



AN OBSERVATIONAL CLINICAL STUDY TO EVALUATE THE EFFICACY OF PRASARINYADI KASHAYA WITH STHANIKA ABHYANGA AND NADI SWEDA IN APABAHUKA W.S.R. TO FROZEN SHOULDER

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ABSTRACT

Ayurveda has given due importance to *vata vyadhis* since the era of *vedas* and later on *samhita kala* the study of *vata vyadhis* have been done more elaborately. In the fast developing technological era, most of the diseases may not be life threatening but hamper day to day life and human productivity. *Apabahuka* is one of the *vata vyadhi* in which *prakupita vata dosha* entered in *bahupradesha* causes *sankocha* of *sira*, *snayu* and *kandara* leading to *lakshana* such as *bahupraspanditahara*. There are clinical conditions in contemporary science which can be compared to *Apabahuka*. Present study evolves the clinical condition, *Apabahuka* vis frozen shoulder. Symptoms often develop gradually over time, But they may start or get worse suddenly. The pain may be mild, or it can be deep and so severe that you are unable to move and do daily activity. The prevalence of frozen shoulder is 2 to 5% of general population. Frozen shoulder is defined as a condition of varying severity characterized by the gradual development of global limitation of active and passive shoulder motion where radiographic findings other than osteopenia are absent. It is often referred as Adhesive capsulitis. Different treatment modalities are available in today's scenario *shodhana* Bio purification & physiotherapy but still people are feeling not getting time for taking available treatments. So considering these points topic is selected to intervene the *Kashaya* and *shaman oushadhies* with *bahir parimarjana chikitsa* which is mentioned by *vataja upakramas* in *vata vyadhi*. In this study *Prasaranyadi Kashaya* is the *yoga* explained for the treatment of *Apabahuka* and *moorchita tila taila* as *snehana* is used in the form of *sthanika abhyanga* and *nadi sweda* with *ushna jala*.

KEYWORDS: *Apabahuka, shoola, vatavyadhi, abhyanga, nadisweda.*

INTRODUCTION

"If your lifestyle does not control your body, eventually your body will control your life style". Present era is an era of stress. Modern day life style and modern gadgets and competitions in all walks of life has made man's life more strenuous than before. It is also responsible for increase in the incidence of many diseases. Most of these diseases may not be life threatening but hamper day to day life and human productivity. "*Apabahuka*" is one among such diseases. This is agonizing and affects normal routine work of human being. Shoulder pain is the third most common cause of musculoskeletal disability after low back pain. The prevalence of Frozen shoulder in the general population is reported to be 2%, prevalence of 11% in unselected individuals with diabetes. For patients of type 1 diabetes, the risk of developing Frozen shoulder in their life time is approximately 40%. Frozen shoulder may affect both shoulders, either simultaneously or sequentially, The frequency of bilateral Frozen shoulder is higher in

subjects with diabetes than in those without diabetes. It occurs most frequently in 5th and 6th decades of life. *Apabahuka* stands one among the disorders, which affects the normal functioning of the upper limb, especially the movements around shoulder girdle.

Different treatment modalities are available in today's scenario *Shodhana*- Bio purification & physiotherapy but still people are feeling not getting time for taking available treatments. So considering these points topic is selected to intervene the *Kashaya* and *Shamana oushadhies* with *Bahir Parimarjana Chikitsa* which is mentioned by *Vataja Upakramas* in *Vatavyadhi*.

In this study *Prasaranyadi Kashaya* is the *Yoga* explained for the treatment of *Apabahuka* and *Moorchita Tila Taila* as *Snehana* is used in the form of *Sthanika Abhyanga* and *Nadi Sweda* with *Ushna Jala*.

Review of literature

1. *Lakshnas* of *Avabahuka* is mentioned in the *Sushruta Samhita*^[1] and *Astanga Hrudayam*^[2], *Madhava Nidana*^[3]
2. Frozen shoulder is explained in the Harrison's Principles of Internal Medicine.^[4], Davidson's principles and practice of medicine.^[5]
3. *Prasaranyadi kashaya* is mentioned in *sahasrayoga*^[6]
4. *Amruta bala ksheera kashaya* is mentioned in *Chikitsa Manjari*^[7]
5. *Moorchitha tila taila* explained in *Bhaishadnya Ratnavali*^[8]
6. *Swedana* is mentioned in *Charaka Samhita*^[9]

MATERIALS AND METHODS**a) Literary Source**

- The *Ayurvedic* classical and modern literatures and contemporary text books including the websites, journals about the disease and the drug will be reviewed and documented for the intended study

b) Sample source

- 20 patients with clinical features of *Apabahuka* (Frozen shoulder) coming under the inclusion criteria approaching the OPD and IPD of SKAMCH&RC, Bengaluru will be selected for the study.

c) Drug Source

- The identified raw drugs required for the study will be collected and will be authenticated by the Department of *Dravya Guna* in SKAMCH & RC.

Diagnostic Criteria

- Patients presenting with *lakshanas* of *Apabahuka*
- Patients with sign and symptom of Frozen shoulder

Inclusion Criteria

- Patients of either sex between the age group of 16 - 70 years.
- Patients presenting with *lakshanas* of *Apabahuka*.
- Patient presenting with symptoms of Frozen shoulder.

- Patients fit for *Sthanika Abhyanga* and *Nadi Sweda*

Exclusion Criteria

- Patients presenting with fracture and dislocation of shoulder joint.
- Any of the systemic disease conditions that may interfere the course of study.

INTERVENTION

A minimum of 20 patients of either sex diagnosed as *Apabahuka* will be selected. The study will be intervened for a duration of 30 days.

Administration of drug

Prasarnyadi Kashaya Will be administered internally in the dose of 48ml twice daily before food with *ushna jala anupana* along with *Stanika Abhyanga* with *moorchitha tila Taila* and *Nadi Swedana* for 7 days and *Kashaya* will be continued till 30th day.

Total duration of study -30 days

Pre test – Before treatment-1st day, After *Abhyana* and *nadi sweda* – 8th day, post treatment 30th day.

Assessment Criteria

Assessment was done based on grading of subjective and objective parameters as per case proforma before, during and after treatment.

Subjective criteria

- *Bahu praspandita hara due to shabdata*
- *Shoola*

Objective criteria

- Flexion
- Extension
- Adduction
- Abduction
- Internal rotation
- External rotation

GRADING OF SUBJECTIVE PARAMETERS

Pain	Description	Gradings(VAS)
None	No pain	0
Mild	Very light barely notice the pain	1
	Mild pain which is discomforting	2
	Noticeable pain, patient used to it	3
Moderate	Patient noticed the pain all the time and cannot completely adapt to work.	4
	Patient notice the pain all the time and which affects normal lifestyle	5
	Very strong piercing pain partially dominating the senses and causing trouble holding a job	6
Severe	Very strong, deep pain completely dominating the senses. Patient effectively disabled	7
	Very strong, deep piercing pain with severe personality changes if the pain is present for long time	8
	Patient can't tolerate it and demand pain killers or surgery	9
	Unimaginable, unbearable, unspeakable	10

Sthabdada/stiffness (bahu) Duration	GRADING
No Stiffness	0
Stiffness for few minutes but relieved by mild movements	1
Stiffness >1 hour in a day but routine works not disturbed	2
Stiffness lasting for > a day daily routines are hampered.	3

GRADIG OF OBJECTIVE PARAMETER

Painful/restricted upper limb movements using Goniometer	Observation in Degrees	Grading
Shoulder		
Flexion	161-180	0
	141-160	1
	121-140	2
	<120	3
Extension	51-60	0
	41-50	1
	31-40	2
	<30	3
Abduction	161-180	0
	141-160	1
	121-140	2
	<120	3
Adduction	40-50	0
	30-40	1
	20-30	2
	10-20	3
Internal rotation	0-10	4
	71-90	0
	51-70	1
	31-50	2
External rotation	<30	3
	71-90	0
	51-70	1
	31-50	2
	<30	3

OBSERVATION

In 20 patients selected for the study, 20(100%) were suffering from *Bahupraspanditahara* due to *Shoola* and *Bahupraspanditahara* due to *Sthabdhata*. 5(25%) patients were having chronicity less than 1 year, 13(65%) patients were having chronicity between $\geq 1 \leq 4$ years, 1 (5%) patient was having chronicity between $\geq 5 \leq 8$ years and 1(5%) patient was having chronicity more than 9 years. 9 (45%) patients were males and 11(55%) patients were females. 2(10%) patients were Illiterate, 10 (50%) patients had studied up to higher secondary, 2(10%) patient were undergraduates and 6 (30%) patient were post graduates. 8(40%) patients were housewives, 2(10%) patients were doing desk work, 1 (5%) patients was teacher, 5(25%) patients were Daily wage workers, 2(10%) patient was Entrepreneur, 2(10%) patient was Rtd employee. 5(25%) patients were vegetarian, 15(75%) patients were mixed diet. 14(70%) patients were having *Vishamashana*, 6(30%) were having *Alpashana*.

20(100%) patients were doing *Dukhashayya*, *Dukhasana*, 19(95%) patients were having *Laghuanna*, 11(55%) patients were having habit of consuming *Sheetanna*, 9(45%) patients were having *Rukshanna*, 16(80%) patients were doing *Athiasana* and *Chinta*, 6(30%) patients were doing *Ratrijagarana*, 7(35%) patients were doing *Rathakshobha* and *Atichankramana*, 8(40%) patients were doing *Ativyayama*, 12(60%) were doing *Bharodwahana*, and were having *Shoka*, 14(70%) patients were doing *Vishamashana* and 6(30%) patients were having *Alpashana*. 9(45%) patients were having Diabetic mellitus and 11(55%) patients were not Diabetic. 14(70%) patients were getting increased pain while sitting prolonged time without support, 3(15%) patients were having increased pain after doing excess work and 3(15%) patients were having increased pain after head bath.

RESULTS

The result in the group in relation to subjective and objective parameters of the assessment criteria pertaining

to *Apabahuka* w.s.r. to Frozen shoulder was subjected to statistical analysis by adopting the - paired 't' test for assessment.

Bahupraspanditahara due to shoola

	Mean		Paired t-test					
	Before	After	Mean Diff	SD	SE	t-value	p value	Re
BT-AT	4.15	3.2	0.95	0.604	0.135	7.024	< 0.001	HS
BT-AT1	4.15	2.05	2.1	0.911	0.203	10.298	< 0.001	HS

Bahupraspanditahara due to sthabdata

	Mean		Paired t-test					
	Before	After	Mean Diff	SD	SE	t-value	p value	Re
BT-AT	2.588	2	0.588	0.618	0.149	3.922	< 0.001	HS
BT-AT1	2.588	1.411	1.176	0.392	0.095	12.344	< 0.001	HS

Flexion

	Mean		Paired t-test					
	Before	After	Mean Diff	SD	SE	t-value	p value	Re
BT-AT	1.641	1.205	0.439	0.598	0.094	4.61	< 0.001	HS
BT-AT1	1.641	0.512	1.128	0.469	0.074	15.213	< 0.001	HS

Extension

	Mean		Paired t-test					
	Before	After	Mean Diff	SD	SE	t-value	p value	Re
BT-AT	2.32	0.84	1.6	0.957	0.180	8.842	< 0.001	HS
BT-AT1	2.32	0.8	1.52	0.822	0.155	9.777	< 0.001	HS

Abduction

	Mean		Paired t-test					
	Before	After	Mean Diff	SD	SE	t-value	p value	Re
BT-AT	1.222	1	0.222	0.427	0.095	2.323	< 0.001	HS
BT-AT1	1.222	0.388	0.833	0.514	0.115	7.243	< 0.001	HS

Internal rotation

	Mean		Paired t-test					
	Before	After	Mean Diff	SD	SE	t-value	p value	Re
BT-AT	1.9	1.4	0.5	0.506	0.080	6.244	< 0.001	HS
BT-AT1	1.9	0.85	1.05	0.749	0.118	8.861	< 0.001	HS

External rotation

	Mean		Paired t-test					
	Before	After	Mean Diff	SD	SE	t-value	p value	Re
BT-AT	1.25	0.687	0.562	0.504	0.089	6.313	< 0.001	HS
BT-AT1	1.25	0.375	0.875	0.491	0.086	10.063	< 0.001	HS

Circumduction

	Mean		Paired t-test					
	Before	After	Mean Diff	SD	SE	t-value	p value	Re
BT-AT	1.166	0.583	0.583	0.503	0.089	6.552	< 0.001	HS
BT-AT1	1.166	0.25	0.916	0.503	0.089	10.296	< 0.001	HS

DISCUSSION

Movement is sign of life which demarcates living beings from nonliving things, life without movement for any living being is said to be the worst tragedy, it has been estimated by research group that the hand performs approximately thousand different functions in an ordinary day to day activity. *Apabahuka* is one among those *Vata Vikaras* resulting in *shosha* of *Bahu* and which hampers most of the foresaid functions of the hand. And probably this may be one of the reasons for considering *Vata Vyadhi* among *Asta Mahagadhas* in *Ayurvedic Literature*.

Ample of references about *Vata* are available in *vedic* period, but citations regarding *Apabahuka* is not present, Detailed description from *Nidana* to *Chikitsa* can be found in the literatures of *Samhita kala* onwards. But *Acharya Charaka* has not used the term *Apabahuka* instead while narrating *Gata vata* he has explained about *Bahusheersheersagata Vata*, which resembles the features as well as the treatment of *Apabahuka*. *Bahusheersheersagata Vata* is dealt under the heading of *Gata Vata* so this might be the reason for not using separate word *Apabahuka*.

Sandhi shoola in *Apabahuka* is caused due to *vata prakopa*. This *prakupita vata* will moves out from its *ashaya* to circulate in entire body. During circulation, it gets localized in *sthana* of *asthi*, *majjavaha srotas*, i.e., *kaksha sandhi* where *khavaigunya* has occurred because *vata* and *asthi* have *ashraya ashrayi sambandha*. There by in *Apabahuka*, *shoola* will be seen in *kaksha sandhi*. Where *vata* get obstructed by *kapha*. Though *Apabahuka* is a *shosha pradhana vyadhi*, in the initial stage *shoola* and *sthambha* will be present due to *avarana*.

Hence in this study *Prasaranyadi Kashaya* along with *Sthanika Abhyanga* and *Nadisweda* has taken. *Kashaya* which is having *shoola* and *vatahara dravyas*, and there will be added effects of relieving *shoola* by *sthanika abhyanga* and *nadi sweda*. *Prasaranyadi Kashaya* by virtue of its *Ushna*, *Tikshna*, *Guru gunas* and *Tikta rasa*, *madhura vipaka* properties reduces the symptoms of *prakupita vata*. There by reduces *shoola*.

Bahupraspandita hara due to *Sthabdata* in *Apabahuka* is due to the *prakupita vata* gets localized in *kaksha sandhi* where *khavaigunya* occurs due to *ashraya ashrayee sambandha* of *asti* and *vata*, in turn does *shoshana* of *kapha* (*shleshaka*), there by the *sandhi snigdghata* reduces and the *karmahani* or *sthabdata* will happen over *bahu pradesha*. As *Apabahuka* is a *shosha pradhana vata vyadhi* in order to counter act to this in the present study *Prasaranyadi kashaya* was given along with *Sthanika abhyanga* and *Nadi sweda*. *Abhyanga* acts on muscles and make them strong. The root of *mamsa vaha srotas* is *snayu*, *twak*, and *raktavahini*. It may thus nourishes the superficial and deep muscles and make the muscles strong and joint stable. *Nadi sweda* by it *sthabdahara*, *gouravahara* and as it is *swedakaraka* reduces the

sheetha guna of *vata*. *Swedana* is *srotoshudhikara*, *kaphavata nirodhana*. Thus by action the *sroto sanga vighatana* may take place and stiffness of joint reduces.

The movement is one among the criteria to assess the *Bala* of the structures involved in the disease through the *Ayaamashakti*. The *prasarana*, *akunchana*, *utkshepana*, *apakshepana* are the movements of shoulder joint and it is affected in *Apabahuka*. And these are the activities that attributed to *vyana vata* and the supportive structures for performing *Ayaama* such as *Mamsa dhatu*, *Meda dhatu*, *Snayu*, *Mamsapeshi*, *Sira* is weakened lead to *Bahupraspanditahara* due to *shoola* and *sthabdata*. *Abhyanga* as a procedure with *Moorchita tila taila*, it is stated that there is no drug which excels *Tila Taila* in treating the *Vata rogas* by virtue of its *Ushna*, *Tikshna*, *Vyavayi*, *Sukshma*, *Guru* and *Sneha* properties. By giving *Kashaya* along with *Abhyanga* and *Nadi sweda* restores the *Bala* over *Amsa*, *Bahu pradesha* showed better improvement in different range of movements.

CONCLUSION

Based on the conceptual analysis and observations made in the clinical study, the following conclusions can be drawn. Present study revealed that the *bharavahana*, *ati yaana*, *rooksha*, *alpa ahara* and *vegadharana*, *ativyayama* are the most incident causes for the manifestation of disease *Apabahuka*. *Vyana vata prakopa* is the prime pathology of *Apabahuka*. This can happen either due to *dhatuksaya* or *kapha avarana* (*vata dosha* encircled with *kapha*). The present study was conducted on *Apabahuka* w.s.r. to *Frozen shoulder* to evaluate the efficacy of *Prasaranyadi Kashaya* along with *Sthanika Abhyanga* with *Moorchita tila taila* followed by *Nadi sweda*. *Prasaranyadi Kashaya* has shown significant result in treating *Apabahuka* by its ingredients *Rasona*, *Bala*, *Rasna*, *Masha*, and *Shunti* reduces the *Prakupita Vata*. *Sthanika Abhyanga* and *Nadi sweda* is easy to constitute, and gives least discomfort to patient and getting good relief by *Sthabda* and *Shoola Nigrahana* properties.

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