



Research Article

A CLINICAL STUDY ON GUNJATAILA AND TILATAILA SHIROABHYANGA IN THE MANAGEMENT OF DARUNAKA

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ABSTRACT

Background: Dandruff is an irritative disease of the scalp in which shedding of dead tissue from the scalp with itching sensation is the cardinal feature. It can be correlated to *Darunaka*. The cardinal symptoms of the disease *Darunaka* are *Kandu* (Itching), *Keshachyuti* (falling of hair), *Swapa* (abnormalities of touch sensation), *Rookshata* (roughness or dryness of the skin) and *Twaksphutana* (breaking or cracking of the skin). *Yogaratanakara* has mentioned the application of *Gunjataila* (i.e., *Gunja*, *Bhringaraj*, *Tilataila*) in the treatment of *Darunaka*. In the current dermatological practice there is no effective modern remedy for dandruff. Hence the present study is undertaken to find effective and safe alternative to conventional topical anti-dandruff agents. **Objectives:** To compare the effects of *Shiroabhyanga* with *Gunjataila* and *Tila Taila* in the management *Darunaka*. **Materials and methods:** This study was Randomized, open labelled, non-controlled, comparative clinical study. In Group A, *Gujataila shiroabhyanga* and in Group-B *Tilataila Shiroabhyanga* was done for thirty days, daily once in the morning, after the completion of treatment, all the patients were advised to attend the O.P.D for two months at regular interval of fifteen days for the follow up study to assess the post effects of treatment. **Results:** Group A showed complete remission in 30%, marked improvement in 30%, moderate 30% and 10% mild relief. In patients of Group B only 30% moderate relief and 10% mild relief from the *Darunaka* is noticed and 60% of the patients found no relief. **Conclusion:** *Gunjataila shiroabhyanga* has higher significant effect in pacifying the symptoms of *Darunaka* and marked reduction in clinical symptoms was well appreciated within one month duration. There was no topical and systemic adverse drug effects noted at the end of the study.

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INTRODUCTION

Dandruff is an irritative disease of the scalp¹ in which shedding of dead tissue from the scalp with itching sensation is the cardinal feature. It can be correlated to *Darunaka*² which is one among the *Kapalagata Vyaadhi*³. The causative factors of *Darunaka* are not practicing *shiroabhyanga*⁴, Improper cleaning, sleeping during day time, Night vigil, Exposure to dust, hot weather⁵ etc. Now a days, due to increased pollution, busy mechanical life schedule application of impure oils to head, etc. causing high incidence of *Darunaka* with cardinal symptoms like *Kandu* (Itching), *Rookshata* (roughness or dryness of the skin), *Twaksphutana* (breaking or cracking of the skin) and *Keshachyuti* (falling of hair)⁶, due to the vitiation of *Vata* and *Kapha dosha*⁷. Till now there is no definite cause and solution for this disease. So there is a need to find a safe and effective remedy in the treatment of *Darunaka*.

Yogaratanakara has mentioned the application of

*Gunjataila*⁸ (i.e., *Gunja*, *Bhringaraj*, *Tilataila*) in the treatment of *Darunaka*. The drugs of the yoga are easily available, economical and effective. Therefore, a clinical research work is proposed entitled - "A Clinical Study on *Gunja Taila Shiroabhyanga* in the Management of *Darunaka*" to contribute a solution for the *Darunaka*. The treatment principles mentioned are *Siravyadha* (*Raktamokshana*), *Shiroabhyanga*, *Nasya*, *Shirolepana*, *Shiropakshalana* and *Shirobasti*⁹ which is considered as *Sadya Vyadhi*¹⁰.

OBJECTIVES

To compare the effects of *Shiroabhyanga* with *Gunjataila* and *Tila Taila* in the management *Darunaka*

MATERIALS AND METHODS

Study Design: Randomized, open labelled, non-controlled, comparative clinical study.

Source of Data: The patients who fulfil the Diagnostic criteria for *Darunaka* were selected randomly from the

OPD and IPD of *Shalakyatantra*, S.D.M. Ayurvedic College and Hospital, Hassan.

Study Population: Patients were selected from the Hassan, Karnataka.

Study Sample: Patients of *Darunaka* attending the OPD and IPD of *Shalaky Tantra*, S.D.M. Ayurvedic College and Hospital.

Sample Size: 20

Study Setting: This study was carried on *Darunaka* patients at S.D.M. Ayurvedic College and Hospital, Hassan from year 2004 to 2006.

Trial Drugs

1. *Gujataila shiroabhyanga* in Group A.
2. *Tilataila Shiroabhyanga* in Group B.

Collection of Drugs: All the raw materials required for the preparation of *Gunjataila* were procured and purchased from the Department of Dravyaguna, S.D.M.C.A. Hassan.

Method of preparation of *Gunjataila*: The trial medicine was prepared in the department of *Rasa shastra* and *Bhishajya kalpana* as per the *Taila*¹¹ was prepared as per *Snehapaka vidhi*.

Ingredients:

Table 1: Showing the Drugs used in the preparation of the *Gunjataila*

S.No.	Drugs	Quantity
01.	<i>Gunjabeeja</i>	1 part. (to prepare <i>Kalka</i>)
02.	<i>Tilataila</i>	4parts
03.	<i>Bhrungaraja</i>	16 parts (<i>Swarasa</i>)

Diagnostic Criteria:

- 1) Itching at scalp (*Kandu*)
- 2) Diffuse hair fall (*Keshachyuti*)
- 3) Roughness of scalp (*Rukshata*)
- 4) Scaling of scalp skin (*Twaksphutana*)

Inclusion criteria

- The patients presenting with classical features of *Darunaka* as mentioned in diagnostic criteria were selected irrespective of Sex and Socio economic status.

Exclusion Criteria

- Associated with other dermatological conditions such as psoriasis etc.
- Patients having Chronic infectious diseases (tuberculosis, leprosy etc.) and metabolic diseases (DM, hypothyroidism etc.)
- Other types of *Kapala rogas*

Investigations

1. Blood for Hb%, TC, DC, ESR.
2. Urine for sugar, albumin.

Grouping: Patients were divided into 2 groups. i.e., Group A and Group B.

Group A – *Gunjataila shiroabhyanga* was applied for thirty days, once daily, in the morning.

Group B – *Tilataila shiroabhyanga* was applied for thirty days, once daily, in the morning.

Procedure of *Shiroabhyanga*

The *Shiroabhyanga* is one among the *Bahrparimarjana chikitsa*¹² which is done in following methods¹³: Patient is made to sit in comfortable position by using *Sukoshna Gunjataila* and *Tilataila shiroabhyanga*¹⁴ done for respectively A & B group for the duration of 5 Minutes. It is carried out by using tip of the fingers gently massage over the Scalp.

Follow up study: After the completion of treatment, all the patients were advised to attend the O.P.D for two months at regular interval of fifteen days for the follow up study to assess the post effects of treatment.

Criteria for Assessment of Treatment

Assessment of treatment were made before and after the treatment based on,

1. *Kesha bhoomi Rookshata*
2. *Kandu*
3. *Twaksphutana*
4. *Kesha chyuti*

Gradation Index

Showing Gradation Index for assessment criteria

Kesha bhoom Rookshata

Absent	:	0
Negligible	:	1
Without discomfort on scalp	:	2
With discomfort on scalp	:	3

Kandu

Absent	:	0
Occasionally	:	1
Frequently	:	2
Constantly	:	3

Twak sphutana (fine flakes)

Absent	:	0
Visible inside the hair	:	1
Visible over the hair	:	2
Spreaded over the shoulder	:	3

Keshachyuti

Absent	:	0
Occasionally	:	1
Moderate loss	:	2
Maximum loss	:	3

Overall effect of Therapy

Severity of *Darunaka*: For assessing the severity of *Darunaka* in each patient the above adopted scores were grouped and assessed as follows.

Showing overall effect of therapy

Grade	Score	
Absent	0	0
Mild	1	1 – 4 Score
Moderate	2	5 – 8 Score
Severe	3	> 8 Score

Criteria for Assessment of Overall Effects

Overall effect of the therapy was assessed in terms of complete remission, marked improvement, moderate improvement, and mild improvement and

unchanged is observed by adopting the following criteria.

Complete Remission: 100% relief in Chief complaints and no recurrence during follow up study were considered as complete remission

Marked Improvement: 75 - 100% improvement in chief complaints is recorded as marked improvement

Moderate Improvement: 50 - 75% improvement in chief complaints is recorded as moderate improvement.

Mild Improvement: 25-50% improvement in chief complaints is considered as mild improvement

Unchanged: Less than 25% reduction in chief complaints or recurrence of the symptoms to the similar extent of severity is noted as recurrence

Statistical analysis of the result

The results having p value less than < 0.05 is considered as statistically significant in this study.

OBSERVATIONS

General Observation: Twenty patients of *Darunaka* were registered for this clinical study. They were divided into two groups, *Gunjataila Shiroabhyanga* group (Group A) and *Tilataila Shiroabhyanga* group (Group B) for the purpose of comparative assessment of treatment. Age wise distribution of patients showed that 07 patients (35 %) were in the age group of 10 – 19 yrs, 10 patients (50 %) were in the age group of 20 – 29 years, 02 patients (10 %) were in the age group of 30 – 39 years and 1 patient (05 %) was between the age of group 40-49yrs. Out of 20 cases, the incidence of *Darunaka* is observed 08 (40 %) in the male and 12 (60 %) in the female patients. Socio-economic status wise distribution of patients showed that 11 patients (55%) were belonged to lower class, 07 patients were (35%) to middle class and 02 patients were (10 %) to upper class. Out of 20 patients, 05 patients (25 %) were of *Vata kapha*, 07 patients (35 %) were of *Vata pitta prakruti* and 08 patients (40 %) were of *Kapha pitta*.

Table 2: Showing Incidences of Symptoms in Patients

Symptoms	Group A		Group B		Total	
	No. of pt's	%	No. of pt's	%	No. of pt's	%
<i>Kandu</i>	10	100	10	100	20	100
<i>Rookshata</i>	10	100	10	100	20	100
<i>Twaksphutana</i>	10	100	10	100	20	100
<i>Keshachyuti</i>	09	90	08	80	17	85

Table 3: Showing the 't' test results in reduction of severity of *Kandu* in Group A group and Group B group after treatment and during follow up

<i>Kandu</i>		Mean score				S.D of mean	S.E of mean	Df	't'	'p'
		BT	AT	Red	%					
Group A	AT	2.3	0.6	1.7	73	0.48	0.15	9	11.13	<0.001
	FU1	2.3	0.5	1.8	78	0.42	0.13	9	13.50	<0.001
	FU2	2.3	0.6	1.7	73	0.48	0.15	9	11.13	<0.001
Group B	AT	2.5	2.1	0.4	16	0.52	0.16	9	2.45	<0.05
	FU1	2.5	2.2	0.3	12	0.48	0.15	9	1.96	<0.10
	Fu2	2.5	2.3	0.2	8	0.42	0.13	9	1.50	<0.20

Table 4: Showing the 't' test results in reduction of severity of *Rookshata* in Group A group and Group B group after treatment and during follow up

<i>Rookshata</i>		Mean score				S.D of mean	S.E of mean	Df	't'	'p'
		BT	AT	Red	%					
Group A	AT	2.4	0.7	1.7	70	0.48	0.15	9	11.13	<0.001
	FU1	2.4	0.6	1.8	75	0.42	0.13	9	13.50	<0.001
	FU2	2.4	0.7	1.7	70	0.48	0.15	9	11.13	<0.001
Group B	AT	2.4	1.8	0.5	25	0.71	0.22	9	2.29	<0.05
	FU1	2.4	2	0.4	16	0.52	0.22	9	2.45	<0.05
	Fu2	2.4	2.1	0.3	12	0.48	0.15	9	1.96	<0.10

Table 5: Showing the 't' test results in reduction of severity of *Twaksphutana* in Group A group and Group B group after treatment and during follow up

<i>Twak Sphutana</i>		Mean score				S.D of mean	S.E of mean	Df	't'	'p'
		BT	AT	Red	%					
Group A	AT	1.7	0.4	1.3	76	0.48	0.15	9	8.51	<0.001
	FU1	1.7	0.3	1.4	82	0.52	0.16	9	8.57	<0.001
	FU2	1.7	0.4	1.3	76	0.48	0.15	9	8.51	<0.001
Group B	AT	1.8	1.2	0.6	33	0.70	0.22	9	2.71	<0.025
	FU1	1.8	1.3	0.5	27	0.71	0.22	9	2.24	<0.05
	Fu2	1.8	1.4	0.4	22	0.70	0.22	9	1.81	>0.1

Table 6: Showing the 't' test results in reduction of severity of *Keshachyuti* in Group A group and Group B group after treatment and during follow up

<i>Keshachyuti</i>		Mean score				S.D of mean	S.E of mean	Df	't'	'p'
		BT	AT	Red	%					
Group A	AT	1.4	0.5	0.9	64	0.32	0.10	9	9.00	<0.001
	FUI	1.4	0.4	1	71	0.47	0.15	9	6.71	<0.001
	FU2	1.4	0.5	0.9	64	0.32	0.10	9	9.00	<0.001
Group B	AT	1.4	0.8	0.6	42	0.70	0.22	9	2.71	<0.025
	FU1	1.4	0.8	0.6	42	0.70	0.22	9	2.71	<0.025
	Fu2	1.4	0.9	0.5	35	0.71	0.22	9	2.24	<0.05

Table 7: Showing the 't' test results in reduction of severity of *Darunaka* in Group A group and Group B group after treatment and during follow up

Severity of <i>Darunak</i>		Mean score				S.D of mean	S.E of mean	Df	't'	'p'
		BT	AT	Red	%					
Group A	AT	2.4	0.8	1.6	66	0.52	0.16	9	9.80	<0.001
	FUI	2.4	0.7	1.7	70	0.48	0.15	9	11.13	<0.001
	FU2	2.4	0.8	1.6	66	0.52	0.16	9	9.80	<0.001
Group B	AT	2.4	2	0.4	16	0.52	0.16	9	2.45	<0.05
	FU1	2.4	2.1	0.3	12	0.48	0.15	9	1.96	<0.10
	Fu2	2.4	2.2	0.2	08	0.42	0.13	9	1.50	<0.20

Table 8: Showing the percentage of improvement in the symptoms of *Darunaka* in Group A and Group B groups after treatment and during follow ups

Percentage of Relief	Group A			Group B		
	AT	FU1	FU2	AT	FU1	FU2
<i>Kandu</i>	73	78	73	16	12	08
<i>Rookshata</i>	70	75	70	25	16	12
<i>Twaksphutana</i>	76	82	76	33	27	22
<i>Kesha chyuti</i>	64	71	64	42	42	35

Table 9: Showing over all percentage of improvement in the patients of Group A and Group B groups

Overall % ^{age}	Group A					Group B				
	AT	FU1	FU2	FU3	FU4	AT	FU1	FU2	FU3	FU4
Complete Relief	30	30	30	30	30	00	00	00	00	00
Marked Relief	30	30	30	30	30	00	00	00	00	00
Moderate Relief	30	40	40	10	30	30	30	20	20	20
Mild Relief	10	00	00	00	10	10	10	10	10	00
No Relief	00	00	00	00	00	60	60	70	70	80

DISCUSSION

Darunaka is generally correlated to Dandruff or Pytiriasis capitis, it resembles more accurately with the signs and symptoms of dry variety of Pytiriasis capitis. Few of the significantly resembling factors are *Twak Sphutana* (scales are dry, fine, white and fall freely on shoulders), *Rookshata* (hair are dry and fine), *Kandu* (mild itching). But hair fall has not been directly mentioned in the modern classics; Even then we can consider *Kasha chyuti* as a reason of *Rookshata* of hairs.

Effect on *Kandu*: Severity of *Kandu* is significantly reduced after treatment in *Gunjataila* group. The reduction of *Kandu* within the groups was Group A 73% and Group B 16%. The effects of Group A group was significant at level of p<0.001. It indicates that, *Gunjataila Shiroabhyanga* is better than *Tilataila Shiroabhyanga*. It is due to the effect of *Gunja* and *Bhrungaraja* present in the *Gunjataila*

Effect on *Rookshata*: Severity of *Rookshata* of *Kapala pradesha* is significantly reduced after treatment in Group A group with 70% of efficacy and Group B group

showed only 25% efficacy. The effect of Group A group was significant at level of p<0.001. This data indicates that *Gunjataila shiroabhyanga* is more effective in reducing severity of *Rookshata*.

Effect on Shedding of scales: Severity of shedding of Scales is significantly reduced after treatment Group A group with 76% of efficacy whereas Group B group showed only 33% of efficacy in reducing the shedding of scales. The effect of Group A group was significant at the level of p<0.001. This data indicates that *Gunjataila* is more effective in reducing severity of shedding of Scales than *Tilataila*.

Effect on *Keshachyuti*: Severity of Falling of hairs is significantly reduced after treatment in Group A group with 64% of efficacy and Group B group showed a lesser efficacy of 42%. The effect of Group A group was significant at level of p<0.001. This data indicates that *Gunjataila Shiroabhyanga* is more effective in reducing severity of hair fall.

Discussion on Overall Effects of the Therapy

Consideration of overall effect of therapies after one month of treatment showed that in Group A group complete remission was found in 30% (6 pt's), marked improvement was found in 30% (6 pt's), moderate 30% (6 pt's) and 10% (2 pt's) mild relief. In patients of Group B group only 30% (6 pt's) moderate relief and 10% (2 pt's) mild relief from the *Darunaka* is noticed and 60% (12 pt's) of the patients found no relief.

Follow Up

On the basis of the above results it can be concluded that *Gunjataila shiroabhyanga* not only provide cure to the patients of *Darunaka*, but it also prevents its recurrence. In the second follow up the recurrence in one patient of Group A might have occurred due to indulgence in *Nidana* again and not following the advice.

Comparison of Effects of Therapies

Gunjataila Shiroabhyanga: *Shiroabhyanga* with *Gunjataila* provided better relief in all symptoms of *Darunaka* especially in *Kandu*, *Rookshata*, *Twaksphutana* and *Keshachyuti*.

Tilataila Shiroabhyanga: *Shiroabhyanga* with *Tilataila* provided moderate relief in all symptoms of *Darunaka* but 60% of the patients didn't show any relief. The above discussions infer that in Group A group the effect of the drug is higher than Group B group. Hence from the above results it may be abstracted that *Shiroabhyanga* with *Gunjataila* provided better overall effect to the patients of *Darunaka* with highly significant statistical values than *Shiroabhyanga* with *Tilataila*.

CONCLUSION

Group A group showed complete remission in 30%, marked improvement in 30%, moderate 30% and 10% mild relief. In patients of Group B group only 30% moderate relief and 10% mild relief from the *Darunaka* is noticed and 60% of the patients found no relief. *Gunjataila shiroabhyanga* has higher significant effect in pacifying the symptoms of *Darunaka* and marked reduction in clinical symptoms was well appreciated within one month duration. There was no topical and systemic adverse drug effects noted at the end of the study.

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