

A CLINICAL STUDY ON THE ROLE OF NASYA KARMA IN THE MANAGEMENT OF AVABAHUKA (FROZEN SHOULDER) WITH VATADA TAILA

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ABSTRACT

Avabahuka was first introduced by *Susruta* (500 B.C) where pain and stiffness of shoulder joint leads to severely restricted movement of hand. It is correlated with frozen shoulder in modern also known as adhesive capsulitis which carries the similar complains of *avabahuka*. It is the 3rd most common cause of musculoskeletal consultation in primary care. *Ayurveda* has explicitly mentioned that *avabahuka* is caused by *vata dosa* and *sosana* of *slesamaka kapha*, so *vatanasana* and *slesamaka kapha posana* should be the aim of *samprapti vighatana* towards the cure of the disease. As the disease is purely caused by affliction of *vayu* and the symptoms come due to the aggravation of *vayu* so *vatanasaka* therapy may be advocated as remedy of the same. There are several *vata nasaka* drug and *vata nasaka* therapies but in present study *vatada taila* (almond oil) has been taken as a trial drug in the form of *nasya (pratimarsha)*. The present study is an effort towards elimination of the disease *avabahuka* (frozen shoulder) with safe and effective measure.

Keywords: *avabahuka*, frozen shoulder, *vatada* oil, etc.

INTRODUCTION

There is a proverb in Hindi “*Apna Hath Jagannath*” means all the works or creations mainly dependent over the Hands. *Susruta* also mentioned that *Hasta* is *Pradhan Yantra*. Hand should be powerful, strengthful and free. But in some diseases movement of this hand become restricted, painful which causes obstruction towards creation. Among all the joints of the human body the shoulder has the greatest range of motion. This allows complex movements and

functions to be carried out, and is of vital importance to the activity of daily living and work.

Avabahuka an ailment first introduced by *Susruta* (500 B.C.) where pain and stiffness of shoulder joint leads to severely restricted movement of the hand. Frozen shoulder, a term coined by Codeman in 1934, which is also called as adhesive capsulitis which carries the similar complains of *avabahuka*. This problem puts a huge amount of strength on patients interfering productivity of the life.¹

Avabahuka is a condition caused by vitiated *vata dosa*, localizes in *amsapradesha* (shoulder region) and does the *samkoca* of *siras* leading to the manifestation of *sirasamkocha* and *bahu praspandana haratvam* which is intimately same to the features of frozen shoulder.²

Frozen shoulder affects patient aged 35 years to 70 years and it is estimated that 3% of people develop the disease over their lifetime. Self reported prevalence of shoulder pain is estimated to be between 16% and 26%. It is the third most common cause of musculoskeletal consultation in primary care. Males tend to be affected less frequently than female and there is predilection for race.³ In modern medicine several anti inflammatory analgesics are being used. Some major exercises advised and some local application of analgesic ointments is used. But no such effective results found.

As *Ayurveda* has clearly mentioned that the disease is caused by purely *Vata dosa* and *sosana* of *Slesmaka kapha* so *vatanasana* and *slesmaka kapha posana* should be the aim of the *samprapti vighatana* towards the cure of the disease. *Taila* is the best *vatanasaka dravya* (pacifies *vata*) and it is *snehadravya*, so it is *kaphaposaka* (nourishes *kapha*). *Nasya karma* is one of the important procedures of classical *panchakarma*, particularly to the diseases of *urdhajatru*. And this *karma* or therapy is employed to the diseases of *Sira*, *Skandha* and *Baksha*. So considering *Guna karma visesa*, *nasya karma* has been taken as a therapy in present study. As *Vatadaa taila* is a nutritious agent contains the properties of *sneha* like *Guru*, *sara*, *snigdha*, *drava*, *mridu* etc. so it has been taken as an weapon to cure *Avabahuka* (frozen shoulder) through the nasal route application in an ethical manner (*nasya karma*). The therapies which are easily available, easily applicable, painless, cost effective as well as safe called the unique one. Considering all these factors like genesis of the disease *samprapti bighatana* (breaking of the pathogenesis), ethical support in selection of the drug and therapy *vatadaa taila nasya* has been se-

lected as a remedy towards cure of the ailment *avabahuka*.

The present study is an effort towards elimination of the disease *Avabahuka* (frozen shoulder) with safe and effective measure.

NIRUKTI (DERIVATIVE SIGNIFICANCE) OF AVABAHUKA / APABAHUKA

Apabahuka is composed of two words “*Apa*” and “*Vahuka*”⁴. The very word *Apa* means ‘*Viyoga*’ ‘*Vikrutau*’ which means dysfunction or separation. And the very word ‘*Vahuka*’ portrays the following meaning:

‘*Vahu*’ meaning the upper limb which is one among the *sadargas*. According to Sanskrit literature the word *Apabahuka* means as bad stiffness and muscle spasm in the arm⁵. The prefix ‘*Aba*’ is used instead of ‘*Apa*’ of the words *Apabahuka*. *Apabahuka* and *Ababahuka* literally bear the same meaning.

PARIBHASA OF APABAHUKA (DEFINITION)⁶

Apabahuka is a disease caused by *kupita vata dosa* localizing around the *amsa pradesa* causing the *shosana* of *amsa sandhis*, thereby leading to *akunchana* of *sira* at that site and giving rise to *bahupraspan-dana haratvam*.

AIM & OBJECTIVES:

- To assess the role of *snehana nasya/ vatadaa taila* on *Avabahuka*.
- To prove its treatment safe, effective and unique.

MATERIALS AND METHODS:

A single group study over samples with drug.

SELECTION OF THE SAMPLES:

Initially fifty six patients have been selected in outpatient department (OPD) of IPGAE & R at SVSP Hospital, APC road, kol -09 for the clinical study of this research program. The following subjective criteria and exclusion criteria have been followed during selection of the patients

in this trial. Finally thirty (30) patients included in trial programme and they all continued the scheduled trial therapy for consecutive fifteen (15) days.

INCLUSION CRITERIA

The patients taken in this trial were according to the following inclusion criteria-

A randomized clinical study

- Patients were randomly selected irrespective of sex, occupation, caste etc.
- The patients between ages of 30 to 70 years
- Patients fit for *nasya karma*
- The clinically diagnosed patients of frozen shoulder with confirmatory tests for shoulder joint (pain, stiffness, restriction of movement) were included in this study.

EXCLUSUION CRITERIA

- Prolonged shoulder immobility –

1. Trauma

2. Overuse injury

3. Surgery

- Systemic diseases as

(a) Hyperthyroid

(b) Hypothyroid

(c) Cardiovascular diseases

(d) Parkinson's disease or MND etc

Discontinuation Criteria -

1. Any adverse effect of the therapy if seen.

2. Any acute or severe illness.

3. Patient not willing to continue the treatment.

ASSESSMENT CRITERIA:

Assessment on the basis of subjective and objective parameters –

(A) Subjective parameters

- Pain in the shoulder joint
- Stiffness of the shoulder joint

(B) Objective parameters

- Range of shoulder movements (Goniometer examination)
- Along with some Laboratory investigations also performed for diagnosis and differential diagnosis
- Blood – Hb%, TC, DC, ESR, FBS, Lipid profile (If possible)
- Radiological – X – ray shoulder joint AP and Lat view

DESIGN

In this present study only one group that is trial group is taken, no division or category maintained.

RECIPES

Vatadaa taila has been taken as the trial drug introduced through the nostril ethically which is designated as '*Nasyakarma*' (*Pratimarsa nasya* or *snehana nasya*). The *vatadaa taila* (Almond oil) procured from the bazaar after certification of specialist *ayurvedic* personnels and keeping view on the R & D clearance of the company made oil.

ASSESSMENT OF RESULTS:

Assessment of results has been done after the course of therapy. It is mentioned earlier that the improvement in clinical sign and symptoms have been taken into considerations as the parameter of the assessment of results. Besides these parameters certain laboratory investigations have been performed before treatment and after treatment.

THE SUBJECTIVE PARAMETER:

Clinical improvement or relief of signs and symptoms has been taken into consideration. Scoring system as per opinion of **Carolyn M Hicks 1999** have been followed in this study to evaluate the effectiveness of the therapy in comparison to before and after treatment.

Table 1: Scoring system followed the two major symptoms pain and stiffness.

Parameter	Finding	Point
Pain	No pain	0
	Mild pain – particularly on moving the shoulder, able to continue routine work with difficulty.	1
	Moderate Pain – pain felt on movement, at rest, interfering with routine work.	2
	Severe Pain – felt on movement and also at rest, disturbing sleep unable to carry out most of the routine work.	3
Stiffness	No stiffness	0
	Mild stiffness – particularly on moving the shoulder, able to continue routine work with difficulty	1
	Moderate stiffness – pain felt on movement, at rest, interfering with routine work	2
	Severe stiffness – felt on movement and also at rest, disturbing sleep unable to carry out most of the routine work	3

The range of movement of arm also been estimated before treatment and after treatment as follows:

OBJECTIVE PARAMETERS:

X-ray shoulder joint, blood for complete blood count, sugar estimation was done. But these parameters have been estimated neither statistically nor mathematically because of their less importance in connection with frozen shoulder.

GROSS EFFECT OF THERAPY

Gross effect of therapy has been assessed in terms of complete remission, marked improvement, moderate improvement and mild improvement which are as follows –

- Mild improvement: below 25% in relief of pain and stiffness, simultaneously improvement of range of motion below 25%.
- Good improvement: 25% - 50% improvement in symptoms like pain and stiffness as well as range of motion.
- Very good: 51% to 75% remission as well as improvement in range of motion.
- Excellent: 76% to 100% relief of symptoms have been taken into consideration as excellent.

FOLLOW UP

All the patients were followed and the observations of subjective and objective parameters were recorded after 15 days of the study.

CLINICAL STUDY

As the *Avabahuka* of *ayurvedic* medicine is close similar to the disease ‘frozen shoulder’ of modern medicine also a lifestyle disorder mainly caused by ‘*Ajatha Balamarambha*’ (work beyond capability) like heavy weight lifting, excessive pulling, pushing etc. Therefore in present project work an effort has been taken through clinical study to assess the role of *snehana nasya* or *pratimarsa nasya* with *Vatadaa/Vatada taila* in the case of *avabahuka*. So, present clinical study may be called as a hope towards the suffering humanity of this very ailment.

ANALYSIS OF DATA:

The data achieved before and after treatment from the scoring system of pain and stiffness and from the range of motion assessment have been calculated statistically in students ‘t’ test method to establish the result whether significant or not.

OBSERVATION AND RESULT:

Table 2: Showing effect of therapy on major sign and symptoms (N=30)

S.no.	Major Complaints/ Sign and Symptoms	Means Scoring		% of Relief	SD±	SE±	t	p
		B.T	A.T					
1	Pain	1.70	0.70	58.82	1.26	0.231	4.329	p<0.001
2	Stiffness	1.73	0.63	63.58	1.27	0.230	4.780	p<0.001
3	Flexion	162.33	166.33	2.46	6.830	1.247	3.200	p<0.01
4	Extension	43.33	48.00	10.785	7.071	1.290	3.620	p<0.01
5	Internal rotation	43.16	47.33	9.66	5.08	0.92	4.53	p<0.001
6	External rotation	68.00	73.83	8.57	7.245	1.324	4.41	p<0.001
7	Abduction	152.83	156.66	2.50	5.24	0.96	3.98	p<0.001

Table 3: Showing on over all response of therapy (N=30)

S.no	On Over All Response	No. of Patients	%
1	Excellent	4	13.30
2	Very Good	5	16.70
3	Good	8	26.70
4	Poor	13	43.30

DISCUSSION AND SUMMARY

Decay, Degeneration and Death are inevitable. Birth, gradual grown up, later death are the usual phenomenon of the life cycle. Several health hazards must have to be faced all over the life. It is a great truth of the living being. In *ayurveda vatavyadhi* are maximum in number among *nanatmaja vyadhi*, so *Vayu* may be called as the pivot of the cycle which carrying the life towards the extreme. *Avabahuka* is such a disease mentioned in *Ayurveda* not vividly or descriptively, but it is a great health hazards to the human being. The disease frozen shoulder/Adhesive capsulitis of western medicine is carrying the similar features of *Avabahuka* of *Ayurvedic* medicine. So in present study frozen shoulder has been taken as a modern correlation of *avabahuka*. The present research work dealt with this problem and its remedies. The term first found in *Susruta Samhita* (500 BC), later other classics like *Bagbhatta*, *Madhavakar*, *Sarangadhara* and *Bhavmisra* have mentioned the term *avabahuka* in their respective texts. During review of the literatures and going through the derivation it might be defined as a disease caused by *kupita vata dosa*. *Avabahuka* is a disease caused

by *kupita vata dosa* localizing around the *amsa pradesa* causing the *soshana* of *amsasandhis*, thereby leading to *akunchana* of *sira* at that site and giving rise to *bahupraspandana haratwam*. In consideration to the *ayurvedic* etiopathogenesis of the disease it reveals that the *vata prakopaka* etiology in general is mainly responsible for the genesis of the disease.

The specific etiology like weight lifting, excessive movements of the hands,

Dukkhasajjya (mal sleeping posture) particularly hand under the head during sleeping are the main causative factors. Aggravate *vata* spreads all over the body(*prasara*) but it takes place specially at the area of *amsasandhi (sthanasamsraya)* due to the prior '*khabaigunya*' and leads to *dosa dusya sam-murchana* at the said place caused by *abhighata* or other etiologies mentioned earlier.

In modern literature review the etiology of frozen shoulder are more or less same to the view of *ayurveda* but conceptually immune complexes have been also taken as an etiology in modern medicine. Some diseases like pneumonia, diabetes come in association with this ailment. The symptomatology

in ayurvedic medicine is *soshana*, *samkochana* and *ruja* which are also similar to the symptomatology like pain, stiffness around the shoulder, mentioned in western medicine.

The line of management of modern medicine is not so satisfactory. Some exercises and analgesics are advised and is said to be self limiting one. In *ayurveda* there are several medications as well as purificatory therapy (*shodhana*) and *rasayana* therapy (*posana/brumhana*) are indicated in *vata* predominant diseases in general. As the disease is purely caused by affliction of *vayu* and the symptoms come due to the aggravation of *vayu* so *vatanasak* therapy may be advocated as a remedy of the same. The reduction of flexion, extension, internal rotation, external rotation and abduction, these are the usual findings and as pain and stiffness are the intensive features, so aims and object of the treatment is to provide relief to the patient by reducing the complaints. The line of management in the *ayurvedic* therapy is *Brumhana nasya*, *paschadbhakta ghru-tapana*, *swedana*, *abhyanga* etc.

The second part of this work is an important part that is the selection of drug. There are several *vata nasak* drug and *vata nasak* therapies but in present study *vatada taila* (almond oil) has been taken as a trial drug in the form of *nasya (pratimarsha)*. It is known that *taila* is the best remedy for the *vata* afflicted diseases⁷.

[Why this oil (VATADA TAILA) selected:

According to Acharya Bagbhatta, *vrumhaniya nasya* is indicated in *apavahuka*. *Vruhatrayis* and *Nighantus* advocated that *Vadama / Vatada* is a *vrumhaniya dravya*.

According to Bhavamisra/ Bagbhatta the *Guna* of the oil and the *Guna* of the original *dravya (swayoni)* are same. (*Bhavaprakash, tailavarga*). So it can easily be inferred that the *Vatada taila* is also *vrumhaniya*. That is why this *Vadama* oil is chosen for the present study.]

Vatada is a *sneha dravya* and *vrumhaniya dravya* having *guru, snigdha, sara, manda, drava* properties which are called as *posakaguna*, so *vatadaa taila*

may pacify *vata* by its *posaka* and *snehana guna*. As *Avabahuka* takes place in shoulder region (*amsasandhi*) so *vyana vayu* is mainly responsible for the genesis of the disease. So *nasyakarma* has been taken into consideration. Aggravated *vayu* dried up the *slesmak kapha* of *amsandhi* and leads to *avabahuka*. In consideration *gunakarmayog snehanaguna* and *nasyakarma* could pacify *vata* by reducing *rukshaguna*.

The ethical division procedures doses, indication, contraindication and the utility have been tried to furnish in a methodical manner. The clinical trial where fifty five patients irrespective of sex, religion, occupation, educational status have been chosen to undergo the clinical trial. The trial conducted at IP-GAE&R at SVSP hospital 294/3/1, Acharya Prafulla Chandra Road, Kolkata 700 009, West Bengal and selection of patients done after following the certain selection criteria as well as exclusion criteria.

Almond oil of good quality procured from the bazaar by the certification of expert *ayurvedic* personnel all the patients taken their therapy by instilling three drops of *vatada* oil into each nostril daily as per ethical manner following local *snehana* and *mridu sweden* for consecutive fifteen days.

The data and records before treatment as well as after treatment have been kept and follow up have been met every week.

Assessment of results done purely on the basis of remission of features like pain, stiffness, flexion, extension, external rotation, internal rotation, abduction.

On the basis of percentage of relief as well as statistical analysis, results have been assessed. It have been revealed that the features like pain and stiffness have reduced markedly that is about 58.82% and 68.58% respectively having p value less than 0.001 that is highly significant. On the other hand the objective parameters like flexion, extension, external rotation, internal rotation, abduction showed improvement with enhancement of their respective angles with percentage of relief by 2.46%, 10.78%, 9.66%, 8.57%, 2.50% where p values found <

0.01, <0.001, <0.001, <0.001, <0.001 respectively and the average response of therapy found excellent 13.3% ,very good 16.7%, good 26.7%, poor 43.3%. In above findings it is clear that the curative value of trial therapy and the drug i.e. *nasya* with *vatada taila* is highly significant. No such adverse effect has been observed during the therapy even in routine examination of blood, LFT, urea and creatinine. So the therapy may be declared as safe and effective one. Though the mode of action of the drug and therapy already been discussed earlier yet at last it could be stated that *vatada taila* (almond oil) is a good *vrumhaniya vatanasak dravya* can cure the disease *avavahuka* in its application through nasal route.

CONCLUSION

- *Avabahuka* of *ayurvedic* medicine may be correlated with the frozen shoulder/adhesive capsulitis of modern medicine
- Aggravated *vata* spreads all over the body (*prasara*), but it takes place especially at the area of *Amsasandhi (sthanasamsraya)* due to the prior “*khabaigunya*” and leads to the *dosa dusya sammurchana* at the staid place caused by *abhighata* or other etiologies.
- *Vatadaa taila* is a potent *vatanasak* and *rasayana dravya* that have the property of pacifying *vatika* disorders.
- *Nasya karma* specially *pratimarsa nasya* with *vatada taila* could cure *avabahuka* in a dose of 3 drops twice into each nostril, and might be effective to the other *urdhajatrugata vatika vikara*.
- *Vatadaa taila* reduces pain and stiffness significantly. The pain and stiffness may be reduced up to about 59% and 69% respectively. Statistically these could show highly significant with $p < 0.001$.
- It may enhance range of motion like flexion, extension, external rotation, internal rotation, abduction and significant with $p < 0.01$, <0.001, <0.001, <0.001, <0.001 respectively.
- Average curative effect of *vatada taila* as *nasya* in a dose of 3 drops twice daily in both nostril

for fifteen consecutive days are excellent 13.3% ,very good 16.7%, good 26,7% and poor 43.3%. And the therapy may be declared as safe and effective.

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