

STUDY OF EFFICACY OF TRIPHALA KWATHA WITH MADHU VIZ-A-VIZ GUDUCHI KWATH IN BAHUPITTA KAMALA (HEPATOCELLULAR JAUNDICE)

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ABSTRACT

Ayurveda is one of the oldest System of Indian Medicine which provides remedies for many Chronic Diseases on which even to this day Modern Medicine has not satisfactory solutions. Kamala Vyadhi is a one grave disease and is described in details in Ayurvedic Compendia with its effective management. Kamala Vyadhi is described of two Types i.e. Bahupitta and Ruddhpatha Kamala. Bahupitta Kamala resembles Hepato cellular Jaundice in which whole body becomes Yellow discolored and Hyperbilirubinemia. Modern Medicine has described Jaundice as a symptom complex, but according to Ayurveda, Kamala is a disease as it has its own Nidanpanchak and specific Treatment. Lot of remedies is described in Ayurveda for Bahupitta Kamala . Among all these remedies, Triphala Kwath is one remedy which will stand effective solution. Because Triphala Kwath with Madhu (Honey) is Tridosha shamak, Mrudu Virechak and has Rasayan Properties. Madhu (Honey) is Kamalahara. Taking into consideration, Triphala Kwath with Madhu (Honey) would be one effective drug for Bahupitta Kamala.

KEYWORDS: Kamala, Triphala Kwath, Madhu, Honey, Jaundice, Hepatocellular Jaundice, Hepatitis.

INTRODUCTION

In the History of Mankind, Ayurveda has proved itself in treating diseases. Ayurveda has shown a systematic line of treatment centuries ago which is proven to be very useful in this ever so changing modern era. In Ayurveda, Kamala is a one grave disease which is described in details with its specific management. In Modern medicine, hepatocellular jaundice resembles Kamala Vyadhi. Liver is one of the extensively explored areas in Modern Medicine which gets affected in Jaundice. Ayurveda has also mentioned the involvement of Liver (Yakruta) in Kamala Vyadhi. Hepatocellular Jaundice, because of its potential to cause life threatening complications like Cirrhosis, Ascites, and Hepatocellular Carcinoma. According to Ayurveda, Kamala vyadhi is also one life threatening disease. There is no specific treatment for Kamala in Modern medicine. But In Ayurveda, Lot of medicines are described for the treatment of Kamala. Among all these medicines, Triphala Kwath with Madhu (Honey) will stand one effective medicine for Bahupitta Kamala (hepatocellular jaundice). Hence the study is conducted to see the

efficacy of Triphala Kwath with Madhu (Honey) in Bahupitta Kamala (hepatocellular jaundice).

AIMS AND OBJECTS

1. To evaluate the efficacy of Triphala kwatha with Madhu (honey) in the treatment of Bahupitta Kamala.
2. To Study the Hepatocellular Jaundice and Kamala in detail.

MATERIALS AND METHODS

Inclusion Criteria

1. Sadhya Vyadhi with specific symptoms of Bahupitta Kamala.

Sadhyanam itaresham tu pravakshyamee chikitsitam II Cha.Chi.16/39

Haridranetra sabhrusham Haridranetra twaknakhaanana I Raktapitashakrunmutrau bhekwarno hatendriya II35II Dahaavipakdaurbalyo sadanaruchikarshita I Cha.chi.16/35

- All patients with irrespective of Age, Sex, and Prakruti.
- Hepatocellular jaundice (a symptom complex as described by modern medicine).

Exclusive Criteria

1. Asadhya Vyadhi

Patients with Asadhya Vyadhi as described in Ayurvedic texts.

Krushnapitashakrunmutro bhrusham shunashcha manava II37II

Saraktakshimukhcchardi vinmutra yashcha taamyati I Dahaaruchitrushaanahtandramohasamanvita II38II

Nashtagnisandhya kshipram hee kamalavan vipadyate I Cha.chi.16/38

- Ruddhpath Kamala (Obstructive Jaundice) as described in Ayurvedic texts.
- Neonatal Jaundice
- CA Pancreas, Hepatoma, CA Gallbladder, Common bile duct stone, Hemolytic jaundice, Hepatitis B, C, D, E.
- Jaundice due to leptospirosis, Yellow fever, Infectious mononucleosis, Congenital hyperbilirubinaemia.
- Patients with Serum.Bilirubin more than 6 mg/dl.

Criteria for Diagnosis

Subjective Criteria

Presence of clinical signs and symptoms of Bahupitta kamala, viz. Haridranetratvam, Haridranakhatvam, Pitamutratvam, Pitapurishatvam, Daha, Avipak, Aruchi were Considered as subjective criteria.

Objective Criteria

Following were considered as objective criteria.

- Serum Bilirubin
- Urine
 - Bile Salts
 - Bile Pigments
- SGPT
- SGOT

Number of Patients

Sixty patients (60) were selected in total and grouped into two by random selection method. The patients treated with Triphala Kwatha with Madhu were considered as study group and those on Guduchi Kwatha with Madhu as control group, each of thirty patients.

Drug and Dosage

The drug Triphala (Aamalaki, Haritaki, and Bibhitaka) is used in the decoction form and given with madhu (honey) as mentioned in the text Bhavprakash Madhya Khanda 39.

Preparation of Drug

Triphala Powder 40 gm † 640 ml. water —Boiled— —80 ml. Decoction. Kwatha is the decoction obtained by

boiling coarse powder of the drugs in proportion of 4, 8, or 16 times (from Mrudu dravya-4 times, madhyama dravya- 8 times, and for khar dravya-16 times respectively) of water reduced to ¼ th and stained in cloth. Cha. su. 4/81/2.

Triphala is used in fine powder form (i.e. Mrudu dravya) and hence Triphala Kwath is prepared in the Following manner. Triphala (fine powdered form) 40 gm † 160ml. water —Boiled—40 ml. Decoction.

Triphala

It is a combination of Aamalaki, Haritaki, and Bibhitaka in equal quantity.

Plan of Work

- Approval from Ethics committee was granted for the topic and accordingly the study was started.
- Informed consent of the patients enrolled for the study was taken.
- Method of Random Selection was used.
- As the research is based on Ayurvedic principles, patients having signs and symptoms of Bahupitta Kamala, as per Ayurvedic text were selected.
- Serum Bilirubin, SGPT, SGOT and Urine for Bile Salts, Bile Pigments was used to judge the Hepatocellular Jaundice.
- The patients attending OPD of the hospital attached to the institute were included in the study.
- Literary Material:** This is based on references of available books on the subject. On the basis of references compiled, a hypothesis was formed and tested in clinical trial.
- Clinical Material:** This was formed from the data of the patients selected for clinical trial. This data was subjected to statistical analysis and conclusion was drawn, specifying the effect of the drug under trial.
- Data was collected before and after the treatment.
- Dosage of Triphala Kwatha** – Uttam Matra- 1 Pal i.e. 40 ml.
- Dose of Kwatha was according to Agni, Age, Rugnabal, and Vyadhibal and Koshtha of the patient.
- The Patients were given 40 ml. of cooled Triphala Kwatha in the morning with honey (Anupan) 4ml.
- Kwatha is advised to consume in the morning as mentioned above.
- If required patients were given Triphala kwatha at the bedtime also.
- Anupan:** It means a medium with which medicine is given e.g. water. It was selected so as to help prevent disease and make medicine disease specific without harming bodily functions. Granthokta Anupan is Madhu i.e. Honey. Dosage of Madhu is 1/8 th of Triphala kwatha. Hence 4 ml. madhu (honey) is given with cooled 40 ml. of Triphala kwatha in the morning.
- Diet:** Barley, wheat, rice were advised in the diet.

- 17. Scoring:** Score was given to individual signs and symptoms depending on their severity. Absence of the symptom was counted as (0), mild degree as (1), moderate as (2), and severe as (3).
- 18. Follow Up:** Registered patients were followed up after five days, for a period of 15 days and the results noted.
- 19. Assessment Phase:** Finally the results were assessed on the basis of Subjective and Objective Parameters before and after the treatment.
- 20.** The result of present study was evaluated in terms of "proportions." The proportions of the patients Getting cured and not getting cured were noted.

The terms 'cured' and 'Uncured' were defined as follows.

1. Cured

These are the patients in which the symptoms like Haridranetra, pita purishatvam, were reduced and investigation showed normal limits of Serum Bilirubin, SGOT, SGPT, and Urine-bile salts and bile pigments in 8 to 10 days.

This group was further subdivided into two groups according to the result.

- Uttam Upashaya: Bahupitta kamala is resolved in 8 to 10 days clinically as well as pathologically.
- Madhyama Upashaya: Bahupitta kamala is resolved in 8 to 10 days clinically i.e. symptoms were reduced but Serum Bilirubin, SGOT, SGPT showed slight elevation.

Serum Bilirubin- 1.3 to 2 mg/dl.

SGOT- 45 to 55 IU

SGPT- 45 to 55 U

Urine- Bile salts + Bile pigments upon same treatment continued till above values

Came to normal limits up to 15th day.

2. Uncured (Anupashaya)

These were the patients, in which the signs and symptoms of Bahupitta kamala were not Reduced, and showed Upadrava's like Jwara, Chhardi etc.

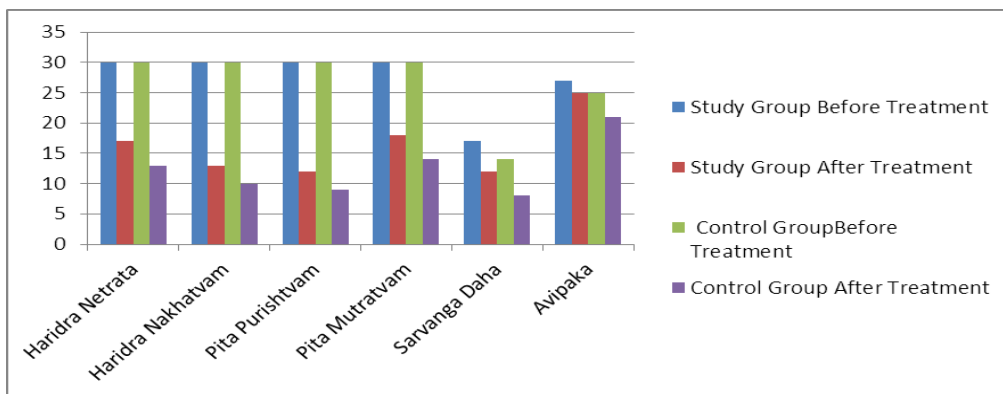
Some additional measures for treating Upadrava's had to be given in those patients.

OBSERVATIONS

Table 1: Effect of Triphala Kwath with Madhu (Honey)-Study Group And Guduchi Kwath with Madhu (Honey) - Control Group.

Subjective Criteria.

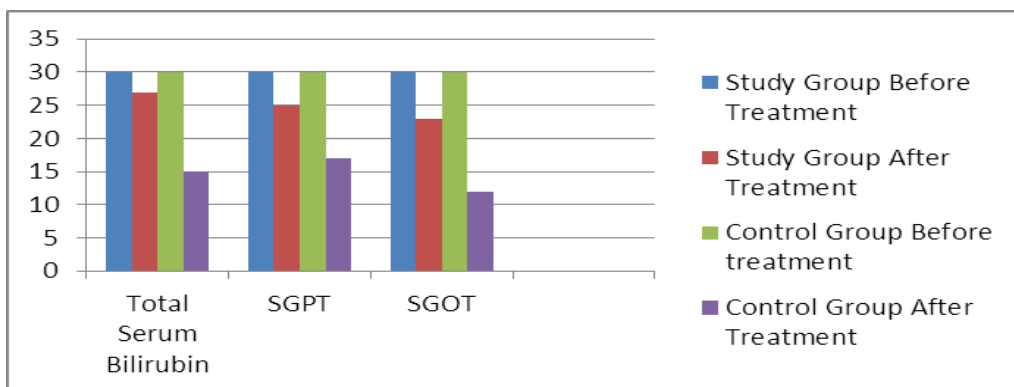
Sr. N.	Symptoms and Signs	Before Treatment		After Treatment		Before Treatment		After Treatment	
		No. of Patients	Percentage	No. of Patients	Percentage	No. of Patients	Percentage	No. of Patients	Percentage
		Study Group				Control Group			
1.	Haridra Netrata (Yellow Discoloration of Sclera)	30	100	17	56.66	30	100	13	43.33
2.	Haridra Nakhatvam (Yellow Discoloration of Nails)	30	100	13	43.33	30	100	10	33.33
3.	Pita Purishatvam (Yellow Discoloration of Stool)	30	100	12	40	30	100	09	30
4.	Pita Mutratvam (Yellow Discoloration of Urine)	30	100	18	60	30	100	14	46.66
5.	Sarvanga Daha (Generalized Prurigo)	17	56.66	12	70.58	14	46.66	08	57.14
6.	Avipak (Indigestion)	27	90	25	92.59	25	83.33	21	84
7.	Aruchi (Anorexia)	28	93.33	26	92.85	26	86.66	19	73.07



Graph 1: Frequency Distribution of Subjective Criteria.

Table 2: Effect of Triphala Kwath with Madhu (Honey)-Study Group and Guduchi Kwath with Madhu (Honey) - Control Group. Objective Criteria

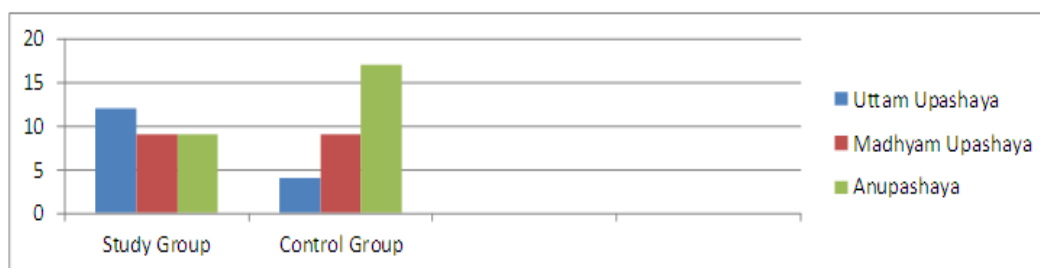
Sr. N.	Objective Criteria	Before Treatment		After Treatment		Before Treatment		After Treatment	
		No. of Patients	Percentage	No. of Patients	Percentage	No. of Patients	Percentage	No. of Patients	Percentage
		Study Group				Control Group			
1.	Total Serum Bilirubin	30	100	27	90	30	100	15	50
2.	SGPT	30	100	25	83.33	30	100	17	56.66
3.	SGOT	30	100	23	76.66	30	100	12	40



Graph 2: Frequency Distribution of Objective Criteria.

Table 3: Distribution of Upashaya and Anupashaya.

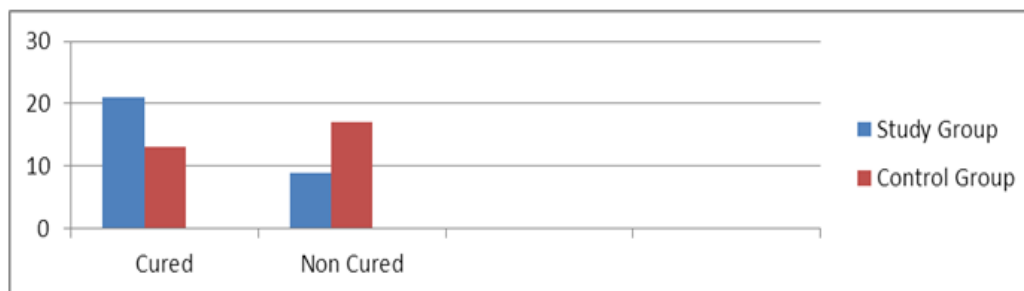
Cured/Uncured	Uttam Upashaya		Madhyam Upashaya		Anupashaya	
	Study Group	Control Group	Study Group	Control Group	Study Group	Control Group
Percentage	40%	30%	30%	13.33%	30%	56.66%
No. of Patients	12	9	9	4	9	17



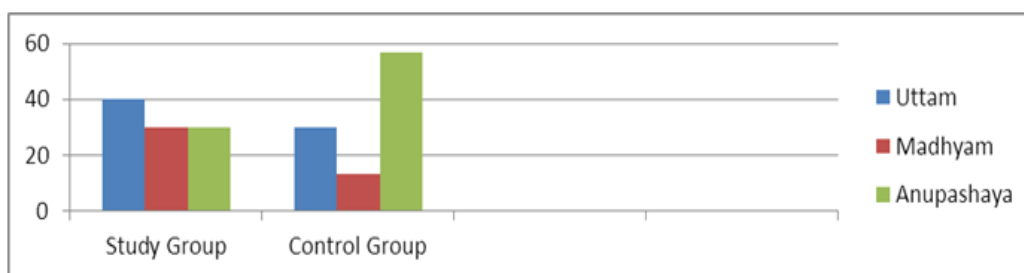
Graph 3: Frequency Distribution of Upashaya and Anupashaya.

Table 4: Results of Cured and Non cured Patients.

Sr. No.	Cured		Non cured	
	Study Group	Control Group	Study Group	Control Group
1.	21	09	13	17

**Graph 4: Frequency Distribution of Cured and Non cured Patients.****Table 5: Percentage of Results.**

Sr. No.	Study Group			Control Group		
	Uttam	Madhyam	Anupashaya	Uttam	Madhyam	Anupashaya
1.	40	30	30	30	13.33	56.67

**Graph 5: Frequency Distribution of Percentage of Results.**

RESULTS

- In the Study Group, 21 patients (70%) got cured (with 12 patients i.e. 40% getting Uttam Upashaya and 9 patients i.e. 30% getting Madhyam Upashaya) while 9 patients i.e. 30% did not get relief.
- In the Control Group, 13 patients (43.33%) got cured (with 9 patients i.e. 30% getting Uttam Upashaya and 4 patients i.e. 13.33% getting Madhyam Upashaya) while 17 patients i.e. 56.66% did not get relief.
So it is observed that the number of patients getting cured is considerably more in the Study Group than Control Group.
- When the dose of Triphala Kwatha is given in the bedtime depending on the Koshtha, Agni and Bala of the patients, early Upashaya (relief) is observed. But to rule out the 'chance factor', it is necessary to apply statistical analysis to the observations and then only the results can be confirmed.

Statistical Analysis

As already discussed, the results of present study were obtained in terms of a Qualitative data. So, results in this study were obtained in proportions, i.e. patients cured and uncured. The difference between two proportions

was calculated and then applying Z test its significance was judged.

Groups	Cured	Uncured	Total
Study Group	21	09	30
Control Group	13	17	30
Total	34	26	60

This was the data obtained from the study. For calculating the significance, the data should be in the form of proportions.

- P- is the percentage of the positive character (in this case p=% of cured)
- q=percentage of negative character (% of 'uncured')

Now p_1 = % of cured in 'Study Group'

P_2 = % of 'cured' in 'Control Group'

q_1 = 100- p_1

q_2 = 100- p_2

In this study

p_1 = 21 patients = 70%

P_2 = 13 patients = 43.33%

q_1 = 9 patients = 30%

q_2 = 17 patients = 56.66%

So, it is well evident that the number and proportion of patients getting cured is certainly more in the Patients of trial group, which are receiving Triphala Kwatha with Madhu. But, we will have to calculate the standard error to judge its significance.

Now, we will calculate the 'Standard Error of Proportion'.

$$SE [p_1 - p_2] = \sqrt{\frac{p_1 \times q_1}{n_1} + \frac{p_2 \times q_2}{n_2}}$$

Where n_1 = no. of patients in Study group i.e. 30

and n_2 = no. of patients in control group i.e. 30

$$= \sqrt{\frac{70 \times 30}{30} + \frac{43.33 \times 56.66}{30}}$$

$$= 12.32$$

$$\text{So, } SE [p_1 - p_2] = 12.32$$

Now, we will apply the Z test.

The criteria for this test are:

1. Random samples
2. Qualitative data
3. Variable normally distributed
4. Sample size more than or equal to 30

Now, $Z = \frac{\text{Observed difference in the proportions}}{\text{S.E. } [p_1 - p_2]}$

$$= \frac{70 - 43.33}{12.32}$$

$$Z = 2.16$$

In other words,

Observed difference = 2.16 x S.E. [p₁-p₂]

i.e. > 1.96 x S.E. [p₁-p₂]

And hence, Significant at 5% level of significance.

DISCUSSIONS

1. Discussion on Subjective and Objective Criteria

Comparatively, the efficacy of Triphala Kwath with Madhu is better than Guduchi kwath with Madhu in terms of Subjective and Objective Criteria. i.e.

- Haridra Netrata (Yellow Discolouration of Sclera) - (56.66% > 43.3%)
- Haridra Nakhatvam (Yellow Discolouration of Nails) - (43.33% > 33.33%)
- Pita Purishatvam (Yellow Discolouration of Stool) - (40% > 30%)
- Pita Mutratvam (Yellow Discolouration of Urine) - (60% > 46.66%)
- Sarvanga Daha (Generalised Prurigo) - (70.58% > 57.14%)
- Avipaka (Indigestion) - (92.59% > 84%)
- Aruchi (Anorexia) - (92.85% > 73.07%)

➤ Total Serum Bilirubin - (90% > 50%)

- SGPT (Serum Glutamic Pyruvate Transaminase) - (83.33% > 56.66%)
- SGOT (Serum Glutamic Oxalate Transaminase) - (76.66% > 40%)

Triphala is laxative so that it acts as Pitta Virechak. When Pitta Virechan is there, then naturally Bilirubin and other enzymatic markers will be reduced. At the same time, Guduchi is well known for its Immunomodulator effect. So from the above observation, it can be stated that Triphala Kwath with Madhu is better than Guduchi kwath with Madhu in Bahupitta Kamal (Hepatocellular Jaundice).

2. Discussion on Results of Cured and Non cured Patients

In the Study Group, 21 patients (70%) got cured (with 12 patients i.e. 40% getting Uttam Upashaya and 9 patients i.e. 30% getting Madhyam Upashaya) while 9 patients i.e. 30% did not get relief. In the Control Group, 13 patients (43.33%) got cured (with 9 patients i.e. 30% getting Uttam Upashaya and 4 Patients i.e. 13.33% getting Madhyam Upashaya) while 17 patients i.e. 56.66% did not get relief.

The Results of cure and uncure for Bahupitta Kamal (Hepatocellular Jaundice) i.e. Sadhyasadhyatwa is depend on Koshtha, Agni and Bala of the patients.

When Patients of Bahupitta Kamala with Sadhya Lakshanani treated with Triphala Kwath with Honey alongwith Guduchi Kwath with Honey would be better line of treatment. Because Both are having action as hepatoprotective.

CONCLUSIONS

1. With the above observations and Discussions, it can be concluded that Triphala Kwath with Madhu (Honey) is very effective in Bahupitta Kamala (Hepato cellular Jaundice).
2. Results of the study are encouraging.
3. This remedy would be better for Bahupitta Kamala in comparison with Modern Medicine.
4. For Detail evaluation of Mechanism of action of these both remedy, further research is necessary.

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