

Efficacy of Gambhari fruit (*Gmelina arborea* linn.) in the management of Sheetapitta W.S.R. Urticaria

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ABSTRACT

Introduction : Sheetapitta, or Urticaria, is a common skin problem affecting 1-5% of the population. While not life-threatening, it significantly impacts an individual's quality of life, especially during the chronic stage lasting more than six weeks. The available treatments for Sheetapitta often prove ineffective, leading to prolonged suffering and frequent relapses, posing a challenge for diagnosis and treatment, **Aims and objective-** This research study aims to compare the efficacy of two Ayurvedic Shamana treatments, Haridra choorna and Gambhariphala churna with Godugdha, in managing Sheetapitta. **Materials and methods-** research methodology involves the selection of 40 Sheetapitta patients, who are administered either Haridra choorna or Gambhariphala churna with Godugdha. Statistical analysis is applied to evaluate the comparative efficacy of the treatments. **Observation and results-** The observations from this clinical study shed light on the effectiveness of Haridra choorna and Gambhariphala churna with Godugdha in managing Sheetapitta. **Discussion-** The discussion section explores the implications of the findings, emphasizing the holistic approach of Ayurveda in addressing both the cosmetic and social aspects of skin health.

Keywords: - Sheetapitta, Urticaria, haridra churna, Gambhari phala churna

INTRODUCTION-

Sheetapitta, or Urticaria, is a common skin problem affecting 1-5% of the population.[1] It can persist for months or years, causing frustration and impacting quality of life. Existing treatments are not always effective, leading to frequent relapses. Ayurveda considers Sheetapitta a Vata Pradhana Tridoshaja Vyadhi [2] involving Rasa and Rakta as a Dushyas, It is characterised by Lakshanas like Varatee Damstravath Shotha (Wheals), Kandu (Itching) and Toda (Pricking sensation) for more than 6 weeks.[3] The management approach includes Shodhana (purification) and Shamana (palliative) therapies. This study compares the efficacy of two Ayurvedic formulations, Haridra choorna [4,5] and Gambhariphala churna with Godugdha,[6] in managing Sheetapitta. Haridra has known antihistaminic properties, while Gambhariphala has been recommended in ancient texts. By examining these formulations, this research aims to improve treatment outcomes for individuals with Sheetapitta.

AIMS AND OBJECTIVE-

The aim of this study is to compare the efficacy of Haridra Choorna (powder of *Curcuma longa*) and Gambhari Phala churna (powder of *Gmelina arborea*) in the management of Sheetapitta (Urticaria).

MATERIALS AND METHODS-

This clinical study aimed to evaluate the efficacy of Gambhari Phala churna in the management of Urticaria (Sheetapitta) by comparing its results with Haridra churna. A total of 40 patients suffering from Urticaria were randomly selected for the study.

Materials:

The study included 40 patients of Urticaria selected from the OPD/IPD of the Department of Kaya Chikitsa, PLRD Hospital, Khurja.

The patients were divided into two groups, Group I and Group II, with 20 patients in each group, based on inclusion and exclusion criteria.

Good quality Haridra (*Curcuma longa*) was collected from a local farmer in Bulandshahr district, while Gambhari Phala (*Gmelina arborea*) was collected from the herbal garden at VYDS Ayurveda Medical College.

Haridra Churna and Gambhari Phala Churna were prepared at the Department of Rasa Shastra and Bhaisajya Kalpana, Vaidya Yagya Dutt Sharma Ayurveda Mahavidyalaya, Khurja.

Methods:

The study design was a single-blind randomized comparative clinical trial.

The duration of the study was 90 days, with follow-up assessments conducted on the 15th, 30th, and 45th day, as well as a recurrence follow-up after 45 days of completing the treatment.

Patients attending the Kaya Chikitsa OPD and IPD of Vaidya Yagya Dutt Sharma Ayurveda Mahavidyalaya, Khurja, diagnosed with Urticaria and meeting the inclusion criteria, were selected for the study.

Data collection was done using a specially designed case proforma.

Literature review was conducted from textbooks available in the Post Graduate Library, Department of Dravyaguna, Vaidya Yagya Dutt Sharma Ayurveda Mahavidyalaya, Khurja, as well as authentic research journals, websites, and digital publications.

The drugs (Haridra Churna and Gambhari Phala Churna) were prepared in the Department of Rasa Shastra and Bhaisajya Kalpana.

The allocation of drugs to the groups was as follows:

Group I: Patients were treated with Haridra Churna internally with Ushna Jala (warm water) twice a day for 45 days.

Group II: Patients were treated with Gambhari Phala Churna internally by boiling it in milk twice a day for 45 days.

The dose for Group I was 3 grams of Haridra churna twice a day, while for Group II, it was 5 grams of Gambhari Phala churna twice a day.

Assessment of the patients was done before and after the treatment period, with subjective and objective parameters recorded.

Subjective parameters included Varati Damshta samsthana Sotha (inflammation), Raag (discoloration), Kandu (itching), Toda (pricking pain), Vidaha (burning sensation), Raktavarni Mandalotpatti (formation of wheals), and Kshanikotpattivinash (duration of symptom relief).

Objective parameters included Hb% (hemoglobin level), T.L.C (total leukocyte count), and E.S.R (erythrocyte sedimentation rate).

The severity of each parameter was graded, and the results were assessed based on grade points.

The overall effect of therapy was categorized as complete remission, marked improvement, moderate improvement, mild improvement, or unchanged/no relief.

Statistical analysis was performed using mean score (\bar{x}), standard deviation (S.D.), standard error (S.E.), paired t-test, and unpaired t-test. A significance level of $p < 0.05$ was considered.

GRADATION OF PARAMETERS:-

1. Varati Damshta samsthana Sotha (Inflammation)

- G0- No Pain and no Inflammation
- G1- Mild pain and Mild Inflammation
- G2- Moderate pain and moderate Inflammation
- G3- severe pain and severe Inflammation
- G4- Unbearable pain and very severe inflammation

2. Raag (Discoloration)

- G0- None
- G1- Mild (<10 % affected area)
- G2- Moderate (10-20% affected area)
- G3- Severe (20-30 % affected area)
- G4- very severe (<30 % affected area)

3. Kandu (Itching)

- G0- none
- G1- mild
- G2- Moderate
- G3- Severe
- G4- Unbearable disturbing routine

4. Toda (pricking pain)

- G0- none
- G1- Mild
- G2- moderate
- G3- Severe
- G4- Unbearable disturbing routine

5. Vidaha

- G0- none
- G1- mild
- G2- moderate
- G3- severe
- G4- Unbearable disturbing routine

6. Raktavarni Mandalotpatti-

- G0- None
- G1- <20 wheels/24 hrs
- G2- 20-30 wheels/24 hrs
- G3- 30-50 wheels/24 hrs
- G4- >50 wheels/ 24 hrs

7. Kshanikotpattivinash

- G0- No
- G1- symptoms disappear in < 1 hour
- G2- Symptoms disappear within 1-6 hours
- G3- symptoms disappear within 7-12 hrs
- G4- symptoms disappear withing 13-24 hours

Observation-

Age wise distribution:- Maximum number of patients (37.5%) belonged to the age group of 15-30 years. 35% of patients were from the age group of 31-40 years. Only 27.5% of patients were above 40 years of age.

Sex wise distribution:- 52.5% of patients were female, slightly higher than male patients (47.5%).

Dominant rasa wise distribution:- Lavana (salty) was the dominant rasa for 40% of patients. Amla (sour) was dominant for 35% of patients.

Dietary habit wise distribution:- 45% of patients had a dietary habit of Virrudhahara (incompatible food combination). 25% had Samashana (balanced diet).

Nidana wise Distribution-The majority of patients (70%) had Lavan Rasa Sevana as the primary nidana, followed by Divaswapa Varshakala and Viruddhahara, each observed in 65% of patients. Amla Rasa Sevana and Dadhi were found in 60% and 55% of patients, respectively. Nidanas such as Santarpan and Shishir Ritu were observed in 45% of patients, while Samashana was found in 35%. Guru Dravya was identified as a nidana in 25% of patients, and Snigdha Bhojana in 20% of patients.

Cardinal Symptom-Based Observations: Kandu and Kshanikotpatti Vinasha were observed in all patients as the chief complaints. Vartidamshta Samsthna Shotha was present in 75% of patients, while Raktavarni Mandalotpatti was found in 70%. Raag was reported in 60% of patients, while Toda and Vidaha were observed in 40% each.

Associated Symptom-Based Observations: Aruchi was the most prevalent associated symptom,

observed in 95% of patients. Vibandh was reported in 90% of patients, followed by Hrillasa in 70%. Jvara was found in 25% of patients, while Chhardi was present in 20%. Swaskashtata and Raktalochanata were observed in 15% and 10% of patients, respectively.

Onset-Based Observations: All patients experienced a sudden onset of symptoms.

Chronicity-Based Observations: The majority of patients (75%) had a chronicity ranging from 2-12 months. Chronicity of 2-12 years was observed in 20% of patients, while only 5% had a chronicity of 1-2 years.

RESULTS-

Table no. 1 showing Effect of Group I (Haridra Churna) on interval of signs and symptoms

Sign /symptom	N	Mean			Relief %
		B.T	A.T	B.T- A.T	
VartidamshtaSamsthna Shotha	12	3	0.83	2.17	72.22
Raag (Discoloration)	14	3.14	0.71	2.43	77.27
Kandu	20	3.2	0.9	2.3	71.88
Toda	8	2.25	0.25	2	88.89
Vidaha	8	2.75	0.25	2.5	90.91
Raktavarni Mandalotpatti	20	3.6	0.8	2.8	77.78
Kshanikotpatti Vinnasha	20	3.5	0.8	2.7	77.14

Table no. 2 showing Effect of Haridra Churna on intensity of signs and symptoms

Sign /symptom	N	Mean			Relief %
		B.T	A.T	B.T- A.T	
Vartidamshta SamsthnaShotha	12	2.83	0.83	2	70.59
Raag (Discoloration)	14	2.86	0.71	2.14	75
Kandu	20	3.7	0.9	2.8	75.67
Toda	8	1.5	0.25	1.25	83.33
Vidaha	8	2.75	0.25	2.5	90.91
Raktavarni Mandalotpatti	20	2.8	1	1.8	64.28
Kshanikotpat ti Vinnasha	20	3	0.8	2.2	73.33

Table no. 3 showing Effect of Haridra Churna on biochemical parameters

Biochemical parameters	N	Mean			Relief %
		B.T	A.T	B.T- A.T	
Hb%	20	11	11.47	0.47	4.27
T.L.C	20	6820	6090	660	9.68
E.S.R	20	35.5	7.6	27.9	78.59

Table no. 4 showing Effect of Group II (Gambhari Phala Churna) in interval of signs and symptoms:

Sign /symptom	n	Mean			Relief %
		B.T	A.T	B.T- A.T	
VartidamshtaSamsthna Shotha	18	3.22	0.56	2.67	82.76
Raag (discoloration)	10	3.2	0.2	3	93.75
Kandu	20	3.2	0.8	2.4	75
Toda	8	3.25	0.75	2.5	76.92
Vidaha	8	3.25	0.5	2.75	84.62
Raktavarni Mandalotpatti	18	3.33	0.44	2.89	86.67
Kshanikotpat ti Vinnasha	20	2.9	0.7	2.2	75.86

Table no. 5 showing Effect of Gambhri Phala Churna in intensity of signs and symptoms:

Sign /symptom	N	Mean			Relief %
		B.T	A.T	B.T- A.T	
VartidamshtaSamsthna Shotha	18	2.67	0.55	2.11	79.17
Raag (discoloration)	10	2.4	0.2	2.2	91.67
Kandu	20	2.9	1	1.9	65.52
Toda	8	3	0.75	2.25	75

Vidaha	8	2.25	0.5	1.75	77.78
Raktavarni					
Mandalotpatti	18	2.78	0.44	2.33	84
Kshanikotpatti	20	1.9	0.6	1.3	68.42
Vinnasha					

Table no. 6 showing Effect of Gambhari Phala Churna on biochemical parameters:

Biochemical parameters	n	Mean			Relief %
		B.T	A.T	B.T-A.T	
Hb%	20	11.2	12.8	0.88	7.86
T.L.C	20	6980	6140	840	12.03
E.S.R	20	43.2	5.7	37.5	86.80

Table no. 7 showing Un-Paired t-Test to Assess the Effect Of both Therapies on interval of disease:

Symptoms	% relief in Control group	% relief in trail Group	S.D	S.E	t	P
Vartidamshta			0.87	0.46	1.1	>0.05
Samsthna Shotha	72.22	82.76				
Raag (discoloration)	77.27	93.75	0.75	0.44	1.3	>0.05

Kandu	71.88	75	1.17	0.53	0.19	>0.05
Toda	88.89	76.92	0.71	0.5	1	>0.05
Vidaha	90.91	84.62	1.14	0.81	0.31	>0.05
Raktavarni Mandalotpatti	77.78	86.67	0.56	0.31	0.29	>0.05
Kshanikotpatti Vinnasha	77.14	75.86	0.73	0.33	1.52	>0.05

This table shows the assessment of both therapies by Unpaired t-test. This shows that all the results are insignificant. That indicates the same effect of both therapies in interval of disease.

Table no. 8 showing Un-Paired t-Test to Assess the Effect of both drugs on intensity of disease:

Symptoms	% of relief in control group	% of relief in trail group	S.D	S.E	t	P
Vartidamshta Samsthna Shotha	70.59	79.17	0.73	0.39	0.28	>0.05
Raag (discoloration)	75	91.67	1.1	0.64	0.09	>0.05
Kandu	75.67	65.52	0.83	0.37	2.43	<0.05
Toda	83.33	75	0.5	0.35	2.86	<0.05
Vidaha	90.91	77.78	1.14	0.81	0.93	>0.05
Raktavarni Mandalotpatti	64.28	84	0.63	0.35	1.51	>0.05

Kshanikotpatti	73.33	68.42	0.73	0.33	2.73	<0.05
Vinnasha						

This table shows the assessment of both therapies by Unpaired t-test. The results were statistically significant in Kandu, Toda and Kshanikotpatti Vinash, that means Gambhari Phala Churna gives better relief in these three symptoms. Results were insignificant in vartidamshta Samsthana shotha, Raag (discoloration) Vidaha and Raktavarni Mandalotpatti. That indicates the same effect of both therapies in above four symptoms.

Table no. 9 showing Time of relapse (if occurs) observed in Group I (Haridra Churna) during follow up study:

TIME	NO. OF PATIENTS	%
Within 15 days	2	10%
16-30 days	2	10%
31-45 days	6	30%
No relapse	10	50%

This table shows that 50% of patients were reported no relapse during follow up study of 45 days in control group, While 50% of patients were reported relapse within 45 days.

Table no. 10 showing Time of relapse (if occurs) observed in Group II (Gambhari Phala Churna) during follow up study:

TIME	NO. OF PATIENTS	%
Within 15 days	0	0%
16-30 days	2	10%
31-45 days	4	20%
No relapse	14	70%

This table shows that 70% of patients were reported no relapse during follow up study of Gambhari phala churna group after 45 days, Only 30% of patients were reported relapse within 45 days.

Discussion-

This study is on the drug Gambhari and its potential use in treating chronic urticaria, a condition characterized by recurrent, transient cutaneous swelling and erythema. The study conducted involved 40 patients with chronic urticaria, who were divided into two groups: the control group (Group I) receiving Haridra Churna (turmeric powder) and the trial group (Group II) receiving Gambhari phala Churna (powder of Gambhari fruit).

The general observations of the patients revealed that chronic urticaria was more prevalent among young individuals (15-30 years) due to their stressful lifestyle and dietary habits. The distribution of the condition among males and females was almost equal. The study did not find a direct correlation between chronic urticaria and occupation, religion, education, marital status, or habitat. However, it indicated a higher incidence of the condition among lower-middle-class individuals.

The patients' symptoms and associated factors were also analyzed. Poor appetite, a predominantly vegetarian diet, and the intake of foods with a dominant salty (lavana) and sour (amla) taste were found to be common factors associated with chronic urticaria. Other factors such as disturbed sleep, addiction to tea or coffee, and specific constitutional types (prakruti) were also considered.

The clinical study evaluated the efficacy of Gambhari phala Churna compared to Haridra Churna in relieving the symptoms of chronic urticaria. The results showed that both groups experienced statistically highly significant relief in various symptoms, such as Vartidamshta Samsthana Shotha (nettle rash), Raag (discoloration), Kandu (itching), Toda (pain), and Vidaha (burning sensation). However, the trial group (Group II) receiving Gambhari phala Churna demonstrated slightly better percentage-wise relief in Vartidamshta Samsthana Shotha and Raag compared to the control group (Group I) receiving Haridra Churna.

For the symptom of Kandu, Gambhari phala Churna showed better relief in terms of the interval, while Haridra Churna provided better relief in terms of intensity. Regarding Toda, Gambhari phala Churna yielded better results than Haridra Churna statistically, but the percentage-wise relief was slightly higher with Haridra Churna. Both groups showed statistically significant relief in Vidaha, with Haridra Churna demonstrating a slightly higher percentage-wise relief.

Overall, the study suggests that Gambhari phala Churna has potential therapeutic effects in chronic urticaria, providing relief in symptoms such as nettle rash, discoloration, itching, pain, and burning sensation. While Haridra Churna (turmeric powder) also showed significant relief, Gambhari phala Churna demonstrated slightly better results in some aspects. It is important to note that the study

sample size was small, and further research with larger sample sizes and comparative studies may be needed to validate these findings and explore the mechanisms of action of Gambhari in treating chronic urticaria.

Probable mode of action-

- Gambhari Phala Churna is used in the treatment of Sheetapitta (chronic urticaria) in Ayurveda. Its mode of action can be explained as follows:
- Pitta-pacifying: Gambhari's taste (Rasa) includes astringent, bitter, and sweet, which helps pacify Pitta dosha, reducing symptoms like burning sensation and discoloration.
- Rakta (blood) control: Gambhari has a supportive effect on Rakta and Pitta doshas, controlling the progression of the disease and promoting normal blood functions.
- Balancing Vata and Kapha: The hot potency (Veerya) of Gambhari helps balance Vata and Kapha doshas, contributing to overall therapeutic action.
- Anti-inflammatory: Gambhari, as part of Dashamoola, exhibits anti-inflammatory properties, reducing swelling associated with Sheetapitta.
- Immune modulation: Gambhari has immune-modulatory actions, reducing the recurrence of Sheetapitta after treatment.
- Processing with milk: Gambhari Churna is processed with milk, which enhances its rejuvenating and delivery properties to the affected areas.
- Srotas purification: Gambhari's properties purify the channels affected by toxic accumulation (Aam), promoting the movement of vitiated doshas towards the gastrointestinal tract.
- Dipan-pachan effect: Gambhari's digestive properties enhance digestive fire, breaking the pathogenesis of Sheetapitta.
- Overall, Gambhari Phala Churna acts through its Pitta-pacifying, blood-regulating, anti-inflammatory, and immune-modulatory properties, while the processing with milk and its effects on channels and digestion further support its therapeutic action.

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