

## CLINICAL EVALUATION OF ROLE OF SHIRODHARA AND ASPIRIN IN THE MANAGEMENT OF HEADACHE

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Received: 30-08-2014; Revised: 08-11-2014; Accepted: 20-11-2014

### Abstract

Headache represents one of the most frequent human discomforts. Its significance is often abstruse for it may signal serious disease or represent only tension of fatigue. The term headache should encompass the aches and pain located in the region of head. In Ayurvedic text headache (shiroshoolaa) is described under the head diseases (shiroroga). Approximately 64-77% of people have a headache at some point of their lives. During each year an average 46-53% of people have headache. The treatment of headache depends on the cause, but commonly involves pain killer and antidepressant but they have serious side effect. In Ayurveda there is wide scope to find out safe remedy for the management of headache. For clinical study 60 clinically diagnosed patients of headache were selected from the OPD of Kayachikitsa and Panchkarma of JAMC, Nagpur. Selected patients were randomly divided into two groups each of 30 patients. Group A was again divided into three sub group each of 10 patients. In Group A 10 patients of Vataja shiroshoola were treated with shirodhara of Bala tailaa, 10 patient of pittaja shiroshoola were treated with shirodhara of Godugdha (cow's milk) and 10 patient of Kaphaja shiroshoola were treated with shirodhara of Koshna jaal (warm water) for 7 days. Group B was administered with tab. Aspirin 150 mg OD for 7 days. Although satisfactory result obtained on various parameter with Tab. Aspirin but Shirodhara is more significant.

**Key words:** Headache; Shiroshoola; Shirodhara; Bala tailaa; Godugdha; Koshna jala; Aspirin.

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### Cite This Article

Seema Chawardol G, Sapan Jain B. Clinical evaluation of role of Shirodhara and Aspirin in the management of Headache. Ayurpharm Int J Ayur Alli Sci. 2014;3(12):369-375.

## INTRODUCTION

Headache represents one of the most frequent human discomforts. Its significance is often abstruse, for it may signal serious disease or represent only tension of fatigue. Fortunately, in most instances it reflects the latter, and only exceptionally does it warn of an intra-cranial abnormality. The terms headache should encompass all aches and pains located in the region of head. The brain tissue itself is not sensitive to pain as it lacks pain receptors. Rather the pain is caused by disturbance of the pain-sensitive structures around the brain. Nine areas of the head and neck have the pain sensitive structures, which are the cranium, muscle, nerves, arteries and veins, subcutaneous tissues, eyes, ears, sinuses and mucous membrane.<sup>[1]</sup>

In Ayurvedic text Shiroshoola was described under the head disease (Shiroroga).<sup>[2]</sup> As per Acharya Charaka, Shiroroga refers to Shiroshoola. In any type of shoola vata predominance is a main factor.<sup>[3]</sup> In Ayurveda there are 9 types of Shiroshoola.<sup>[4]</sup>

In Samhita detailed description of causative factors of Shiroshoola was mentioned. They are almost similar to the causative factors which are found during the study. The prevalence of headache is increasing worldwide at a shocking rate in developed and developing countries. Persistent stress, fast growing competition, irregular sleeping pattern, habit of unwholesome eating, unconscious towards daily regimen (dinacharya) and seasonal regimen (ritucharya) are main causes of headache.<sup>[5]</sup>

Approximately 64 – 77% of people have headache at some point in their lives. During each year an average 46-53% of people have headache. The treatment of a headache depends on the cause, but commonly involves pain killers and anti-depressant. They have serious side effect, like GI disturbance, giddiness and habit forming nature. In

Ayurveda, there is wide scope to find out safe remedy for the management of headache. In present study out of 9 types of headache (shiroshoola) three type of headache (shiroshoola) i.e. vataja, pittaja and kaphaja shiroshoola were studied and comparative study of Shirodhara with well known drug Aspirin was done.

## AIMS AND OBJECTIVES

- To review the causative factors of the headache (shiroshoola) in view of Ayurvedic and Modern medicine.
- To find out safe and effective treatment of headache (shiroshoola).
- To assess the effect of Shirodhara in headache (shiroshoola).

## MATERIAL AND METHODS

### Inclusion criteria

Patients between the age group of 20 to 80 years.

Patients suffering from Shiroshoola (Headache of stretching in nature), Shirodaha (burning sensation) in head, Shirogaurava (heaviness in head), Shankanishtoda (Bilateral), lalatshoola (frontal headache), Ghatasambheda (occipital region pain), Prakasha akashmata (Photophobia), Nasasrava (Nasal secretion), Netra daha (burning sensation in eyes), Trishna (thirst), Bharama (Confusion), Sweda praverutti (excessive sweating), Tandra (Sleepiness), Alassaya (lethargy) were selected irrespective of sex, education, socio-economic status and religion.<sup>[7][8]</sup>

### Exclusion Criteria

Patients suffering from acute illness such as severe hypertension, malignancy, meningitis, diabetes mellitus, eye disorders, cervical spondylitis, dental disorders, sinusitis and any other type of infection associated with fever.

## Selection of patients

For the clinical study 60 clinically diagnosed patients of headache were selected from O.P.D., Department of Kayachikitsya and Panchakarma, JAMC, Nagpur. This study was done after the permission of head of the institute. For the subjective assessment symptoms were observed before and after the treatment. Detailed history and clinical examination of cases was done in all the 7 days of trial and asked them for follow up for every 15 days.

## Grouping

Selected patients were randomly divided into two groups each of 30 patients. Group A again divided into three sub group each of 10 patients.

### Group A

10 diagnosed patients of Vataja Shiroshoola were treated with Shirodhara of Bala taila, 10 diagnosed patients of Pittaja Shiroshoola were treated with Shirodhara of Godugdha (Cow's milk) and 10 diagnosed patients of Kaphaja Shiroshoola treat with Shirodhara of Koshna Jal (Lukewarm water). Shirodhara was done daily for 7 days.

### Group B

Patients in group B was administered with Tab. Aspirin 150 mg OD for 7 days.

## Duration of trial

Clinical trial was done for 7 days. In both group patients were advised mental and physical rest.

## Assessment criteria

Subjective symptoms were taken into consideration for the assessment of results. Intensity of symptoms was indicated by Grade

0- Normal, Grade 1 – Mild, Grade 2 – Moderate & Grade 3 – severe.

Bala taila was prepared as mention in Yogratnakar.<sup>[8]</sup>

## OBSERVATION

In the initial level of present study maximum incidence of headache were found in the age group between 20 years to 40 years i.e.29 (48.33%). The number of female patients were higher i.e. 34 (56.67%). Maximum number of patients were non-vegetarian i.e. 35 (58.33%) and belonging to middle class group i.e.31 (51.67%). Maximum number of patients was of vatakaphaj dehaprakruti i.e. 25 (41.67%) (Table 1 to Table 5)

## RESULT

In the present study the symptoms like shiroshool(headache), shankhanistood (bilateral pain), lalatshool (frontal headache), shirogaurav (heaviness in head) there is no significant difference in effect of shirodhara and aspirin. In ghatasambheda (occipital region pain) the effect of aspirin is more significant. In shirodaha (burning sensation), trishna (thirst), bhrama (confusion), tandra (sleepiness), alassaya (lethargy) and prakash akshamata (photophobia) the effect of shirodhara is more significant. (Table 6 and Table 7; Graph 1 and Graph 2)

## DISCUSSION

In Ayurvedic text detailed description of headache (shiroshoola) is mentioned. In this study it was observed that the causative factors of headache are mostly similar to as mention in samhitas.

In samhita a very short description of Shirodhara was mentioned. Shirodhara is a process of continuous pouring of medicated oil, decoction, milk etc. on the forehead from a specific height for specific period of time.<sup>[11]</sup>

**Table 1: Distribution of patients according to their age**

Age Group	No. of Pt. Group A	No. of Pt. Group B	Total No of Pt	Percentage (%)
20 – 40 year	14	15	29	48.33
41 – 60 year	12	10	22	36.67
61 to 80 year	4	5	9	15
<b>Total</b>	<b>30</b>	<b>30</b>	<b>60</b>	<b>100</b>

**Table 2: Distribution of patients according to their Sex**

Sex	No. of Pt. Group A	No. of Pt. Group B	Total No of Pt.	Percentage (%)
Male	14	12	26	43.37
Female	16	18	34	56.67
<b>Total</b>	<b>30</b>	<b>30</b>	<b>60</b>	<b>100</b>

**Table 3: Distribution of patients according to their Diet**

Type of Diet	No. of Pt. Group A	No. of Pt. Group B	Total No of Pt.	Percentage (%)
Veg	13	12	25	41.67
Non Veg.	17	18	35	58.33
<b>Total</b>	<b>30</b>	<b>30</b>	<b>60</b>	<b>100</b>

**Table 4: Distribution of patients according to their Socio-economic Status**

Income Status	No. of Pt. Group A	No. of Pt. Group B	Total No of Pt	Percentage (%)
Upper class	7	7	14	23.33
Middle class	17	14	31	51.67
Lower Middle	6	9	15	24
<b>Total</b>	<b>30</b>	<b>30</b>	<b>60</b>	<b>100</b>

**Table 5: Distribution of patients according to their Dehaprakruti**

Dehaperkruti	No. of Pt. Group A	No. of Pt. Group B	Total No of Pt	Percentage (%)
Vatapittaj	10	11	21	35
Vatakaphaj	13	12	25	41.67
Pittakaphaj	7	7	14	23.33
<b>Total</b>	<b>30</b>	<b>30</b>	<b>60</b>	<b>100</b>

**Table 6: Showing % of relief of therapy in group A**

S.No.	Parameter	N	Score		Score		% of Relief
			BT	AT	BT	AT	
1.	Shiroshoola	30	52	24	1.73	0.8	53.75
2.	Shirodaha	11	15	6	1.36	0.54	60.29
3.	Shitrogaurav	10	15	8	1.5	0.8	46.66
4.	Shankanistod	22	30	12	1.36	0.54	60.29
5.	Lalatshool	20	28	9	1.4	0.45	67.85
6.	Ghatasambheda	16	32	18	2	1.12	44
7.	Prakash Akshamata	14	20	7	1.42	0.5	64.78
8.	Netradaha	9	13	5	1.44	0.55	61.80
9.	Bharama	15	20	8	1.33	0.53	60.15
10.	Trishna	15	20	9	1.33	0.6	54.88
11.	Alaasya	16	21	10	1.31	0.62	52.67
12.	Tandra	10	12	6	1.2	0.6	50

**Table 7: Showing % of relief of therapy in group B**

S.No.	Parameter	N	Score		Score		% of Relief
			BT	AT	BT	AT	
1.	Shiroshoola	30	55	19	1.83	0.63	65.57
2.	Shirodaha	12	17	9	1.41	0.75	46.47
3.	Shitrogaurav	12	17	7	1.41	0.58	58.86
4.	Shankanistod	23	32	10	1.39	0.43	69.06
5.	Lalatshool	24	32	11	1.54	0.45	70.77
6.	Ghatasambheda	18	34	11	1.88	0.61	67.55
7.	Prakash Akshamata	14	20	11	1.42	0.78	45.07
8.	Netradaha	10	16	9	1.6	0.9	43.75
9.	Bharama	14	18	13	1.28	0.92	28.12
10.	Trishna	13	16	13	1.23	1	18.69
11.	Alaasya	10	14	9	1.4	0.9	35.71
12.	Tandra	14	14	9	1	0.64	36

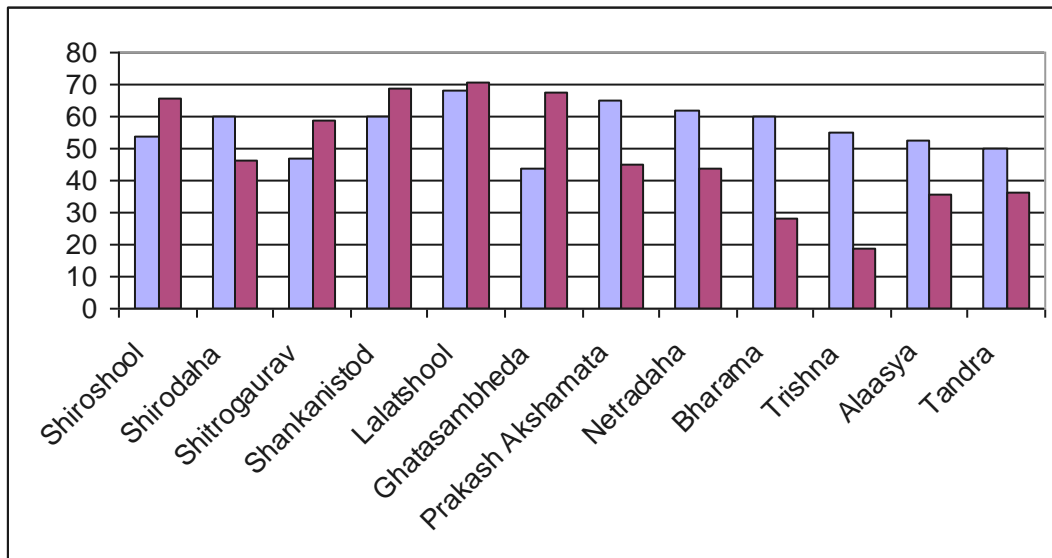
**Table 8: Showing Properties of Ingredient of Bala Taila<sup>[7]</sup>**

S. No.	Name of Drug	Latin Name	Useful parts	Guna	Rasa	Virya	Vipak	Doshakarma
1.	Atibala	<i>Abutilon indicum</i>	Root	Laghu, Singhdha Pishchail	Madhur	Sheet	Madhur	Vatpitta shamak
2.	Bilva	<i>Aegle Marmelos</i>	Fruit	Laghu, Ruksha	Kashay Tikta	Ushna	Katu	Kaphvatashamak
3.	Agnimantha	<i>Premna mucronata</i>	Fruit	Laghu, Ruksha	Kashay Madhur	Ushna	Katu	Kaphvatashamak
4.	Shonyak	<i>Oroxylum indicum</i>	Root, Bark	Laghu, Ruksha	Kashay Madhur	Ushna	Katu	Kaphvatashamak
5.	Patla	<i>Stereospermum suaveolens</i>	All parts	Laghu, Ruksha	Kashay Madhur	Ushna	Katu	Tridhoshgna
6.	Gambhari	<i>Gmelina arborea</i>	Root, Fruit	Guru	Kashay Madhur	Ushna	Katu	Tridhoshgna
7.	Shalparni	<i>Desmodium gangetium</i>	All part	Guru, Sighandha	Madhur Tikta	Ushna	Madhur	Tridhoshgna
8.	Prushna parni	<i>Uraria picta</i>	Root	Guru, Sighandha	Madhur Tikta	Ushna	Madhur	Tridhoshgna
9.	Bruhatai	<i>Solanum indicum</i>	Root, fruit	Laghu, Ruksha Tikshna	Katu Tikta	Ushna	Katu	Kaphvata shamak
10.	Kantakari	<i>Solanum xanthocarpum</i>	All parts	Laghu, Ruksha Tikshna	Katu Tikta	Ushna	Katu	Kaphvata shamak
11.	Gokshur	<i>Tribulus terrestris</i>	Fruit, root	Guru Signdha	Madhur	Sheet	Madhur	Vat Pitta Shamak
12.	Yav	<i>Hordeum vulgare</i>	Fruit	Guru Ruksha	Kashay Madhur	Sheet	Katu	Kaphavat Shamak
13.	Kol	<i>Zizyphus jujaba</i>	Fruit	Guru Singndha	Madhur	Ushna	Madhur	Vatshamak
14.	Kulattha	<i>Dolicos biflorus</i>	Seed	Langhu	Kashay	Ushna	Amla	Vat Kaphasshmak

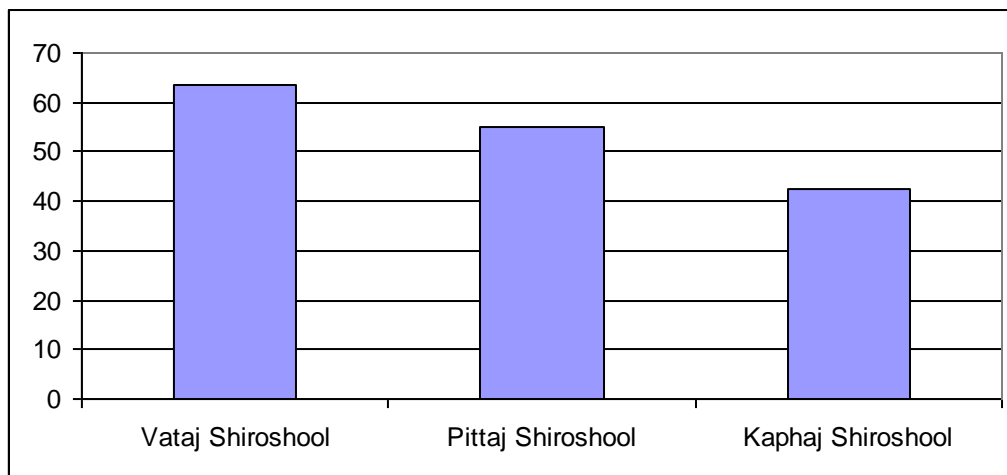
**Table 9: Properties of Koushna Jala & Dugdha<sup>[9][10]</sup>**

S.No.	Name of Drug	Guna	Rasa	Virya	Vipak	Doshakarma
1.	Godugdha	Singhdha, Guru, Mardhu, Pischil	Madhur	Sheet	Madhur	Vat Pitthar
2.	Koshna Jala	Laghu, Ruksha	-	Ushna	Katu	Kaph Vathar medohar

**Graph 1: Shows Percentage of Relief in Group A & Group B**



**Graph 2: Percentage of relief in Vataj Pittaj aShiroshoola & Kaphaj Shiroshoola in Group A**



Shirodhara acts as an sedative and soothing effect to the brain and induces sleep. This constant flow of liquid over the forehead induces a multifaceted effect in the skull and brain.<sup>[12]</sup>

In the symptoms like shiroshoola, shankhanistood, lalatshool, shirogaurav there is no significant difference found in relief by shirodhara and Aspirin. In symptom like ghatasambheda effect of Aspirin is more significant than shirodaha. In shirodaha, Trishna, bhrama, tandra, alasya and prakash akshamata the effect of shirodhara is more significant then Aspirin.

## CONCLUSION

The study shows that the Shirodhara is a safe and effective treatment for the management of headache (shiroshoola). Tolerance of shirodhara was good and no side effect was observed. Patients treated with shirodhara reported much better mental and physical fitness after the treatment. More research work with longer duration is encouraged as results are promising.

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Source of Support: Nil

Conflict of Interest: None Declared