



Research Article

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CLINICAL EVALUATION OF ANUBHUTA YOGA (INGUDI) IN THE MANAGEMENT OF KAMALA

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ABSTRACT

The present study is to establish the efficacy of folklore medicine Ingudi in the management of Kamala. The methods are Subjects presenting with classical symptoms of Kamala taken for the study. Total 30 subjects were selected randomly. Gradations were given to subjective parameters actual test values were given to objective parameters. Test values of LFT were recorded before and after the treatment. Patients were administered Anubhuta yoga (Ingudi Kalka) 5 gm bid for 14 days. The obtained subjective and objective data was statistically analyzed to determine the significance of treatment. In the subjects treated 55% of marked improvement was found, 36% moderate improvement was found. 2% of subjects had no relief. This shamana line of treatment has succeeded in reducing the signs and symptoms along with LFT values which reduced within the time period of 14 days.

Keywords: Kamala, Jaundice, hyperbilirubinemia, Ingudi.

INTRODUCTION

Kāmala is one of the major causes of mortality and morbidity in developing countries. Kāmala has been observed to be shifting from sub clinical infection to rapidly producing chronic liver disease. Its prevalence is more in India, as liver plays a central role in the maintaining of metabolic homeostasis¹ and excreting toxicity. So, it is essential to study diseases and disordered metabolism.

Ayurveda acharyas explained Kāmala and its bhedas as Swatantra and Paratantra vyadhi to Panduroga and Upadrava of other disease. It is commonly caused due to mithya ahara and vihara leading to dooshana of asthayidhatu rasa and rakta as together. This Dushti of rasa and Raktavaha srotas jointly produces Kāmala roga² by effecting the Raktavaha srotomulayakruth and pleeha. Yakrit in particular helps in Pachana Kriya and production of pitta, which it secretes into grahani.

Hyperbilirubinemia is a global hazard is one of the toughest challenges faced by the medical field in new millennium. In developing countries like India where hygiene standards are poor the incidence of viral infection are more. Hyperbilirubinemia produces clinically similar illness. If neglected it causes asymptomatic to fulminant and fatal acute infection to progressive chronic liver disease³. Liver being the major organ infected in Jaundice, it is responsible for metabolism of carbohydrate fats and protein to turn them into substances useful for body's energy production. It stores vitamin for future use, so when it fails to function properly, the entire body begins to suffer the consequences.

The present clinical study is taken up with a view that the basic approach in the management of hyperbilirubinemia regardless of its subtypes as they have similar clinical features and complications. This is a humble venture to evaluate the efficacy of folklore medicine Ingudi Kalka in the management of kamala.

On this aspect so many medicines are in use. Among them one is folklore medicine (Ingudi, Ela and Khanda Sharkara). Mode of action of these drugs is not studied till date. Present study is undertaken to evaluate the medicinal efficacy and mode of action on Kāmala disease.

MATERIAL AND METHODS

Aim

Research was aimed to find out hepato protective property of the trial drug in jaundice patients, i.e., to find out the effect of the drug in reducing the signs and symptoms as well as to normalize the altered LFT.

Source of the Data/ location of the study

The clinical study was conducted at the Ayurvedic medical college hospital, Davangere and place where folklore medicine is being practiced for 45 years in Kotturu.

Sample

Thirty patients who have been diagnosed jaundice were selected incidentally from the source. The patients were registered, and consent was taken. Treatment was started on outpatient basis. Case sheet proforma was affixed in appendix

Ethical clearance is CDC/SYN/AEA-D/PG/01/2008-09

Sampling method

Random sampling technique was used.

Criteria selection

The criterions are as said below:

Inclusion criteria

- Patients in age group of 20- 50 years.
- Patients with signs and symptoms of jaundice.
- Abnormal values of LFT, Urine Analysis and Hb%

Exclusion criteria

- Patients with complication of jaundice will be excluded like Kumbha Kamala and Haleemaka. Chronic liver disease, cirrhosis, chronic alcoholic liver disease etc was excluded.
- Kamala with other systemic disease which hinders course of treatment was excluded.

Diagnosis

Diagnosis is done after thorough examination of patients. The detail clinical history, physical examination and systemic examinations were recorded.

- 1) **History:** previous illness, drug history, family history, nature of occupation, h/o immunization etc.
- 2) **Systemic examination:** Regarding GIT distention, ascites, liver size & tenderness, spleen & gall bladder along with other systemic examination.
 - a) Malaise (Daurbalya)
 - b) Anorexia (Aruchi)
 - c) Icterus (Peeta Netra)
 - d) Yellowness of urine (Peeta Mutrata)
 - e) Pruritis (Kandu)
 - f) Fever (Jwara)
 - g) Vomiting and Hrillasa (Chardi)
 - h) Arthralgia and Myalgia
 - i) Liver tenderness
- 3) **Laboratory investigations** such as urine bile salts & bile pigment. LFT were advised to confirm the diagnosis

Administration of research drug

Dose

- **Ayurvedic drug:** 5 gm of Ingudi Kalka Bid
- **Anupana:** Ushnajala
- **Time of administration:** Morning and evening in empty stomach
- **Duration-** 14 days
- **Follow up-** two follow up once in 15 days
- **Pathya-** Purana Shali, Purana Yava and Godhuma, Mudga.

Assessment criteria

Both subjective and objective parameters were taken into consideration to assess the hepatoprotective property of the trial drug.

RESULTS

Observation and Result- As for the clinical trial, 36 patients were selected from OP/IP ayurvedic medical college hospital and among 6 dropouts during the course with 30 clinical study done.

Results based on subjective and objective data before and after the treatment. After doing paired sample statistics malaise 94% of patients found complete relief, and 6% did not get relieved. Anorexia 91% got relief and 9% did not get relief. Icterus parameter 95% got relief and 5% did not get relief. Yellow urine 95% was cured and 5% not cured. Fever 92% got cured and 8% not cured. Nausea 88% got relief and 4% did not get relief. Arthralgia and myalgia-got significantly reduced by 100%.

Table 1: Subjective criteria with relief in percentage

Subjective criteria	Relieved percentage%	Not relieved %
Malaise	94	6
Anorexia	91	9
Icterus	95	5
Yellow urine	95	5
fever	92	8
Nausea	88	4
Arthralgia and myalgia	100	0

Table 2: Icterus and yellow urine, paired samples statistics

Pair I	Mean	N	Std deviation	Std. error mean
Icterus before treatment	1.733	30	0.4498	0.0821
Icterus after treatment	0.100	30	0.3051	0.0557
Yellow urine before treatment	1.767	30	0.7739	0.1413
Yellow urine after treatment	0.100	30	0.3051	0.0557

Table 3: Objective criteria, paired sample statistics

Pair I	Mean	N	Std deviation	Std error mean
Total bilirubin before treatment	6.551	30	2.9752	0.5432
Total bilirubin after treatment	1.709	30	0.7234	0.1321
SGOT before treatment	145.376	30	182.5734	33.332
SGOT after treatment	70.266	30	70.2208	12.8205
SGPT before treatment	178.459	30	292.8708	53.4707
SGPT after treatment	70.637	30	80.7359	14.7403
Alkaline phosphate before treatment	220.287	30	172.3000	31.4575
Alkaline phosphate after treatment	157.933	30	806255	14.7201
Serum albumin before treatment	3.311	30	0.5090	0.0929
Serum albumin after treatment	3.074	30	0.7008	0.1279
Serum globulin before treatment	3.230	30	0.7715	0.1409
Serum globulin after treatment	3.013	30	0.8231	0.1503
AG ratio before treatment	1.028	30	0.5991	0.1094
AG ratio after treatment	1.0983	30	0.65197	0.11903

In objective parameter Total bilirubin 79% get significant results, 21% did not have significant results. The objective parameter SGOT 67% get significant relief and 33% did not get significant relief. The objective parameter SGPT 72% get significant relief and 28% did not get significant relief. In objective parameter serum albumin 52% got significant relief and 48% did not get relief. In objective parameter serum globulin 52% got significant relief, 48% didn't get significant relief. Alkaline phosphate 58% got relief and 42% did not get significant relief. In AG ratio 48% got significant relief, 52% did not get relief.

DISCUSSION

In the subjective parameter Malaise 94% of patients found relief and 6% did not get relief. The parameter Anorexia 91% get relief and 9% did not get relief. The parameter Icterus 95% got relief and 5% did not get relief. Parameter yellow urine 95% got relief and 5% did not get relief. In Fever 92% get relief and 8% did not get relief. In Vomiting parameter 100% got relief. In Nausea 88% get relief and 4% did not get relief. In Pruritis parameter 80% get relief and 20% did not. In parameter Arthralgia and Myalgia relief was found by 100%. In the Objective parameter Urine bile salt and bile pigment result showed highly significant results.

In total bilirubin 79% of the patients got significant result and 21% did not. In objective parameter direct bilirubin 81% got significant result and 19% did not get. In indirect bilirubin 82.3% got significant relief, 27.44% patients did not get. In SGOT parameter 67% patients got relief while 33% did not. In SGPT, 72% got significant relief, 28% did not get relief. In total protein 51% got significant result, 49% did not. In serum albumin 52% got result, 48% did not. In serum Globulin 52% got significant result, 48% did not. In alkaline phosphate 58% got result and 42% did not. In A/G ratio 48% have got significant result and 52% did not get. So, we can conclude that significant results are seen in objective parameters.

Mode of action of drug

Ingudi⁴ has Tikta, Madhura rasa, Katu veerya, Ushna guna, karma-Kaphavata shamaka, Guna-Laghu, snigdha, Vipaka-Katu and Prabhava-Krimighna. By the tikta and Madhura rasa it is pitta shamaka, due to katu rasa Strotoshodhaka, Kaphahara, deepana and Samsrana, by the ushna veerya vata shamaka and Strotoshodhana, it is rakta shodhaka, and Krimighna by Prabhava. Katu vipaka also causes kapha shamana and Ela⁵ has Rasa: Katu, Madura, Veerya-Sheeta, Guna-laghu, ruksha and Vipaka-Madura. By Katu rasa it is Deepak and pachaka, By Madhura rasa it is vata shamaka and Balya, laghu and by ruksha guna it is kapha hara, by Madhura vipaka pitta shamaka and by dosha guna karma it is Tridoshaghna. It has Krimighna action. By samstanika karma it is chardi nigravana, trishna nigravana, pachana and anulomana.

Balanites aegyptiaca- Various parts of this plant are used in the treatment of different ailments such as syphilis, jaundice, liver and spleen problems, epilepsy, yellow fever and the plant also has insecticidal, anti-helminthic, antifeedant, molluscicidal and contraceptive activities. Research has been carried out using different *in vitro* and *in vivo* techniques of biological evaluation to support most of these claims⁶.

The pharmacological studies of *B. aegyptiaca* demonstrated insecticidal, antibacterial, antifungal, hepatoprotective, anti-

cancerous, anti-helminthic, anti-parasitic, anti-diabetic properties. It was reported to possess immune modulating properties and anti-inflammatory activities.

The drugs by its hepatoprotective activity, anti-inflammatory activity, anti-parasitic activity, anti-helminthic activity, antiviral activity, antioxidant activity act simultaneously in hepatocellular, obstructive jaundice and haemolytic jaundice⁷. Thus, proving the supremacy of this formulation in jaundice which is potent enough so as to undergo further research work through which we can have a better insight in its mode of action in different types of liver disease. Other drugs increase the palatability and preservation of the Kalka.

CONCLUSION

The study shows shamana line of treatment is highly effective. The Anubhuta yoga can be administered safely in the patients of Jaundice, which helps in Ama pachana, Agni deepana and Chardi nigravana, rakta shodhaka and Krimighna action. Result was found in both Shakhshrita and Koshtashrita kamala. The trial drug showed hepatoprotective properties which proved by improving signs and symptoms and in LFT values. Among 30 cases 5 cases were Koshtashkhshrita cases forming 17% and 25 cases were Shakhshrita forming 83%. Results showed that 28 cases markedly improved and 2 cases not cured. By studying the subjective and objective criteria marked result was found in 60%, moderate result was found in 40%.

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