Case Report

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Internal Medicine Section

Implementation of Ayurvedic Treatment Principles in Hepatocellular Jaundice: A Case Report

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ABSTRACT

Jaundice is a yellow colouring of the skin, mucous membranes, and the conjunctival membrane surrounding the sclera. It is a clinical indication of underlying hepatocellular dysfunction, biliary obstruction, or anomalies in bilirubin metabolism. Kamala might be linked to jaundice based on shared traits. *Ayurveda* has been well known for treating liver disorders for centuries. In this case report, a 29-year-old male patient, visited the Kayachikitsa outpatient department with primary complaints of pricking pain in the abdomen, loss of appetite, yellow discolouration of urine, nausea, vomiting, generalised weakness, and constipation for 10 days. Based on clinical examination and Liver Function Tests (LFT), he was diagnosed with jaundice. The patient was effectively treated with *Shodhan* (bio-purification) with *sadya virechan* (purgation therapy) followed by medicinal treatment for 45 days. Within 7-8 days, there was a significant improvement in abdominal pain with mild tenderness, frequency of vomiting, complaints of anorexia, nausea, constipation, and yellow discolouration of urine, along with substantial improvement in liver function. After 45 days of Ayurvedic treatment, all symptoms and liver functions showed highly significant results. The treatment was given by considering the vitiation of *Pitta* and *Rakta*. It can be concluded that by implementing *Ayurvedic* treatment principles, liver function can be improved in cases of jaundice in a short duration without causing any adverse effects.

Keywords: Abdominal pain, Hepatitis, *Kamala*, Liver disorders, *Sadya virechan*

CASE REPORT

A case report of a 29-year-old male patient, who visited the Kayachikitsa outpatient department with the leading complaints of pricking pain in the abdomen, gradually increasing over 10 days, along with symptoms of *Agnimandya* (loss of appetite), *Pitta Varniya Mutra* (yellow discolouration of urine), *Hrullas* (nausea), *Chardi* (vomiting), *Daurbalya* (weakness), and *Vibhandha* (constipation) from 10 days. Upon inquiry, the patient disclosed that he had a fever 20 days prior, for which he had received treatment from a general practitioner. The patient felt better with the medication of Tablet (Tab.) Acetaminophen 500 mg twice a day, Tab Pantoprazole 40 mg twice a day, Domperidone 10 mg once a day, and Capsule (Cap) Vitamin B complex 400 mg once a day for five days. After 20 days, he developed the afore-mentioned symptoms.

Further history it is found that the patient was a factory worker who had been consuming food from roadside stalls, including fried and spicy items, for one and a half years. The case had no history of blood transfusions, hypertension, diabetes, or any chronic illnesses. Clinically examined, he was found to be afebrile, with abdominal distention, mild tenderness in the epigastric region, no hepatomegaly, and a tympanic sound present throughout the abdomen. Other systemic examinations did not reveal any significant findings. Based on the clinical examination, he was provisionally diagnosed with viral hepatitis and was advised to undergo Complete Blood Count (CBC), Liver Function Tests (LFT), Hepatitis B surface Antigen (HBsAg) testing, and abdominal Ultrasonography (USG) abdomen to specify the diagnosis. Later on, diagnosed with jaundice. His findings were as follows [Table/Fig-1].

S. no	Name of investigation	Values in patient
1	Haemoglobin (Hb)	12.2 g/dL
2	Total serum bilirubin	12.30 mg/dL
3	Direct serum bilirubin	8.2 mg/dL
4	Indirect serum bilirubin	4.1 mg/dL
5	SGOT	870 U/L
6	SGPT	1240 U/L
7	ALP	193 U/L
8	Total cholestrol	121 mg/dL
9	Triglycerides	213 mg/dL
10	HDL Cholesterol	17 mg/dL
11	VLDL Cholesterol	42.60 mg/dL
12	HBsAg	Negative
13	USG abdomen	No demonstrable abnormality

[Table/Fig-1]: Shows the findings of the investigations.
SGOT: Serum glutamic oxaloacetic transaminase; SGPT: Serum glutamic pyruvic transaminase; ALP: Alanine phosphatase; HDL: High density lipoprotein; VLDL: Very low density lipoprotein; HBsAg: Hepatitis B surface Antigen; USG: Ultrasonography

Treatment Plan: This case was diagnosed as *Bahupitta Kamala*, and the treatment was planned as per the treatment principles of *Kamala*.

- *Sadhya Virechana* (Purgation therapy): *Sadhya Virechana* was administered using two tablets of *Abhyadi Modak* with lukewarm water at bedtime, resulting in 8 Vegas (frequency of stool).
- *Shaman Chikitsa* (Internal Medication):

To alleviate the symptoms and cure the disease, the Ayurvedic treatment protocol has been administered [Table/Fig-2].

Observation

The therapeutic outcome of the patient's subjective assessment during the 45-day treatment course is detailed in [Table/Fig-3] [1,2]. The changes in blood investigations during the 45-day treatment period are outlined in [Table/Fig-4]. The alterations in scleral colour before start of treatment and after the 45-day treatment are depicted in [Table/Fig-5].

S. no.	Medicine	Dose	Frequency	Aduvant	Duration
1.	*Aarogyavardhani vati*	500 mg	Twice a day after a meal	With lukewarm water	For consecutive 45 days
2.	*Livomyn tablet*	500 mg	Twice a day before a meal	With lukewarm water	
3.	*Rohitakaristha*	20 mL	Twice a day after a meal	With an equal amount of water	
4.	*Syrup amlycure*	15 mL	Twice a day after a meal	with water	

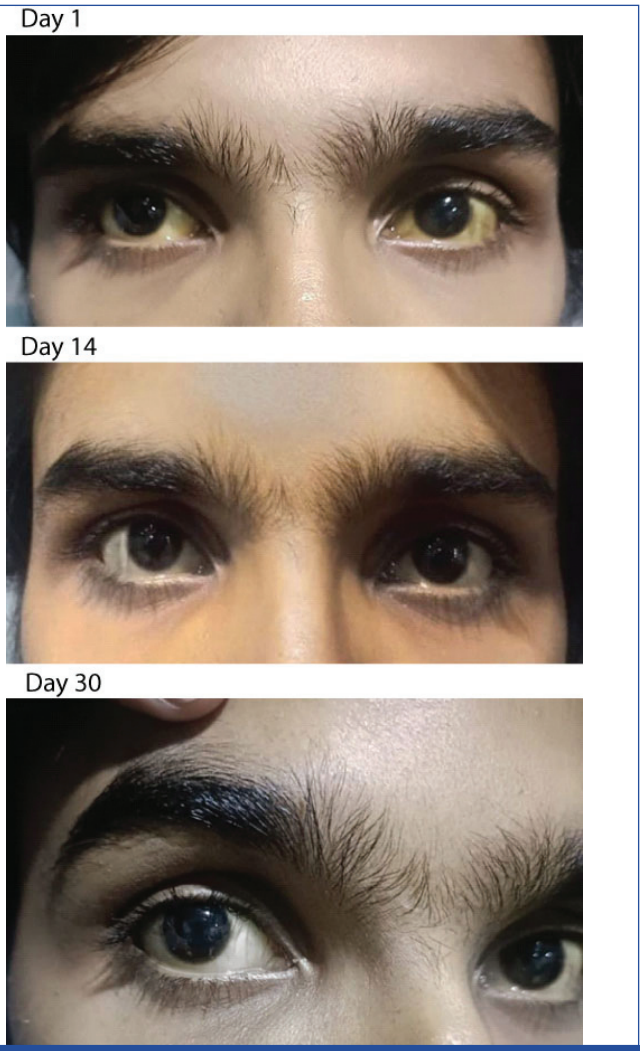
[Table/Fig-2]: Internal medications.

Assessment parameters	Day 1	Day 3	Day 14	Day 45
Aruchi (Anorexia)	3	2	Nil	Nil
Chhardi (vomiting)	3	2	Nil	Nil
Daurbalya (Lassitude)	3	3	1	Nil
Hrillasa (Nausea)	3	2	Nil	Nil
Haridra netra (Yellow discolouration of eyes)	3	2	1	Nil
Udarshool (Abdominal pain)	1	1	Nil	Nil

[Table/Fig-3]: There was an improvement in the following symptoms.
*The gradings of symptoms are measured as per the gradations given in the study [1,2]

Assessment parameters	Day 1	Day 13	Day 14	Day 45
Serum Bilirubin total (mg/dL)	12.30	9.16	4.4	1.26
Direct (mg/dL)	8.2	5.8	2.8	0.83
Indirect (mg/dL)	4.1	3.4	1.6	0.43
SGOT (U/L)	870	658.4	158	42
SGPT (U/L)	1240	1171	324	35

[Table/Fig-4]: Changes in blood investigation during treatment.



[Table/Fig-5]: The changes in patient's Sclera colour during the course of treatment.

After 45 days of treatment, the patient experienced complete relief from all symptoms. Following a 15-day treatment follow-up, the patient completely recovered with no complaints of pain in the abdomen, yellow discolouration of urine, nausea, vomiting, Generalised weakness, or constipation.

DISCUSSION

Jaundice, sometimes referred to as hyperbilirubinemia, is characterised by the yellowing of the skin, mucous membranes, and the sclera of the eyes. Jaundice occurs due to an increased level of bilirubin, a yellow pigment produced during the breakdown of red blood cells, in the blood [3]. Bilirubin only residues when there is an excess of it, which indicates either unnecessary production or inadequate excretion. The ancient Acharyas of *Ayurveda* considered *Pitta dosha* and *Agnimandya* as the primary etiological aspects of Kamala. In the above patient, due to frequent intake of *Lavan, Katu*, and *Amla Ahara*, there was *Pitta's* vitiation which led to dysfunction of *Jatharagni* followed by the production of *Amavisha*, causing *Kamala* [4]. The vitiated *Pitta* later affects the liver, blood, and muscle tissue, obstructing the liver's channels and the release of *Pitta* back into the blood, resulting in nausea, pain in the abdomen, vomiting, and eye and skin discolouration.

In this study, SGOT, SGPT, and total serum bilirubin levels were 870 U/L, 1240 U/L, and 12.30 mg/dL, respectively, which were reduced to 42 U/L, 35 U/L, and 1.26 mg/dL, respectively. In a similar study conducted by Deshmukh S et al., it was found that SGOT, SGPT, and total serum bilirubin levels were 439 U/L, 1543 U/L, and 4.62 mg/dL, respectively, reduced to 17 U/L, 14 U/L, and 0.96 mg/dL, respectively over the duration of five months [5]. Additionally, a similar study conducted by Sinha N et al., revealed that SGOT, SGPT, and total serum bilirubin levels of 1098.76 U/L, 1175.84 U/L, and 5.41 mg/dL were reduced to 30.9 U/L, 36.1 U/L, and 0.78 mg/dL, respectively in a 10-year-old female patient [6]. From similar studies, it can be inferred that the *Virechana* procedure removes toxins from the body, promotes the immune system, and after *Virechana*, internal medication works better, providing additional relief to eradicate the disease. This procedure plays a major role in the management of *Kamala*. Both single drugs and compound drugs have been mentioned in our ancient classics for *Kamala*. These medications have '*Kamalahara*' characteristics, treating symptoms such as weakness, loss of appetite, nausea, vomiting, discolouration of urine, and pain in the abdomen.

Virechana means the administration of a purgative to alleviate doshas from the body. *Pitta dosha* becomes vitiated as a result of ingesting *Pittakara aahara* (hot, spicy food) repeatedly, and *Virechana* (purgation) is the first line of treatment for *Pittadushti*, known as "*Kamalatu virechana*." In *Kamala*, *pitta dosha* is vitiated and accumulated, requiring the elimination of accumulated *pitta. Mrudu virechana* (mild purgation) is useful in *Bahupitta Kamala*. Abhayadi Modak [7] contains *Trivrut, Danti, Pippali, Maricha*, and *Amalaki. Abhayadi Modak* has *Katu Rasa, Teekshna Guna Ushna Virya*, and *Katu Vipak*, which acts as *Pitta Rechan, Kapha Samshodhan*, and *Vatanuloman*, facilitating easy purgation and eradication of the aggravated *pitta dosha* in the body.

Arogyavardhini vati [8] It contains *Shuddha Parada, Shuddha Gandhaka*, Herbal *Loha Bhasma, Abhraka Bhasma, Tamra Bhasma, Triphala, Shilajatu, Guggulu, Chitramool, Kutaki*, and Juice extract of *Nimba* leaf. The main ingredient *Kutaki* has *Kapha pittaghana dosha karma* and *Tikta Rasa* properties, reducing *Pitta dosha* and promoting liver regenerating activities by restoring cytochrome.

Rohitakaristha [9] comprises *Rohitak, Pippali, Sontha, Dhataki*, and Jaggery. These drugs pacify *Kapha Dosha* and *Pitta Dosha*, acting as a hepatic stimulant that helps in detoxification, reducing toxins developed due to viral, bacterial, or parasitic infections, enhancing white blood cell production, reducing low-grade liver inflammation, increasing bile flow, and offering protective action on the liver.

Syp Amlycure [10] mainly contains *Kutaki, Kalmegh, Sharpunkha, Tulsi, Bhuiamla*, and *Punernava*. The combination of these drugs helps maintain cellular integrity of hepatocytes, improving appetite and digestion, regulating LFT parameters, preventing liver damage from toxins, boosting immunity.

Livomyn tablet contains herbs like *Bhumiamalki, Kutaki, Guduchi, Daruharidra, Aloe vera*, and *Triphala*, known hepato-protectives, ensuring the protection of liver cells from toxins, viruses, bacteria, reducing free radical activity, preventing oxidative stress, and hepatic cell damage [11]. Among all these drugs, *Kutaki* is present and plays a significant role in curing liver-related disorders due to its *Pitta Rechak* property [12]. Because of a properly concentrated dose of *Kutaki*, quick and significant results were observed in symptoms and liver-related investigations.

CONCLUSION(S)

From this case report, it can be concluded that by implementing Ayurvedic principles of *bahupitta kamala* (hepatocellular) liver functions can be improved. *Kutaki* (Picrorhiza kurroa) is specifically described in Ayurvedic literature for its hepatoprotective properties. It can also be due to a properly concentrated dose of *kutaki*, which acts in breaking the pathogenesis of Kamala and leads to quick and significant results. The *Virechana* procedure removes toxins from the body and promotes the immune system. After *Virechana*, internal medication works better and provides additional relief, eradicating the disease. No side effects were observed in the patient, indicating that it can be considered a safe and effective therapy. Based on this successful outcome of Ayurvedic management in jaundice, planning further clinical trials with a large sample size, if needed in the future, is necessary.

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