EUROPEAN JOURNAL OF BIOMEDICAL AND PHARMACEUTICAL SCIENCES
http://www.ejbps.com

ISSN 2349-8870
Coden USA: EJBPBO
Volume: 13
Issue: 3
Year: 2026

INTEGRATIVE MANAGEMENT OF JAUNDICE – CASE SERIES

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DOI: https://doi.org/10.5281/zenodo.18796381

How to cite this Article: Dr. Rohit Natekar[1]*, Dr. Rachana Magdum[2], Dr. Madhuri Rodd[3], Dr. Ghansham Jadhav[4], Dr. Hemlata Natekar[5] (2026). Integrative Management Of Jaundice – Case Series. European Journal of Biomedical and Pharmaceutical Sciences, 13(3), 158–163.

Article Received on 25/01/2026 **Article Revised on 14/02/2026** **Article Published on 01/03/2026**

ABSTRACT

Background: Jaundice is a common Hepatocellular disease. It is yellowish discoloration of eyes, skin and urine caused by hyperbillirubinemia. In Ayurveda jaundice is described as a Kamala roga. The hepatocellular jaundice is described as a Kosthaashrita Kamala. It is pittaja nanatamaja vyadhi and raktapradoshaj vyadhi. **Case:** Total 7 children's diagnosed with Jaundice were taken for this case series that had symptoms such as fever, nausea, abdominal pain, loss of appetite, general weakness with raised LFT levels. **Intervention:** We treated Kamala with Mrudu Virechana Samshodhana i.e purgation therapy.The patient who has Samshudhakoshta should take Pathya Ahara includes Purana shali, Ghodhuma, Mudgayusha which are having less fat content that is good for fat metabolism of liver in this condition. So, here the importance of Pathya can be seen. The pathya ahara with some ayurvedic formulations are given. **Observation:** The present study shows statistical significant reduction in liver function parameter such as total billirubin, SGOT, SGPT, Sr Alk Phoshatase. **Conclusion:** There is significant result of Mrudu Virechana Samshodhana in 7 cases of jaundice. This case series mainly focuses on Pathya ahara. After treatment we got an excellent result of Ayurvedic intervention. Ayurvedic Pathya ahara offers an effective approach to manage Kamala vyadhi.

KEYWORD: Kamala, Jaundice, Ayurveda, Samshodhana, Mrudu Virechana, Case series.

INTRODUCTION

The jaundice is a yellowish pigmentation of skin, the conjunctival membrane over the sclera and other mucous membrane caused by hyperbillirubinemia. This hyperbillirubinemia subsequently causes increased level of billirubin in the extracellular fluid. Concentration of blood plasma does not normally exceed 1 mg/dl (> 17 nmol/L). Concentration higher than 1.8 mg/dl (> 30 nmol/P) leads to Jaundice. Jaundice is often seen in liver disease such as hepatitis or liver cancer.[1] It may arise due to increased bile pigment to the liver, affection of billirubin diffusion into the liver cells, defective conjugation and defective excretion.[2]

Kamala is a systemic disease of yakruta (liver). In Ayurveda most of Acharyas mentioned Kamala vyadhi in pandu adhyay. Kamala is a pittaja nanatamaja and raktapradoshaja vyadhi. Hepatocellular Kamala is a Kosthaashrita Kamala. Deep yellow colour of eyes, nails and urine, skin colour resembling a frog, weakness of sense organ, burning sensation, indigestion, weakness, debility and anorexia are the features of Kamala. It involves kostha (alimentary tract), shakha (blood) and other dhatus.[3]

According to Ayurvedic principle, pitta is responsible for digestion, metabolism and transformation process. Imbalance in pitta dosha and vitiated rakta dhatu can lead to development of Kamala. Ayurvedic treatment focusing on strengthening digestion, removing toxins and purging the excess pitta dosha. Ayurvedic Samshodhan chikitsa helps in restoring physiological function.

In Ayurveda Samshodhan chikitsa mentioned to cure disease from root. Virechana is a detoxification and rejuvenation therapy. 'Kamale tu Virechanam….' According to Ayurvedic principle, Virechana karma is mentioned for Kamala disease.[4] Virechana karma is a purgation therapy that involves elimination of excess pitta and toxins. In Kamala vyadhi, the Pathya ahara is mentioned. The Pathya ahara mainly included Purana shali, Yava, Godhuma, Mudgayusha and Jangalmamasa rasa.[5] These Pathya ahara having less fat content that is good for fat metabolism of liver and eliminate excess pitta, toxins. The Samshudhakoshta person should take Pathya ahara act as Mrudu Virechana. Thus Mrudu Virechana Samshodhana along with some Ayurvedic formulation helps in Kamala vyadhi.

In this case series aims to examine the ayurvedic approach to maintain jaundice with the principle and treatment found in classical texts. By evaluating patient's condition from an ayurvedic prospective, this study underscores importance of Pathya ahara. Ayurvedic principle and treatment focusing not just symptom relief but also cure disease from root and gives long term health. So these Ayurvedic treatment offers a unique and effective approach to jaundice.

AIMS AND OBJECTIVES

AIM

To study the efficacy of Mrudu Virechana Samshodhana in Kamala.

MATERIAL AND METHOD

A total 7 diagnosed patient's of Kamala treated with Mrudu Virechana karma and Pathya ahara. The Pathya ahara included Purana shali, Godhuma, Mudgayusha given for 30 – 45 days. Mudgayusha is a liquid portion prepared by using 1 part of mudga and 14 parts of water and cooked it well. [6]Mudgayusha given twice per day. Some ayurvedic formulation such as arogyavardhini vati, haritaki churna and dhatriavleha given. By assessing the child we had given an appropriate matra of medicine. Follow up of patient had been taken every 2nd day.

CASE SERIRS

Table no. 1: table showing symptoms, general examination and systemic examination of 7 patient's of jaundice.

CASE NO.	SYMPTOMS	GENERAL EXAMINATION	SYSTAMATIC EXAMINATION
Case no. 1	Fever on and off, Loss of taste, General weakness, Abdominal pain	Pallor – present Icterus – present	Yellowish discoloration of urine
Case no. 2	Fever, Loss of taste, Vomiting, Abdominal pain, General weakness	Pallor – present Icterus – present	Yellowish discoloration of urine
Case no. 3	Fever, Abdominal pain, Nausea, Loss of taste, General weakness	Pallor – mild present Icterus – present	Slightly yellowish discoloration of urine
Case no. 4	Mild fever, Abdominal pain, Loss of taste, General weakness	Pallor – present Icterus – mild present	Yellowish discoloration of urine
Case no. 5	Fever, Nausea, Abdominal pain, General weakness	Pallor – present Icterus – present	Yellowish discoloration of urine
Case no. 6	Fever on and off, Abdominal pain, Loss of taste, Constipation, General weakness	Pallor – present Icterus – present	Yellowish discoloration of urine
Case no. 7	Fever, Abdominal pain, Constipation, General weakness	Pallor – present Icterus – present	Yellowish discoloration of urine

OBSERVATION AND RESULT

Table no. 2: Table showing result before intervention.

CASE NO.	TOTAL BILLIRUBIN	DIRECT BILLIRUBIN	INDIRECT BILLIRUBIN	S.G.O.T	S.G.P.T	SR.ALK PHOSPHATASE
1	6.4 mg/dl	2.8 mg/dl	3.6 mg/dl	1050IU/L	1275 IU/L	329 IU/L
2	5.07 mg/dl	1.70mg/dl	3.37 mg/dl	387.78 IU/L	308.32 IU/L	387.89 IU/L
3	2.6 mg/dl	1.7 mg/dl	0.9 mg/dl	715 IU/L	842 IU/L	363 IU/L
4	5.66 mg/dl	2.10 mg/dl	3.56 mg/dl	273.9 IU/L	165.2 IU/L	787 IU/L
5	7.45 mg/dl	3.55 mg/dl	3.9 mg/dl	630 IU/L	715 IU/L	498 IU/L
6	5.6 mg/dl	2.5 mg/dl	3.1 mg/dl	335 IU/L	845 IU/L	458 IU/L
7	5.1 mg/dl	2.2 mg/dl	2.9 mg/dl	525 IU/L	1010 IU/L	609 IU/L

Table no.3: Table showing result after intervention.

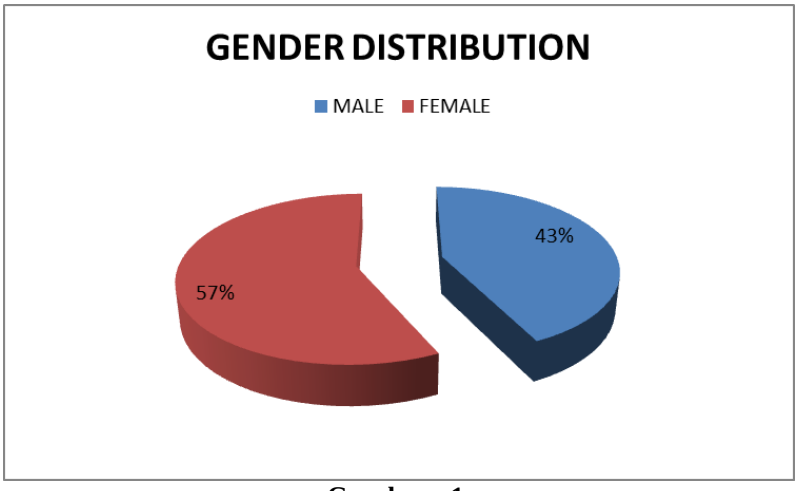
CASE NO.	TOTALBILL IRUBIN	DIRECTBIL LIRUBIN	INDIRECTBIL LIRUBIN	S.G.O.T	S.G.P.T	SR.ALK PHOSPHATASE
1	0.70 mg/dl	0.30 mg/dl	0.4 mg/dl	48.70 IU/L	43.90 IU/L	191 IU/L
2	0.97 mg/dl	0.39 mg/dl	0.58 mg/dl	49.1O IU/L	44.87 IU/L	95.12 IU/L
3	1.2 mg/dl	0.4 mg/dl	0.8 mg/dl	102 IU/L	230 IU/L	450 IU/L
4	1.6 mg/dl	0.4 mg/dl	1.2 mg/dl	150 IU/L	279 IU/L	420 IU/L
5	0.90 mg/dl	0.30 mg/dl	0.60 mg/dl	64.10 IU/L	88.20 IU/L	262 IU/L
6	0.80 mg/dl	0.30 mg/dl	0.5 mg/dl	35 IU/L	28 IU/L	215 IU/L
7	0.80 mg/dl	0.30 mg/dl	0.5 mg/dl	49 IU/L	40 IU/L	383 IU/L

The assessment of patient was done before and after treatment on the basis of liver function parameters given in table no. 2 and 3. After treatment, it was observed that liver function parameters such as Total billirubin, SGOT, SGPT and Sr. Alk Phosphatase values are reduced. An unpaired t-test was applied for statistical analysis to compare results of before and after treatment.

Demographic Information

A. Distribution of patient according to gender

Total 7 child diagnosed with jaundice were taken for this case series. Out of that 4 female patient and 3 male patients. This graph shows gender distribution. Male – 43 % and Female – 57 %.



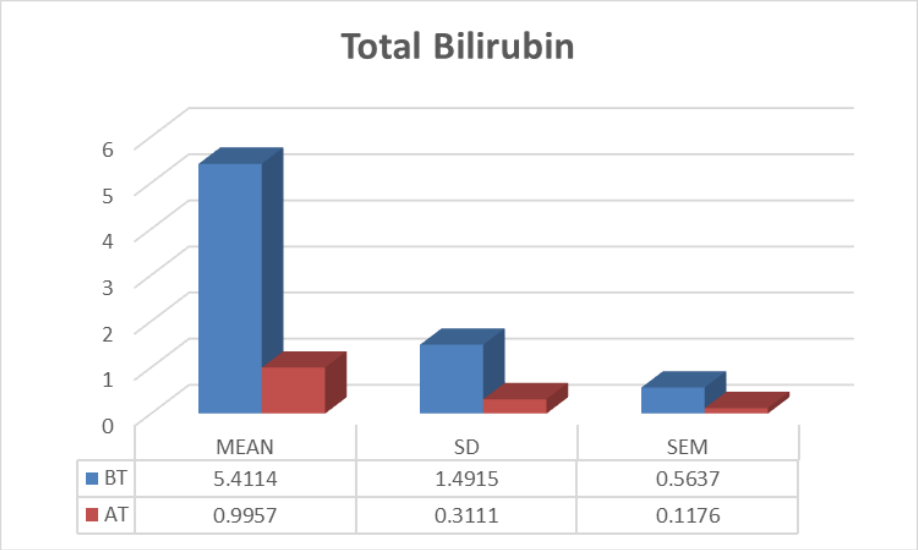
Graph no. 1.

B. Total billirubin

Table no. 4: Table showing statistical data of total billirubin before treatment and after treatment.

GROUP	BT	AT
MEAN	5.4114	0.9957
SD	1.4915	0.3111
SEM	0.5637	0.1176

A highly significant reduction in total billirubin level was observed after following treatment. The mean total billirubin decreased from 5.4114 ± 1.4915mg/ dl to 0.9957 ± 0.3111. This reduction in billirubin level was found extremely statistically significant ($P < 0.0001$), with a 95 % confidence interval ranging from 3.1610 to 5.6705.



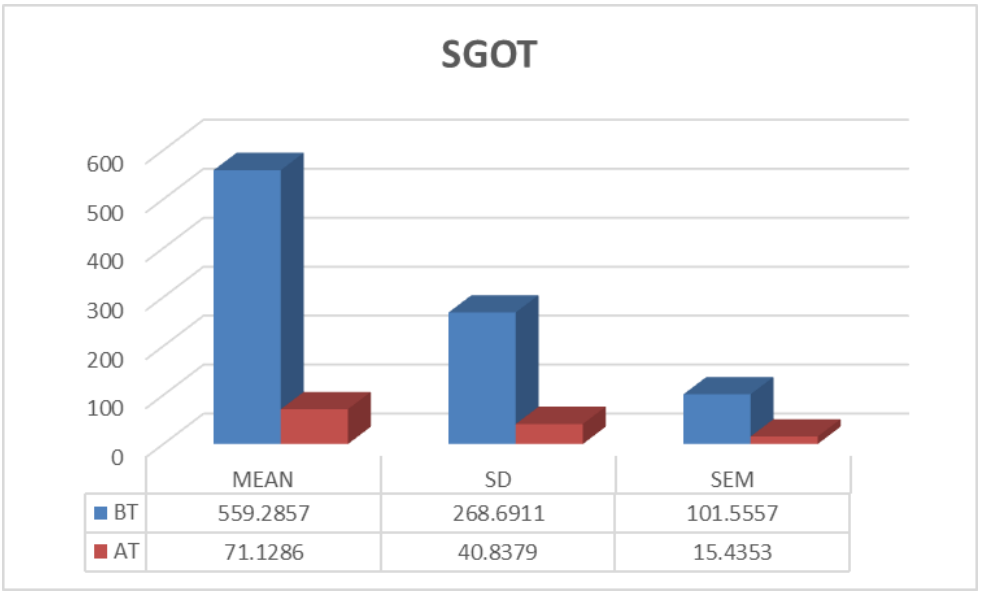
Graph no. 2.

C. SGOT

Table no. 5: table showing the statistical data of SGOT before and after treatment.

GROUP	BT	AT
MEAN	559.2857	71.1286
SD	268.6911	40.8379
SEM	101.5557	15.4353

SGOT levels showed a marked decline after treatment. The mean SGOT level reduced from 559.2957 ± 268.69 U/L before treatment to 71.1286 ± 40.8379 U/L after treatment. The mean difference of 488.1571 U/L was extremely statistically significant (P = 0.0005), with a 95% confidence interval of 264.3453 to 711.97.



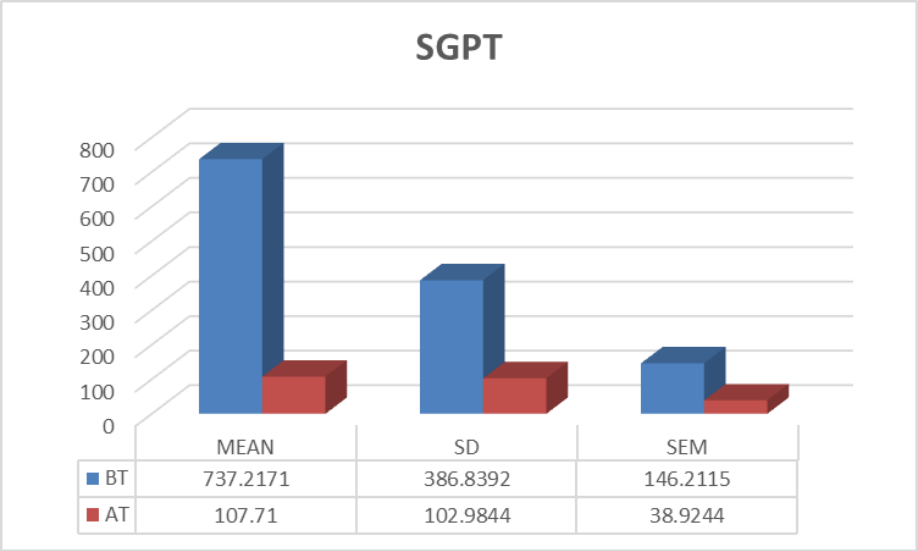
Graph no. 3.

D. SGPT

Table no. 6: table showing statistical data of SGPT before treatment and after treatment.

GROUP	BT	AT
MEAN	737.2171	107.7100
SD	386.8392	102.9844
SEM	146.2115	38.9244

SGPT levels was noted a significant improvement. The mean SGOT level reduced from 737.2171 ± 386.8392 U/L before treatment to 107.71 ± 102.9844 U/L after treatment. The mean reduction of 629.5071 U/L was extremely statistically significant (P = 0.0013), with a 95% confidence interval of 299.8441 to 959.1701.



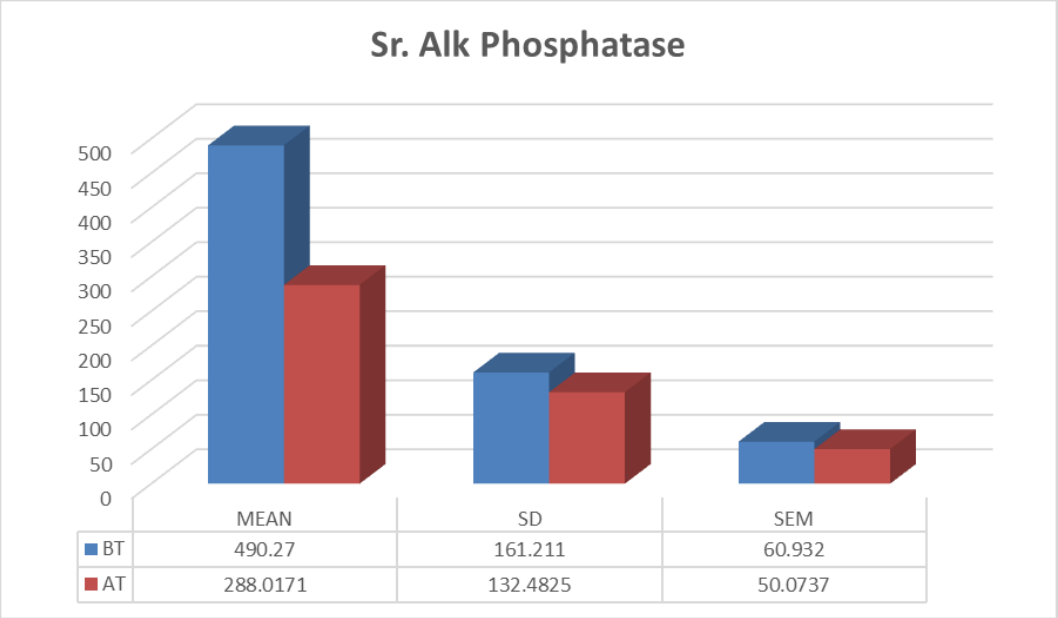
Graph no. 4.

E. Sr. Alk Phosphatase

Table no. 7: table showing statistical data of Sr. Alk phosphatase before and after treatment.

GROUP	BT	AT
MEAN	490.2700	288.0171
SD	161.2110	132.4825
SEM	60.9320	50.0737

Serum alkaline phosphatase levels demonstrated a statistically significant reduction after following treatment. The mean value decreased from 490.27 ± 161.21 U/L before treatment to 288.0171 ± 132.4825 U/L after treatment. The mean reduction of 202.2529 U/L (P = 0.0248) with a 95% confidence interval of 30.4154 to 374.



Graph no. 5.

DISCUSSION

Jaundice is a yellowish discoloration of tissue resulting from deposition of billirubin. In Ayurveda, 'Kamale tu virechanam…'Virechana karma is mentioned for Kamala vyadhi. Virechana is the best purgation therapy that involves elimination of excess pitta and toxin. Puran shali, Godhuma, Mudgayusha are mentioned as a Pathya ahara in Kamala vyadhi. Mudga is the best in all shamidhanya.

These Pathya ahara has less fat content that is good for fat metabolism of liver. It improves metabolism, removes toxins and excess pitta from the body. It reduces yellowish pigmentation of eyes, skin and urine. It decreases symptoms such as fever, nausea, abdominal pain, loss of appetite.

Arogyavardhini vati.[7]
Arogyavardhini vati regulate agni (dipana and pachana), enhance digestion, clean the liver and improve bile secretion. Thus, arogyavardhini vati helps in reducing pitta dosha, balancing agni and digestive system.

Haritaki churna[8]
Haritaki increases digestion and act as anuloman. It stimulates liver.So, useful in Kamala disease.

Dhatriavleha[9]
It contain amalaki, loha bhasma, sunthi, maricha, pippali and haridra – each equal quantity. Due to all these contain it can useful in Kamala disease.

In the present case study, a total 7 children's diagnosed with jaundice were taken. Diagnosis is mainly on the basis of sign and symptoms of jaundice as mentioned in ayurvedic text. Statistical analysis compares two parameters before treatment (BT) and after treatment (AT). Student t test were applied to evaluate the significance of changes observed after treatment.

The present study demonstrates a statistically significant reduction in liver function parameters such as reduction in total billirubin, SGOT, SGPT and sr. alk Phosphatase levels. The highly significant reduction in total billirubin level indicates marked improvement in hepatic excretory function and bile metabolism. The significant decline in SGOT and SGPT levels indicates restoration of normal hepatic metabolic activity. It suggest the hepatoprotective and regenerative effect of the intervention. The statistically significant reduction in sr. alk phosphatase levels indicates improvement in biliary function.

Here we managed child symptomatically with antipyretic, antispasmodic with antiemetic medications and after stabilization we adapted an ayurvedic line of management. After treatment we got an excellent result of integrative practice.

CONCLUSION

In conclusion, the Ayurvedic treatment of Kamala offers an approach that target the root cause of excess billirubin level - primarily an imbalance in pitta dosha, poor digestion and the accumulation of toxins. According to ayurvedic principle the Virechana karma is the best purgation therapy that eliminates excess pitta and toxins. The Pathya ahara mainly Mudgayusha act as Mrudu Virechana. Mudgayusha helps in fat metabolism of liver. The combination of Arogyavardhini vati, Haritaki churna and Dhatriavleha are also enhance digestion, pacifying pitta and liver function. We statistically analysis the liver function parameters before and after treatment and after study there is significant reduction in liver function parameter. So, The Mrudu Virechana Samshodhana along with some Ayurvedic formulation helps in Kamala vyadhi. In this case series mainly focuses on Pathya ahara for relieving Kamala vyadhi.

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