



## A CLINICAL STUDY TO EVALUATE EFFECT OF KSHEERBALA TAILA NASYA IN THE MANAGEMENT OF AVABAHUK w.s.r. FROZEN SHOULDER

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**ABSTRACT**

Avabahuk is the disease that usually affect Amsa sandhi (shoulder joint). Even though the term Avabahuk is not mentioned in the nanatmaj Vatavyadhi. Acharya Sushrut and others have considered Avabahuk as a Vatajvikar. Avabahuk is one such disease which hampers the day to day activity of an individual.. In Avabahuk, vitiated vata dosha localizes in amsa pradesh and does the sankoch of siras leading to the manifestation<sup>1</sup>. Sira sankoch and bahupraspanditharam can be correlated with painful stiffness and loss of motion of the shoulder. Hence it can be correlated with frozen shoulder as described in the modern system of medicine. Frozen shoulder is more common in diabetics.

The general line of treatment mentioned for vatavyadhi in ayurvedic classics include snehan (both internal and external), swedan, mrudusamshodhan, basti, shirobasti, Nasya . Acharya Charak further states that, depending on the location and dushya (tissue element vitiated by vata) each patient should be given specific therapies. Acharya Vagbhata has mentioned Nasya karma in the jatruurdhwavatikar.

Present study was conducted to assess the efficacy of Nasya with Ksheerbala taila in Avbahuka 15 patients of avabahuka were taken in an open label single group clinical study for nasya with ksheerbalataila. Results of this study showed that Nasya with Ksheerbala taila was effective in relieving the symptoms of Avabahuka and found statistically significant.

**KEYWORDS :** Avabahuk, Nasya ,Ksheerbalataila, jatruurdhwavatikar. Frozen shoulder

**INTRODUCTION:**

Vata is considered as chief factor for physiological maintenance of the body. The impairment of this factor leads to severe pathological conditions. Therefore vatajvyadhi is given the utmost importance than the vyadhis produced by other two doshas. If one sees the modern point of view under vatavyadhi, the disease involving neurological, musculoskeletal, psychosomatic and gastro-intestinal system can be considered. It proves the wide ranging involvement of vata in various systems of body.

The causes (hetu) of Avabahuk can be classified into two groups : (i) Bahyahetu :- causing injury to the vital parts of the body (marma) or the region surrounding the amsa sandhi, which is also known as bahyaabhigataj that manifests the vyadhi or disease first ; (ii) Abyantarhetu :- indulging in the etiological factors that aggravate vata leading to the vitiation of vata in that region and is also known as doshaprakopjanya (samsray), which in turn leads to karma hani of bahu.

By considering the above references, the following can be stated as the line of treatment of Avabahuk.

1. Nidanparivarjan
2. Abhyanga
3. Swedan
4. UttarbhaktikaSnehapan
5. Nasya karma
6. Shaman aushadhi

In Ayurveda, therapies like abhyanga, swedana, snehapana, nasya karma, basti karma, and shaman aushadhi are mentioned to combat the vatavyadhi.

Acharyas have mentioned about Nasya Karma, as the prime treatment modality in curing Jatruordhwagata Rogas<sup>2</sup>. As<sup>3</sup> "Nasahi Shirasodwaram, the systematic performance of Nasya Karma helps in relieving almost all diseases of the head and neck easily<sup>3</sup>. Ksheerbala taila which contains balamool, ksheer and tila taila as ingredients are having properties of vatahara and balya which can act as bruhmana over the sosh of amsa sandhi<sup>4</sup>. therefore this study is undertaken to evaluate whether Ksheerbala taila Nasya is effective in the Management of Avabahuka<sup>5</sup>.

**OBJECTIVE:**

To evaluate effect of Ksheerbalataila nasya in the management of Avabahuka .

**MATERIAL AND METHOD:** 15 Patients of either sex diagnosed with avabahuka from the OPD and IPD of D.Y Patil Ayurvedic hospital nerul ,navi Mumbai, were selected for the study. Out of the 19 patients 4 patients drop in the initial stage of study and 15 patients completed the course of treatment.

**DOSAGE & TIME-**

Nasya- with ksheerbala tail 8 drops In each nostril for 7 days . 2 sittings at 15 days interval.

**DIAGNOSTIC CRITERIA:**

The diagnosis of the disease is mainly based on the signs and symptoms mentioned in classics and modern text as follows:-

- Amsa sandhi shoola (pain in shoulder joint)
- Bahustambha (stiffness in Shoulder Joint)
- Bahupraspanditahara (loss of motion of the shoulder)

**INCLUSION CRITERIA:**

1. Patients presenting with pratyatmalakshana of Avabahuka.
2. Patients of Frozen shoulder with or without the history of Diabetes mellitus.<sup>6</sup>
3. Patients between the age group of 30-70 years were selected.
4. Patients irrespective of sex, occupation, religion, socio economic status were selected.
5. Patients fit for Nasyakarma .

**EXCLUSION CRITERIA:**

1. Patients below 30 years & above 70 years are excluded from the study.
2. Any other systemic disorder which interfere with the treatment.
3. Patients with shoulder ailments of varied pathology other than frozen shoulder
4. Pregnant and lactating mother.

**Procedure of Nasya Karma:**

Nasya Karma can be explained in the following three headings as reported in the classics.

**Poorva Karma :**

Patients were instructed not to suppress the natural urges and go through the normal routine. Before taking the Nasya Karma he should not have any food. Subsequently, the patient were taken to a comfortable room, which was without dust, extreme breeze or sunlight. Bahyasnehana in the form of mrudu Abhyanga is performed to the shiras first and then over the gala, kapola, lalata, and karma. After snehana, a mild swedana is performed to the part of the body above the shoulders. The eyes of the patient should be taken care of by closing them with a band of cloth.

**Pradhana Karma<sup>7</sup>**

Once the poorva karma is completed, the patients were made to lie down on the table in the supine position with legs slightly raised. Eyes should be covered with a cloth.. The head of the patient was then highly raised and Ksheerbala taila which was slightly warm with the help of hot water was poured in each nostril one after the other. The other nostril should be closed while administering the medicine in one nostril. The medicine should be slowly instilled in an uninterrupted

manner called 'Avicchinnadhara'. Patients were advised to inhale the medicine slowly and forcefully. Care should be taken not to shake the head during the procedure. *Tapasweda* can be repeated conveniently. After administration of the medicine, patients were strictly advised not to swallow the medicine, but to spit it out. The spitting can be done after the smell and taste of the medicine disappears from the throat. Next, the patients were allowed to relax in the same posture for 100 *matrakalas* (30 – 32 seconds), without going to sleep.

**Paschat Karma**

*Pradhana karma* is followed by *dhoomapana with haridra dhoom varti* and *kavala with sukhoshna jala* was given to patients. Patients were advised to follow certain rules and regimen. Patients must avoid exposure to dust, sun breeze, drinking excessive water, alcohol, *Sneha dravya*, bathing, excessive walking day sleep etc.

**Assesment Criteria**

The subjective and objective parameters are assessed by ascertaining the signs and symptoms before and after the treatment. The assessment is based on the effect of the therapy and will be given suitable scores by application of clinical tools, *Samyak Lakshanas of Nasya*, changes in signs and symptoms of *Avabahuka*. Subjective parameters like *Bahu Shoola*, *Bahu Stabdhatta* and objective parameters like range of motion (ROM) including Flexion, Internal Rotation, External Rotation & Extension were assessed by using Goniometer.

**Grades Of Assesment Parameters**

**Subjective parameters:**

**Observations Scale :**

Subjective parameter	Observation	Scale
1. Bahushoola (Pain)	No pain	00
	Mild pain, particularly on moving the shoulder but able to continue the routine work without difficulty	01
	Moderate pain, felt on movement and also at rest interfere routine work	02
	Severe pain, felt on movement and also at rest, unable to carry most of the routine work	03
Subjective parameter	Observation	Scale
2. Bahusthambha (stiffness)	No stiffness	00
	Mild stiffness, particularly during shoulder movement able to continue routine work with difficulty	01
	Moderate stiffness, unable to continue work with difficulty	02
	Severe stiffness, felt on movement and also at rest interfering routine work	03

**Objective parameters:**

1. Range of shoulder movements ( Goniometer examination)

	Normal Range of motion
Flexion	160°-180°
External rotation	upto 90°
Internal rotation	Upto 90°
Extension	Upto 60°

**STATISTICAL EVALUATION:** Statistical analysis was carried out using the graph pad In Stat software. Test was paired 't' test for quantitative data. Mean score BT, AT, SD, SE 't' was noted. After obtaining 't' value the corresponding 'P' value against significant particular degree of freedom was noted on Table of 't'. P value <0.05 was considered as statistically significant, P<0.01 very significant, P<0.001 and P<0.0001 was considered as highly significant.

**FOR OBJECTIVE PARAMETER PAIRED 't' TEST APPLIED FLEXION**

	MEAN	S.D,	S.E.	tVALUE	P VALUE	Significance
B.T.	144.00	11.832	3.055	10.473	<0.0001	Highly significant
A.T.	172.67	7.037	1.817			

**INTERNAL ROTATION**

	MEAN	S.D,	S.E.	t VALUE	P VALUE	Significance
B.T.	60.000	11.339	2.928	11.210	<0.0001	Highly significant
A.T.	88.667	3.519	0.908			

**EXTERNAL ROTATION**

	MEAN	S.D,	S.E.	t VALUE	P VALUE	Significance
B.T.	55.333	7.432	1.919	15.838	<0.0001	Highly significant
A.T.	88.000	4.140	1.069			

**EXTENSION**

	MEAN	S.D,	S.E.	t value	P VALUE	Significance
B.T.	28.000	8.619	2.225	12.616	<0.0001	Highly significant
A.T.	52.000	5.606	1.447			

For subjective parameter (qualitative data) Wilcoxon signed rank test was applied.

**Qualitative data**

**BAHUSHULA**

	MINI	MAX	MEDIAN	r	p-value
B.T.	2	3	3	0.3553	<0.0001
A.T.	0	2	1		

**BAHUSTHAMBHA**

	MINI	MAX	MEDIAN	r	p-value
B.T	2	3	2	0.4219	<0.0001
A.T	0	2	1		

**OBSERVATION AND RESULT:** Results were obtained within the group and the data observed in BT (On 1st Day), AT (On 28th Day) are compared by using Paired 't' test and the effect of treatment is analyzed in each objective parameters. Statistical analysis was done using the graph pad In Stat software. For subjective parameter (qualitative data) Wilcoxon signed rank test was applied.

**OBSERVATIONS:**

The observations made of the 15 patients with avabahuka were as follows: Maximum incidence found in the study between the age group 41-50 i.e. 53.33%, followed by 26.66% patients in the age group 51-60 years, 13.33% in the age group 31-40 years. Most of the patients were Female (66%), most of the patients were house wives (40%). Maximum no. of the patients were from the middle socioeconomic status group; 33% have diagnosed cases of NIDDM.

**Mode of action of Nasya**

Nasya is the gateway to shiras. Nasya karma is one of the procedure of panchakarma in which the drug is administered through the nasal route. This procedure not only alleviates the vitiated doshas, but also give benefit by complete eradication of the vitiated dosha and the disease. The drug administered will reach the shringataka marma and spread through the opening of the shiras of the eyes, ears, throat, and to the head. Acharya Charak has emphasized that the nasya drug after its absorption by the shringataka marma, acts on the diseases of Skaanda, Amsa and greeva and the doshas are expelled from the shira pradesha. The action of Nasya karma depends upon the dravya used in it. Based on this nasya is divided into shodhana, shaman and brumhana. Brimahana nasya provides nourishment to the shiroindriya and other organs and alleviates the vitiated vata. Hence it is useful in vatajanya ailments.

The nose is a highly vascular structure and its mucous membrane provides a good absorbing surface. Therefore siddha sneha dravya when administered spread along the nasal mucous membrane. An active principle along with sneha get absorbed inside the olfactory and respiratory mucosa and from there is carried out to different places. The lipid contents of ksheerbala tail may pass through blood brain barrier and can exert their action. Ksheerbala taila provides nourishment to the nervous system and helps in removing the irritation. On its nasal administration, it reaches different shirogat indriya and causes vatashamana and brumhana. Final conclusion from the above description that ksheerbala taila nasya helps in avabahuka by its vatashamana and brumhana karma.

**DISCUSSION:** Avabahuka is a disease characterised by morbid vatadosha localizing around the shoulder joint and thereby causing constriction of the siras at this site leads to loss of movements of the arm. Sthanika Abhyanga and sweda may enhance the drug absorption by increasing the blood circulation. As the efferent vasodilator nerves are spread to the superficial surface of the face, receive the stimulation by fomentation and it may increase the blood flow to the brain. Ksheerbalataila formulation contains drugs Bala (Sidacordifolia). It is generally considered as nervine stimulant. The term bala is applied because of its balya property of moola. In ksheerbalataila, this serves

the purpose of generating the sufficient energy to the muscle tissue and also by its effective supporting factors such as Madhura rasa and madhuravipaka as Vata hara<sup>8</sup>. Goksheer is Brumhaniya and Vat Pitta shamak<sup>9</sup>. **Tilataila**: It is the main base ingredient for the other drugs because it is yogavahi and carries all essential ingredients into the system by virtue of its sukshama and ashukariguna.<sup>10</sup> Formulation used for the study has Vatahara, kaphahara and brumhana properties. Bala is brumhana, which is essential upakarma in the treatment of Vata vyadhi. Other ingredients also have vatahara and kapha hara karma. So, may have action either on kaphavrutavata or vata directly in the samprapti of Avabahuka. Nasya is considered to be best therapy for Urdhwajatrugata and bahu shirshagatavata vikara. So, this taila used in the form of Nasya has given moderate improvement in the patients. Ksheerbala Taila having ingredients as Bala Moola, Ksheera and Tila Taila has the properties like Rasayana, Indriyaprasadana, Jeevana, Brumhana, Vata Shamana. Bala Moola (*Sida cordifolia*) is having the qualities like Guru, Snigdha, Pichchila and is Vata Shamaka. Tila Taila (*Sesamum indicum*) is considered best among the oils. It is having the qualities like Snigdha, Ushna. Taila has got both the action of Brumhana and Karshana. By these properties Taila will help in Brumhana in Vataja condition of Apabahuka, and also Karshana if it is Vata Kaphaja. Ksheerbala Taila acts as an anti-inflammatory and provides nourishment and there by helps for the recovery.

#### CONCLUSION:

Nasya karma is very easy and effective procedure which can be adopted in treatment of avabahuka. Ksheerbala taila nasya can be effectively and safely administered without any adverse effect. Ksheerabala taila having a Brimhana effect, when used, brought out a moderate significant result in Bahuprasandita hara and significant relief in Shula.

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