha: Lipta(slightly whitish) Shabda: Spastha Sparsha: Ruksha, Samsheetoshana Drikka: Peet varn Aakriti: Samanya	Prakriti : Vata – Pittaja Vikriti : Dosha – Pitta, Dushya – Maamsa, Rakta Sara: Rasa sara Pramana: Madhyam Satmya: Madhyam Satva: Madhyam Ahara Shakti: Heen Vyayama Shakti: Heen Vaya: Balyavastha

Local examination - A detailed examination of the patient showed clinical features like Peet chakshu (yellowish discoloration of eyes- Icterus +++), Peet nakha (yellowish discoloration of nails), Peet mukha (yellowish discoloration of the face), Peet vidmutra (yellowish discoloration of urine and stools), Nirutsaah (lack of ardor or energy), Nashtagni, Aavipaka (Reduced appetite), Daurbalya (generalized weakness), and Aruchi (Anorexia).

Diagnostic assessment –

- Lab investigation: When the patient first visited the outpatient department, following routine blood investigations were advised (dated 02/02/2025)–

Table no.- 2: Lab investigation dated 02/02/2025

Liver Function Test	
Total Bilirubin	6.75 mg/dl
Direct Bilirubin	2.49 mg/dl
Indirect bilirubin	4.08 mg/dl
SGPT	1221.0 U/L
SGOT	1277.0 U/L
Alkaline Phosphatase	600.15 U/L
A/G Ratio	1.15
Gamma-glutamyl Transferase-serum	239.54 IU/L
C- Reactive Protein	6.07 g/l

- Ayurveda diagnosis: Kamla
- Conventional diagnosis: Jaundice

Therapeutic intervention –

Treatment Protocol: After a thorough interrogation of the patient's clinical picture, lab investigations, and his mother regarding the diet, habits of the child, the history of present illness, and after a proper evaluation regarding the present condition of the child, he was planned for treatment with internal medications shown in the therapeutic intervention [Table 3].

Treatment duration – 15 days
Period of assessment - The patient was assessed at intervals of 3, 5, and 7 days.

Table 3 - Therapeutic Intervention

OPD visit	Medication	Duration	Advice
First visit (03/02/2025)	Arogyavardhani vati – 50 mg Shankha Bhasma - 50 mg Mandura Bhasma - 50 mg Three divided doses with honey Phaltrikadi Kwatha – 10 ml BID	For 3 days	Avoid fast food, packaged food, and spicy food Drinking clean, boiled water Diet as advised
Second visit (06/02/2025)	Arogyavardhani vati – 50 mg Shankha Bhasma - 50 mg Mandura Bhasma - 50 mg Three divided doses with honey Phaltrikadi Kwatha – 10 ml BID Syrup. Triphala - ½ tsp BID	For 5 days	Avoid fast food, packaged food, and spicy food Drinking clean, boiled water Diet as advised
Third visit (17/02/2025)	Arogyavardhani vati – 65 mg Praval panchamrit -35 mg Giloy Satva - 65 mg Bhumiamlaki Churna - 500 mg Gokshur Rasayan - 250 mg Punarnva Mandur - 65 mg Three divided doses with honey Phaltrikadi Kwatha – 10 ml BID	For 7 days	Avoid fast food, packaged food, and spicy food Drinking clean, boiled water Diet as advised

IV. RESULT

During the treatment patient was kept only on oral medication for 15 days. The results were notable in both clinical and laboratory parameters, showing statistically significant improvement in the yellowish discoloration of the eyes and urine, loss of appetite, weakness, and a reduction in serum bilirubin levels.
Figure. 1, 2, 3 – Depicts the changes in the icterus of patient in 1st, 2nd and 3rd visit.
Laboratory investigations were repeated after the treatment (dated 19/02/2025), and the results are as follows:

Table no. 4 : Lab investigations dated 04/03/2025

Total Bilirubin	0.90 mg /dl
Direct Bilirubin	0.30 mg/dl
Indirect Bilirubin	0.60 mg/dl
SGPT	26.8 U/L
SGOT	37.7 U/L
Alkaline Phosphatase	81.94 U/L

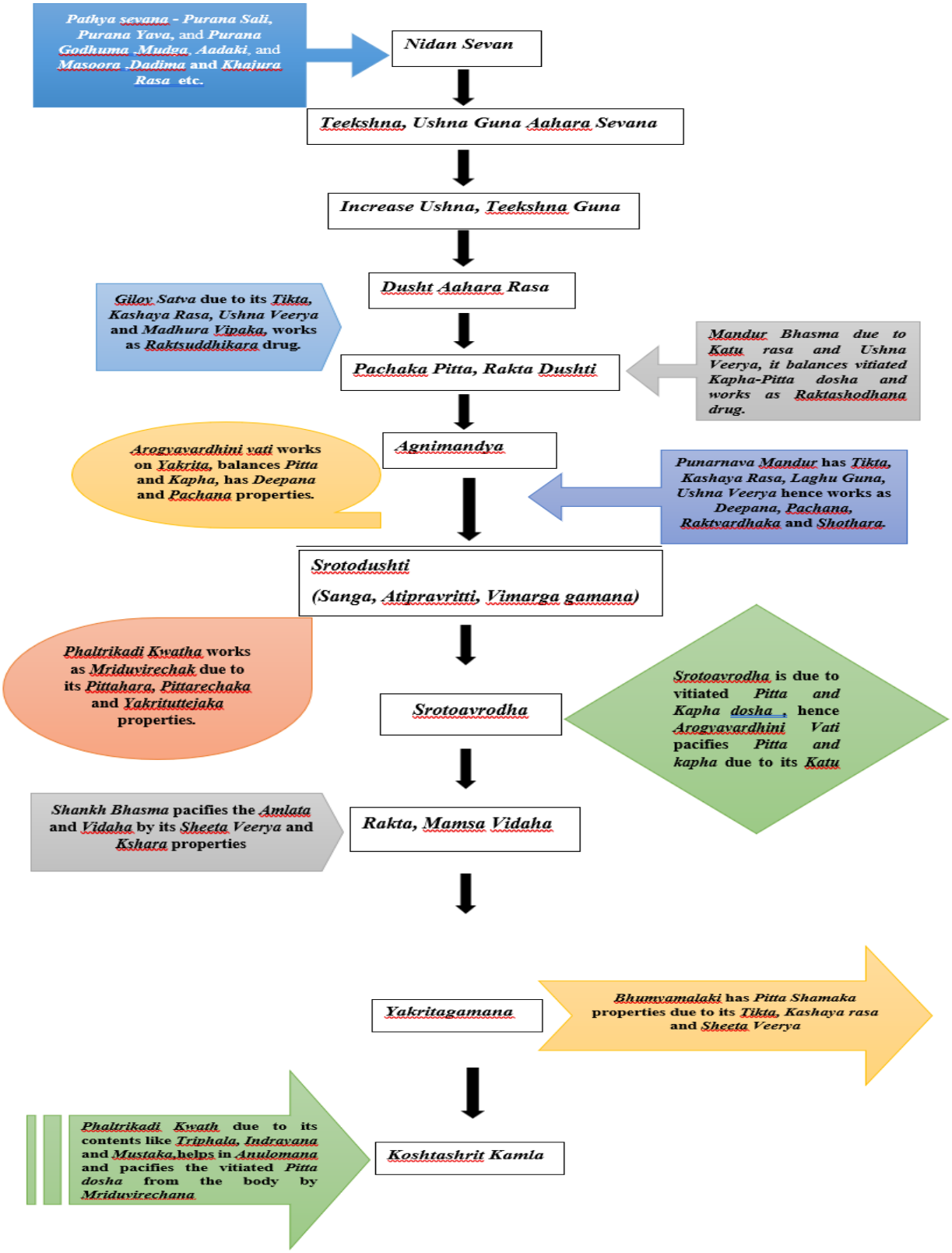
Table no. 5: Laboratory findings of before and after treatment- (Fig. 4, 5)

	Before treatment	After treatment
Total bilirubin	6.75 mg/dl	0.90 mg/dl
Direct Bilirubin	2.49 mg/dl	0.30 mg/dl
Indirect bilirubin	4.08 mg/dl	0.60 mg/dl
SGPT	1221.0 U/L	26.8 U/L
SGOT	1277.0 U/L	37.7 U/L

V. DISCUSSION

After 15 days of treatment, the patient showed significant improvement in all symptoms. Over time, the patient's condition has continued to improve steadily, with no recurrence of symptoms observed during the 2-month follow-up period.

Figure. 6- Diagrammatic presentation of Kamla Samprapti – Samprapti Vighatana



The description suggests that the drug interrupts the progression of Kamala by acting as a blood purifier (Raktashodhaka) and balancing the three doshas (Tridoshaghna). It also helps reduce fever (Jwaraghna), enhances digestion (Deepana and Pachana), promotes proper bowel movement (Anulomana), and functions as a rejuvenative tonic (Rasayana), thereby supporting the formation of healthy Dhatu. Additionally, it lowers excess bile in the bloodstream and helps restore normal blood parameters.

VI. CONCLUSION

In Shakhasrita Kamala, Kapha blocks Ranjaka Pitta in its site (Pitta Sthana), preventing it from reaching the Kostha. As a result, stool lacks the usual bile color and appears white. To treat this, Kapha needs to be cleared using substances with Katu, Lavana, Amla Rasa, and Ushna, Tikshna, Ruksha properties. This treatment should be continued until Ranjaka Pitta returns to Kostha, evident when stool regains its normal color, and symptoms of Kamala subside. By breaking the Samprapti Chakra (pathological cycle), the treatment is planned to remove the root cause of Kamala. This approach helps restore the normal functioning of Ranjaka Pitta, and the relief of symptoms demonstrates the effectiveness of Ayurvedic management in Kamala.

In the management of Kamala, a carefully selected Pathya Ahara (wholesome diet) plays a crucial role in supporting digestion and liver function. The following items are considered beneficial: Purana Sali, Purana Yava, and Purana Godhuma serve as easily digestible grains. Among pulses, Mudga, Aadaki, and Masoora are preferred due to their light and nourishing qualities. Jangala Mamsarasa provides strength and is easy to digest. Mridvika Toya and Amalaki Toya aid in detoxification and nourishment. Kola Phala and Amalaki with Sneha support liver health, while Ksheera and Ghrita act as rejuvenators. Leafy vegetables like Vrisha, Patola, and Parpataka Saka help pacify Pitta and improve digestion. Dadima and Khajura Rasa nourish and enhance digestive strength [14-15].

Figure file

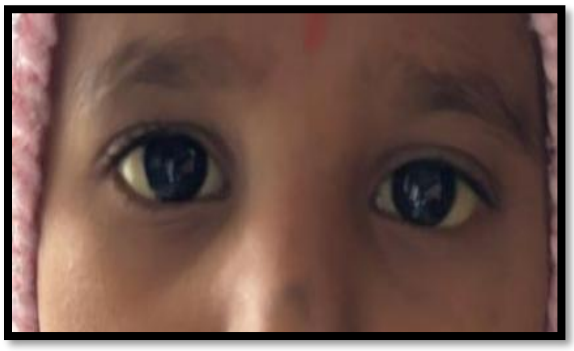


Fig. 1- Icterus in first visit (03/02/2025)

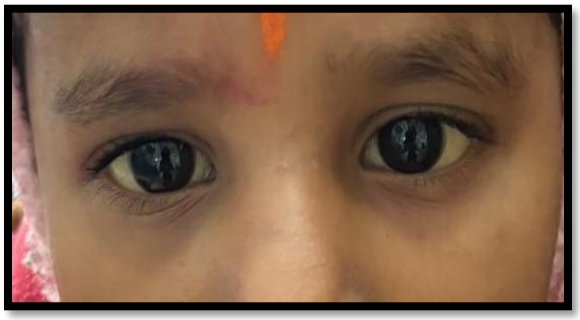


Fig. 2- Icterus in second visit (06/02/2025)

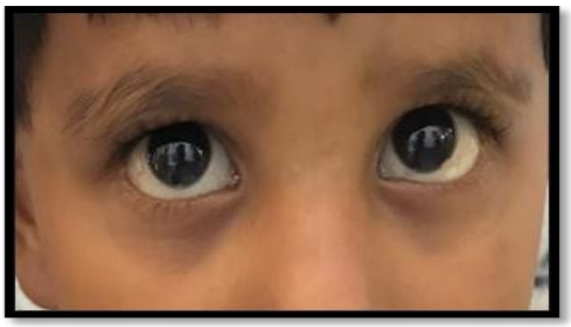
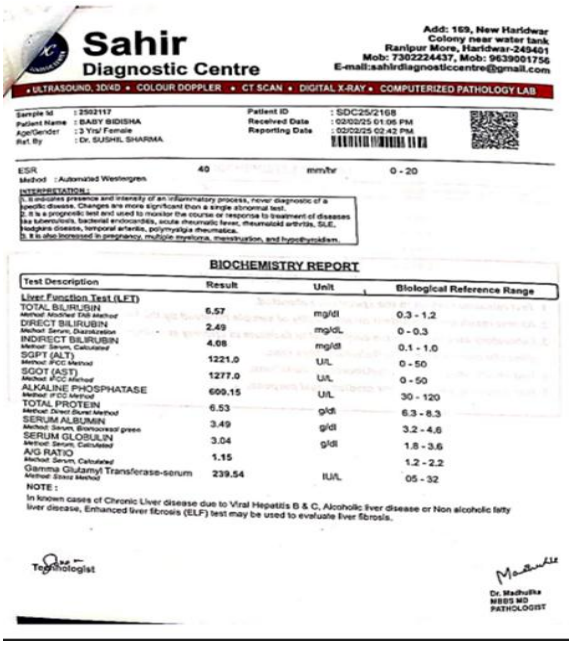


Fig. 3- Icterus in third visit (17/02/2025)



Sahir
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• ULTRASOUND, 3D/4D • COLOUR DOPPLER • CT SCAN • DIGITAL X-RAY • COMPUTERIZED PATHOLOGY LAB

Sample Id : 2502117
Patient Name : BABY SIDISHA
Age/Gender : 3 Yrs/ Female
Ref. By : Dr. SUSHIL SHARMA

Patient ID : SDC25/2168
Received Date : 02/02/25 01:05 PM
Reporting Date : 02/02/25 02:42 PM

ESR 40 mm/hr 0 - 20
Method : Automated Westergren

INTERPRETATION :
1. It indicates presence and intensity of an inflammatory process, never diagnostic of a specific disease. Changes are more significant than a single abnormal test.
2. It is a prognostic test and used to monitor the course or response to treatment of diseases like tuberculosis, bacterial endocarditis, acute rheumatic fever, rheumatoid arthritis, SLE, Hodgkins disease, temporal arteritis, polymyalgia rheumatica.
3. It is also increased in pregnancy, multiple myeloma, menstruation, and hypo@uricemia.

BIOCHEMISTRY REPORT

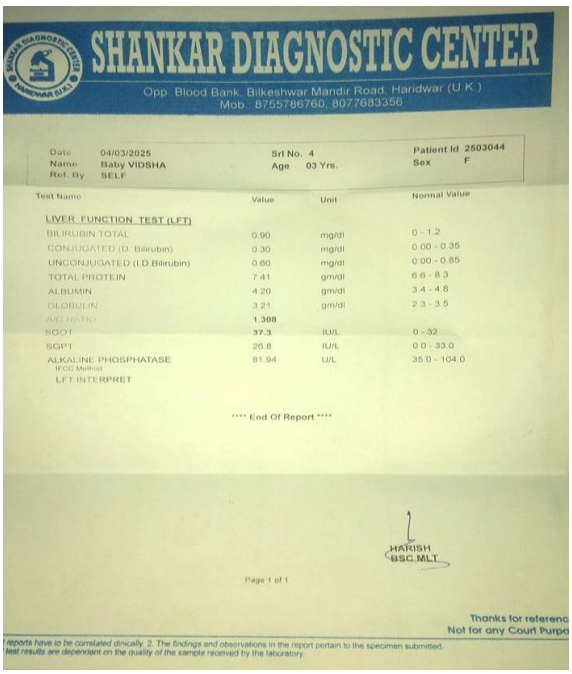
Test Description	Result	Unit	Biological Reference Range
Liver Function Test (LFT)			
TOTAL BILIRUBIN (Method: Modified Diazotization)	6.57	mg/dl	0.3 - 1.2
DIRECT BILIRUBIN (Method: Serum, Diazotization)	2.49	mg/dL	0 - 0.3
INDIRECT BILIRUBIN (Method: Serum, Calculated)	4.08	mg/dl	0.1 - 1.0
SGPT (ALT) (Method: IFCC Method)	1221.0	U/L	0 - 50
SGOT (AST) (Method: IFCC Method)	1277.0	U/L	0 - 50
ALKALINE PHOSPHATASE (Method: IFCC Method)	609.15	U/L	30 - 120
TOTAL PROTEIN (Method: Direct Biuret Method)	6.53	g/dl	6.3 - 8.3
SERUM ALBUMIN (Method: Serum, Bromocresol green)	3.49	g/dl	3.2 - 4.6
SERUM GLOBULIN (Method: Serum, Calculated)	3.04	g/dl	1.8 - 3.6
A/G RATIO (Method: Serum, Calculated)	1.15		1.2 - 2.2
Gamma Glutamyl Transferase-serum (Method: Enzy Method)	239.54	IU/L	05 - 32

NOTE :
In known cases of Chronic Liver disease due to Viral Hepatitis B & C, Alcoholic liver disease or Non alcoholic fatty liver disease, Enhanced liver fibrosis (ELF) test may be used to evaluate liver fibrosis.

Technologist

Dr. Madhulika
MBBS MD
PATHOLOGIST

Fig. 4- Liver Function Test report dated 02/02/2025



SHANKAR DIAGNOSTIC CENTER

Opp. Blood Bank, Bilkeshwar Mandir Road, Haridwar (U.K.)
Mob. 8755786760, 8077683356

Date 04/03/2025 Srl No. 4 Patient Id 2503044
Name Baby VIDSHA Age 03 Yrs. Sex F
Ref. By SELF

Test Name	Value	Unit	Normal Value
LIVER FUNCTION TEST (LFT)			
BILIRUBIN TOTAL	0.90	mg/dl	0 - 1.2
CONJUGATED (D. Bilirubin)	0.30	mg/dl	0.00 - 0.35
UNCONJUGATED (I.D.Bilirubin)	0.60	mg/dl	0.00 - 0.85
TOTAL PROTEIN	7.41	gm/dl	6.6 - 8.3
ALBUMIN	4.20	gm/dl	3.4 - 4.8
GLOBULIN	3.21	gm/dl	2.3 - 3.5
A/G RATIO	1.308		
SGOT	37.3	IU/L	0 - 32
SGPT	26.8	IU/L	0.0 - 33.0
ALKALINE PHOSPHATASE (IFCC Method)	81.94	U/L	35.0 - 104.0
LFT INTERPRET			

**** End Of Report ****

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reports have to be correlated clinically. 2. The findings and observations in the report pertain to the specimen submitted. test results are dependant on the quality of the sample received by the laboratory.

Fig. 5- Liver Function Test report dated 04/03/2025

Declaration of patient consent - The authors confirm that all necessary patient consent forms have been obtained. Consent for the publication of clinical information and images was obtained from both the patient and their parents. They have been informed that, although names and initials will not be disclosed, every effort will be made to protect their identity; however, complete anonymity cannot be guaranteed.

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Conflicts of interest: There are no conflicts of interest.

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