

To Study the Effect of Pratimarsh Nasya and Shiro Taila Abhyanga on Vaatik Shiro Shool w.s.r. To Tension Headache

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ABSTRACT

Stress is the main causative factor of *Vatik shirashool* which can be considered as Tension headache. A very common complaint regarding *Shiroroga* is *Shirahshoola*. *Manahsantapa* is the leading causative factor of *Shirahshoola* according to Charaka. For treatment of *vatic shirashool pratimarsha nasya* with *Anutaila* and *Abhyanga* with *Sarsapa taila* were used in this study. 60 patients were selected and divided into 2 groups. In Group A *Pratimarsha nasya* was given with *Anu taila* and in Group B *Shiro abhyanga* with *Sarsapa taila* was given. Both the treatments were significantly effective in improving the sign and symptoms of *vatic shirashool*. Comparing both the groups it was found that Group A was statistically more effective than group B in treating *Shankhanistoda* ($p<0.001$), *Bhrumadhya Evam Lalatatapanam* ($p<0.05$), *Shiroghurnanam* ($p<0.05$), lack of concentration ($p<0.001$), and disturbed sleep ($p<0.05$), *Shirostambha* ($p<0.05$), Vertigo ($p<0.05$) and severity of headache ($p=0.001$). The difference in relief was statistically insignificant in *Ghatasambheda*, *Srotoniskasnavat Pida*, *Akshiniskasnavat Pida*, *Sandhimokshanavat Pida*, heaviness in head, *Sirajalaspurana*, *Hanugraha*, *Ghranasrava*, blurring of vision, Stiffness of neck, stiffness of shoulder and photophobia, phonophobia, memory loss, frequency and duration of headache ($p>0.05$). On Hamilton rating scale, Group A was more statistically highly effective than group B in both parameters ($p<0.001$).

INTRODUCTION

Stressful psychological conditions contribute to most of the psychosomatic diseases. Tension headache is one of them which can be compared with *Vatika Shirshoola* described in Ayurvedic texts. Mental factors like excessive weeping, grief, fear, terror have also been attributed in its aetiopathogenesis¹. A very common complaint regarding *Shiroroga* is *Shirahshoola*. *Manahsantapa* is the leading causative factor of *Shirahshoola* according to Charaka². It is clearly mentioned by Charak and Harita that *Shoka* and *Bhaya* is specifically responsible for *Vatika Shirashoola*^{3,4}. Tension headache

is the most common type of headache. It can cause mild, moderate, or intense pain in a person's head, neck, and behind the eyes. It is estimated that 82% of headache occurs due to tension (Kaplan & Sadock, 1995). Its increasing global incidence is a cause of concern for all which has forced to initiate the research work to discover an effective medicine for the better management of this challenging ailment. Shirahshoola, which is a chief symptom of Shiroroga, comes under Urdhwajatrugata Vikara. Nasya is advocated by almost all the Acharyas for its effective management^{5, 6, 7}. Medicine administered through the nose, goes into the Mastishka and expels out the vitiated Doshas. Pratimarsh is a type of Nasya which is devoid of any complications. It cures stiffness of neck, headache, facial paralysis, half sided headache & tremors of head. Veins, skull bones, joints, ligaments & tendons are nourished & become strong^{8, 9, 10}. Shiro-abhyanga is a subtype of Abhyanga, which is useful in headache, hair falling or hair graying¹¹. Since all the properties of Abhyanga are opposite to the features of Vata, Abhyanga is considered useful in the treatment of the disease occurring by vitiated Vata. In this study both the methods were adopted in different groups and their result was obtained and compared.

MATERIAL AND METHODS

Pratimarsh Nasya with Anu Taila and Shiroabhyanga with Sarshapa Taila are taken to evaluate their role in the treatment of Vatik Shirahshoola i.e. Tension Headache.

Aims and objectives of study

- To evaluate the role of Pratimrash Nasya performed with in the management of tension headache.
- To evaluate the role of Shiro Taila-Abhyang administered tropically in the management of tension headache.
- To compare that whether Nasya route or Shiro Taila-Abhyang is better for the management of tension headache

Study design

Selection of patients

60 Patients of Vaatik Shirodhool (tension Headache) from OPD of Swasthvritta department and participants referred from other departments of Major S. D. Singh P. G. Ayurvedic Medical College and Hospital, Farrukhabad (UP) were registered irrespective of sex, caste, religion and occupation etc. and randomly divided in to two equal groups containing 30 patients each.

Criteria of Inclusion

1. Patients with chief complaints of *Vatik Shiroshool* (Tension Headache)
2. Patient between 18-50 years were selected.
3. Their score should be in between the mild to moderate headache.

Criteria of Exclusion

1. Secondary headaches arising due to any other pathological conditions were excluded.
2. Headaches arising due to meningitis, encephalitis, psychosis, neurosis, hypertension, sinusitis
3. Hypoglycemic patients were also excluded.
4. Pathological conditions occurring in eye, ear, nose and oral cavity were also excluded for this study.

Method of Study

It was an open clinical trial. Patients were randomly divided in to two equal groups and treated according to following schedule-

Group A- *Pratimarsh Nasya* with 2 drops *Anutaila* in each nostril once daily for 3 months.

Group B- *Shiro Taila Abhyanga* with *Sarshapa Taila* (Mustard Oil) once daily for 3 months.

Protocol during Trial

1. Fulfillment of inclusion criteria
2. Written and well informed consent were taken.
3. Registration of the patients
4. Data obtained was statistically analysed.

Laboratory Investigations

Routine urine, blood examinations, biochemical investigations like FBS, PPBS were conducted wherever required before and after treatment.

CRITERIA FOR ASSESSMENT

It was based on relief found in the signs and symptoms of the disease. For this purpose main signs and symptoms were given suitable score according to their severity before and after treatment. The details of the score adopted for the main signs and symptoms in this study are as follows-

1- Shankhanistoda (Bi-temporal Headache)

- Nil/absent - 0
- Mild - 1
- Moderate (Can Continue Work) - 2
- Moderate (forced to stop work) - 3

2-Ghatasambheda (Pain In Occipital Region)

- Nil/absent - 0
- Mild - 1
- Moderate (Can Continue Work) - 2
- Moderate (forced to stop work) - 3

3-Bhrumadhya Evam Lalatatapana (Pain & Burning In Forehead)

- Nil/absent - 0
- Mild - 1
- Moderate (Can Continue Work) - 2
- Moderate (forced to stop work) - 3

4- Shrotranishkasanvat pida (Severe pain in ears)

- Nil/absent - 0
- Mild - 1
- Moderate (Can Continue Work) - 2
- Moderate (forced to stop work) - 3

5- Akshinishkasanavat Pida (Pain in eyes as feeling with eyes are coming out)

- Nil/absent - 0
- Mild - 1
- Moderate (Can Continue Work) - 2
- Moderate (forced to stop work) - 3

6- Shiroghurnanam (Giddiness)

- Nil/absent - 0

- Mild - 1
- Moderate - 2
- Severe - 3

7- Sandhimokshanavat pida (Pain as joint are being axed)

- Nil/absent - 0
- Mild - 1
- Moderate (Can Continue Work) - 2
- Moderate (forced to stop work) - 3

8- Lack of concentration

- Nil/absent - 0
- Mild - 1
- Moderate - 2
- Severe - 3

9- Disturbed sleep

- Nil/absent - 0
- Mild - 1
- Moderate - 2
- Severe - 3

10- Heaviness in head

- Nil/absent - 0
- Mild - 1
- Moderate - 2
- Severe - 3

Associated complaints were given score as-

- Absent - 0
- Mild - 1
- Moderate - 2
- Severe - 3

Severity frequency and duration of headache were assessed in following way-

Severity of Headache -

- Nil/absent - 0
- Mild - 1
- Moderate (Can Continue routine work) - 2
- Moderate (Forced to stop work) - 3

Frequency of Headache/Week -

- Nil / Absent - 0
- 1-2 times / Week - 1
- 2-4 times / Week - 2
- > 4 times / Week - 3

Duration of Headache in Hrs/Day

- Nil / Absent - 0
- 1-4 hrs./day - 1
- 4-8 hrs./day - 2
- > 8 hrs. / day - 3

HAMILTON ANXIETY RATING SCALE

ITEM	SYMPTOM	RATING
Anxious Mood	Worries, anticipation of the worst, fearful anticipation, irritability	-
Tension	Feelings of tension, fatigability, startle response, moved to tears easily, trembling, feeling of restlessness, inability to relax	-
Fears	Of dark, of strangers, of being left alone of animals, of traffic, of crowds	-
Insomnia	Difficulty in falling asleep, broken sleep, unsatisfying sleep and fatigue on waking, dreams, nightmares, night-terrors	-
Intellectual (Cognitive)	Difficulty in concentration, poor memory	-
Depressed Mood	Loss of interest, lack of pleasure in hobbies, depression, early waking, diurnal swing	-
Somatic (Muscular)	Pains and aches, twitching, stiffness, myoclonic jerks, grinding of teeth, unsteady voice, increased muscular tone	-
Somatic (Sensory)	Tinnitus, blurring of vision, hot and cold flushes, feeling of weakness, picking sensation	-
Cardiovascular Symptoms	Tachycardia, palpitations, pain in chest, throbbing of vessels, fainting feelings, missing beat	-
Respiratory Symptoms	Pressure of constriction in chest, choking feelings, sighing, dyspnoea	-
Gastrointestinal Symptoms	Difficulty in swallowing, wind, abdominal pain, burning sensations, abdominal fullness, nausea, vomiting, borborygmi, looseness to bowels, loss of weight, constipation	-
Gentitourinary Symptoms	Frequency of micturation, urgency of micturation, amenorrhoea, menorrhagia, development of frigidity premature ejaculation, loss of libido, impotence.	-
Autonomic Symptoms	Dry mouth, flushing, pallor, tendency to sweat, giddiness, tension headache, raising of hair	-
Behavior at Interview	Fidgeting, restlessness or pacing, tremor of hands, furrowed brow, strained face. Sighing or rapid respiration, facial pallor, swallowing, belching, brisk tendon jerks, dilated pupils, exophthalmoses	-

Signs and symptoms mentioned in Hamilton scale were assessed by adopting the following scoring pattern.

Gradation for Each Symptom -

- Nil/absent - 0
- Mild - 1
- Moderate - 2
- Severe - 3
- Very severe (grossly disabling) - 4

Thus available adopted score was grouped and scored as follows

- 00 to 05 - 0
- 05 to 15 - 1
- 15 to 25 - 2
- 25 to 35 - 3
- More than 35 - 4

HAMILTON DEPRESSION RATING SCALE

Item	Rating	Symptoms
Depressed mood (Sadness, hopeless, helpless, worthless)	0	Absent
	1	These feeling states indicated only on questioning.
	2	These feeling states spontaneously reported verbally
	3	Communicates feeling states non-verbally
	4	Patient report Virtually Only these feeling states
Feelings of guilt	0	Absent
	1	Self reproach, feels he has let people down.
	2	Ideas of guilt or rumination over past errors or sinful deeds
	3	Present illness is a punishment, delusions of guilt
	4	Hears accusatory or denunciatory voices and/or experiences threatening visual hallucinations
Suicide	0	Absent
	1	Feels life is not worth living
	2	Wishes he was dead
	3	Suicide ideas or gesture
	4	Attempts at suicide
Insomnia initial	0	No difficulty falling asleep
	1	Complains of occasional difficulty falling asleep
	2	Complains of nightly difficulty falling asleep
Insomnia Middle	0	No difficulty falling asleep
	1	Patient complains of being restless and disturbed during the night
	2	Waking during the night – getting out of bed

Insomnia delayed	0	No difficulty
	1	Walking in early hours of the morning but goes back to sleep Unable to fall asleep again if gets out of bed
	2	
Work interest and activities	0	No difficulty
	1	Thoughts and feelings of incapacity, fatigue or weakness Loss of interest in activity, hobbies, or work
	2	Decrease in actual time spent in activities or decrease in productivity
	3	Stopped working because of present illness
	4	
Retardation (Slowness of thought and speech : impaired ability to concentrate, decreased motor activity)	0	Normal speech and thought
	1	Slight retardation at interview
	2	Obvious retardation at interview
	3	Interview difficult
	4	Complete stupor
Agitation	0	None
	1	“Playing with” hands, hair, etc.
	2	Hand – wringing, nail biting, hair pulling, biting of lips.
Anxiety psychic	0	No difficulty
	1	Subjective tension and irritability
	2	Worrying about minor matters
	3	Apprehensive attitude apparent in face or speech
	4	Fears expressed without questioning.
Anxiety somatic (Physiological concomitants of anxiety, such as: GIT, CVS, RS and GU symptoms)	0	Absent
	1	Mild
	2	Moderate
	3	Severe
	4	Incapacitating
Somatic symptoms Gastrointestinal (GIT)	0	None
	1	Loss of appetite but eating without staff encouragement. Heavy feelings in abdomen. Difficulty, eating without staff urging. Requires laxatives or medication for bowel and for G.I. symptoms
	2	
Somatic symptoms general	0	None
	1	Heaviness in limbs, back or head, backaches, headache, muscle aches.
	2	Any clear-cut symptom.

Genital symptoms (Loss of libido, Menstrual disturbances)	0	Absent
	1	Mild
	2	Severe
Hypochondrias	0	Not present
	1	Self-absorption (bodily)
	2	Preoccupation with health
	3	Frequent complaints, requests for help.
Loss of weight	0	No weight loss
	1	Probable weight loss associated with present illness.
	2	Definite weight loss
	0	Acknowledge being depressed and ill.
Insight	1	Acknowledges illness but attributes cause to bad food, mate, overwork, etc.
	2	Denies being ill at al.

Thus the available adopted score was classified and scored as follows before and after treatment.

▪	0	to	5	-	0
▪	5	to	15	-	1
▪	15	to	25	-	2
▪	25	to	35	-	3
▪	More than		35	-	4

Follow Up

All patients registered for the trial were followed up every week. Reassessment was done after 3 month of stoppage of treatment.

OBSERVATION

The following observations were found in this study –

1. Majority of the patients were in 21-30 years age group (40%), female (53.33%), married (73.33%), Hindu (91.67%), graduate (53.33%), of middle class (53.33%), doing private job (41.67%) and residents of urban area (81.67%).
2. Majority of patients (55%) had vegetarian diet, regular dietary habits (75%) with moderate appetite (70%) and used to *Vishamashana* (63.33%).
3. 80% patients had *Rajasika* type of diet and 73.33% patients had *Katu rasa* and 63.33% had *Ruksha guna* dominancy in diet which is *Vata –Prakopaka*.
4. Maximum number of the patients had *Vata-pitta Prakriti* (55%), *Rajasika Prakriti* (85%), *Madhyama Sara* (70%), *Madhyama Samhanana* (75%), *Madhyama Satva* (60%), *Madhyama Pramana* (66.67%), *Madhyama Satmya* (51.67%), *Vishama Agni* (56.67%), *Krura Kostha* (68.33%), *Madhyama Abhyavaharana Shakti* (63.33%), *Madhyama Jaranashakti* (73.33%), *Madhyama Vyayamashakti* (65%).

5. Maximum Patients were addicted to tea (83.33%), had disturbed sleep (90%), irregular bowel habit (68.33%) and do not exercise (65%) facing psychological exertion (55%)
6. All the 60 patients of *Vatika Shirahshula* were having the complaints of *Shankhanistoda* and lack of concentration, 93.33% were having heaviness in head, 90.00% patients were suffering from disturbed sleep, 83.33% patients were having *Ghatasambheda*, 76.67% patients were having *Bhrumadhya Evam Lalatatapanam*, 55.00% patients were suffering from *Shiroghurnanam*, 31.67% patients had *Akshinishkasanvat Pida*, 30.00% patients had *Sandimokshanavt Pida*, and minimum 11.67% patients had *Shrotranishkasanvat Pida*.
7. Maximum number of patients e.g. 83.33% were suffering from stiffness of neck, 71.67% had *Shirostambha*, 35.00% had vertigo, 33.33% had photophobia, 31.67% had *Sirajalasphurana*, 23.33% had stiffness of shoulder, 21.67% had blurring of vision, 16.67% had loss of memory, 15.00% had phonophobia, 11.67% had *Hanugraha* and 05.00% had *Ghransrava*.
8. Most of the patients were having 1 to 2 years chronicity (48.33%), moderate category of pain but they were unable to continue their routine work (71.67%), headache more than four times/week (61.67%), more than eight hours/week duration (65%) and headache increased at evening (81.48%) and gradual onset of headache (91.67%).
9. Maximum patients reported *virrudhahara* (48.33%), *Ratri Jagrarana* (75%) and *Chinta* (78.33%) as *nidana*.

Effect of Therapy

Group A: *Pratimarsha Nasya* of *Anu Taila* was given and results were highly significant in *Shankhanistoda*, *Ghatasambheda*, *Bhrumadhya Evam Lalatatapanam*, *Shiroghurnanam*, lack of concentration, disturbed sleep and heaviness in head ($p < 0.001$), while significant in *Akshinishkasanvat Pida* ($p < 0.05$). Results were statistically insignificant in *Sandhimokshanavat Pida* and *Shrotranishkasanavat Pida* ($p > 0.05$).

On associated complaints statistically significant relief was observed in *Sirajalasphurana* ($p < 0.05$), *Shirostambha* ($p < 0.01$), vertigo ($p < 0.01$), memory loss ($p < 0.05$) and stiffness of neck ($p < 0.01$). Results were statistically insignificant in *Hanugraha*, *Ghranasrava*, blurring of vision and stiffness of shoulder and photophobia ($p > 0.05$)

Highly significant relief was observed on severity and frequency/week and duration of headache ($p < 0.001$).

Results were also highly significant on Hamilton anxiety rating scale and depression rating scale at $p < 0.001$.

Group B: *Shiro-abhyanga* with *Sarshapa Taila* provided highly significant relief in *Shankhanistoda*, *Ghatasambheda*, *Bhrumadhya Evam Lalatatapanam*, lack of concentration, disturbed sleep and heaviness in head ($p < 0.001$), while significant in *Akshinishkasanvat Pida* ($p = 0.001$) and *Shiroghurnanam* ($p < 0.05$). Results were statistically insignificant in *Sandhimokshanavat Pida* and *Shrotranishkasanavat Pida* ($p > 0.05$).

On associated complaints statistically significant relief was observed in *Sirajalasphurana* and stiffness of neck ($p < 0.05$). Result was highly significant in *Shirostambha* ($p < 0.001$) while statistically

insignificant in *Hanugraha*, *Ghranasrava*, vertigo, blurring of vision and stiffness of shoulder and photophobia, phonophobia and memory loss ($p>0.05$).

Highly significant relief was observed on severity ($p<0.001$) and significant in frequency/week and duration of headache ($p<0.01$).

Results were also highly significant on Hamilton anxiety rating scale ($p<0.001$) while significant on depression rating scale ($p<0.01$).

Intergroup Comparison

Group A was statistically more effective than group B in treating *Shankhanistoda* ($p<0.001$), *Bhrumadhya Evam Lalatatapanam* ($p<0.05$), *Shiroghurnanam* ($p<0.05$), lack of concentration ($p<0.001$), and disturbed sleep ($p<0.05$), *Shirostambha* ($p<0.05$), Vertigo ($p<0.05$) and severity of headache ($p=0.001$).

The difference in relief was statistically insignificant in *Ghatasambheda*, *Srotoniskasnavat Pida*, *Akshiniskasnavat Pida*, *Sandhimokshanavat Pida*, heaviness in head, *Sirajalasphurana*, *Hanugraha*, *Ghranasrava*, blurring of vision, Stiffness of neck, stiffness of shoulder and photophobia, phonophobia, memory loss, frequency and duration of headache ($p>0.05$).

On Hamilton rating scale, Group A was more statistically highly effective than group B in both parameters ($p<0.001$).

PROBABLE MODE OF ACTION

Pratimarsha nasya of anu taila

It is explained that *Nasa* being door way to *Shirah*, the drug administered through nostrils reaches *Sringataka*, a *Siramarma* by *Nasa Srota* and spreads in the *Murdha* (Brain), taking routes of *Netra* (eyes), *Shrotra* (ears), *Kantha* (throat) *Shiramukhas* (opening of the vessels) and scratches the morbid *Doshas* in supra clavicular region by expelling them from *Uttamanga*¹². It could be hypothesised that *Nasya* acts in both local as well as general levels, by the direct contact with nerve terminals or uptake of the drugs by the nasal mucosa. Due to *Sukshama* and *Vyavayi Guna* of *Anutaila*, it easily spreads through minute channels while *Laghu*, *Tikshna*, *Ruksha Guna* and *Ushnaveerya* remove the *Margavarana* and has *tridosahara* effect. *Madhurarasa*, *Sheeta virya*, *Snigdha guna* and *Tridosahara* properties will promote the nourishment of *Dhatu*s which ultimately increases the general and local immunity. By these properties of the *Anu Taila*, its *Nasya* removes the obstruction and alleviate *Vata Prakopa* and useful in *Vatika Shirahshoola*.

Shiro-abhyanga with sarshapa taila

Shiro-abhyanga is a subset of external *Snehana*. The drugs used in *Abhyanga* have the *Sneha* property. They act as their properties are opposite to the properties of *Vata*. Mustard oil also has healing properties for many diseases including headaches. Mustard oil is composed of stimulation, anti-fungus, anti-inflammation, anti-bacteria and good at stimulating blood circulation and comforting stiff muscles. It has been found to be powerful antibacterial agent¹³. Mustard oil also has great anti-inflammatory properties¹⁴ and its massage is useful in headache.¹⁵ Its anti-inflammatory properties are attributed to the presence of selenium, which reduces pain and swelling. The application of *Taila* on the scalp with finger

tips leads to increase the local blood circulation and promotes the absorption of the drug. The topically administered oil is absorbed into the body very easily. *Taila* alleviates *Vata*, at the same time doesn't aggravate *Kapha* as it has *Ushna*, *Tikshna* and *Snigdha Gunas*.

CONCLUSION

Anu taila is one of the best medicines described for *Nasyakarma* in various classics. *Brihat trayi* sites *Anutaila* in the context of *Nasya* many times. Mustard oil is popular oil in northern India as hair oil and massage. Thus, although therapies in both groups were effective and satisfactory, but *Pratimarsha Nasya* of *Anu Taila* provided better relief than *Shiro-Abhyanga* with *Sarshapa Taila* in symptoms of *Vaatik Shirahshoola* (Tension headache).

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