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A SINGLE ARM CLINICAL TRIAL TO STUDY THE EFFECT OF KSHEER BALA AVARTANA TAIL ANSABASTI IN AVABAHUKA WITH SPECIAL REFERENCE TO FROZEN SHOULDER

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ABSTRACT

Avabahuka, affecting the *Ansamoola* (shoulder joint) exhibits symptoms in the *Bahu*. The vitiated *Vata Dosha* localizes in the *Ansa Pradesh* and causes *Sankocha* of the *Siras*, leading to *Sirasankocha* and *Bahupraspandithara.* These can be correlated with painful stiffness and loss of motion of the shoulder joint.[1] It is considered a *Vatavyadhi* of the *Ansa Sandhi* and can be effectively paralleled with the modern condition known as frozen shoulder. Generally, patients rely on analgesics, corticosteroids, and anti-inflammatory drugs, which provide temporary relief but do not cure the disease. Therefore, it is necessary to find an effective treatment through a modified form of *Swedan Karma*. In the present study, *Ksheerbala Avartana Taila Ansabasti* was administered to 24 patients for seven days. The following results were obtained: 53.73% relief in *Shoola* (pain), 73.44% in *Stambha* (stiffness), 65.79% in flexion of the shoulder joint, 62.50% in extension, 58.33% in internal rotation, 75% in external rotation, and 53.19% in abduction.Overall, based on the effect of therapy alone, 3 patients (13%) experienced mild improvement, 19 patients (79%) had moderate improvement, and 2 patients (8%) showed marked improvement.

KEYWORDS: *Ansabasti, Avabahuka, Kheerbala Avartana Taila, Vata vyadhi, Amsa shosha, Swedan.*

INTRODUCTION

Acharya Charaka explains 80 different types of *Vataja Nanatmaja Vyadhi*, and *Avabahuka* is one of them. It is also described by *Acharya Sushruta* in *Sushrut Samhita, Vatavyadhi Adhyaya*.[2] Although *Avabahuka* may not be life-threatening, it hampers daily activities and productivity. It is painful and affects the normal functioning of the upper limb. *Avabahuka* is a common condition that severely interferes with routine domestic tasks such as combing hair, bathing, and sleeping, causing disturbances in daily life.

When *Avabahuka* affects the *Ansamoola*, it produces symptoms in the *Bahu.* The vitiated *Vata Dosha* localizes in the *Ansa* Pradesh and causes *Sankocha* of the *Siras*, leading to *Sirasankocha* and *Bahupraspandithara*. These can be correlated with painful stiffness and loss of motion in the shoulder joint. In *Ayurveda*, it is considered a *Vatavyadhi* of the *Ansa Sandhi* and can be effectively compared to frozen shoulder in modern medicine.

This condition is common, and pathologically, the two layers of the synovial membrane become adherent to each other. Clinically, patients—usually between 30 and 60 years of age—present with progressive shoulder pain, stiffness, and restriction of all movements, particularly external rotation, abduction, and medial rotation. As the contribution of the glenohumeral joint decreases, patients develop altered scapulohumeral rhythm due to excessive use of scapular motion when performing overhead flexion and abduction.[3] Treatment of Vatavyadhi as per Ayurvedic literature[4] includes the sequential administration of Sneha, Swedana, and Mrudu Shodhana.

There are some clinical conditions in modern medicine that may be compared to Avabahuka. These include.
1. Periarthritis, frozen shoulder, or adhesive capsulitis
2. Subacromial or subdeltoid bursitis
3. Subcoracoid bursitis
4. Painful shoulder
5. Bicipital tendinitis
6. Osteoarthritis of the shoulder joint
7. Brachial plexus neuropathies

In this study, the clinical condition—namely periarthritis, frozen shoulder, or adhesive capsulitis—was correlated with Avabahuka. In this condition, pain and stiffness of the shoulder joint are the cardinal symptoms, leading to the inability or loss of function in the affected upper limb. The progression of the condition may be divided into three phases:
Painful phase
Stiffening phase
Thawing/recovery phase

AIMS AND OBJECTIVES

- To study the effect of *Ksheerbala Avartana Taila Ansabasti* in *Avabahuka* w.s.r. to Frozen Shoulder.
- To study the literature of the disease in view of *Ayurveda* and modern medical science.

MATERIALS AND METHODS

SOURCE OF DATA
Patients of either sex diagnosed with *Avabahuka* from the OPD and IPD of the SMBT *Ayurvedic* Medical College And Hospital, Dhamangaon, were selected for study. All patients completed the course of treatment.

CRITERIA FOR SELECTION OF PATIENTS

The patients presenting with signs and symptoms of *Avabahuka* according to *Ayurvedic* texts were selected for the study. Patients of both sexes in the age group of 20-60 years were selected. The main criteria for diagnosis was the presence of clinical symptoms of *Avabahuka,* that is, *shoola, stambha* and *bahupraspandithara.*

INCLUSION CRITERIA

- *Avabahuka* diagnosed according to the classical signs and symptoms described in *Ayurveda.*
- Patients of both sexes within the age group of 20-60 years.

EXCLUSION CRITERIA

Patients with history of fracture of affected hand.

LABORTARY INVESTIGATIONS

- C.B.C
- HB, TLC, PLATELET, PCV, MCV, MCH, MCHC, RDWCV, NEUTROPHILS, LYMPHOCYTES, EOSINOPHILS, MONOCYTEs, BASOPHILS
- RBS
- SR.CALCIUM-
- X RAY SHOULDER JOINT- (if needed) Antero – posterior, lateral view
- MRI SHOULDER JOINT-(if needed)

TREATMENT SCHEDULE

After diagnosis, the randomly selected patients were treated with *ksheerbala Avartana taila Ansabasti* for seven days follow up was on 8th and 14 th day.

METHOD OF ANSABASTI

Ksheerbala Avartana Taila[5] is prepared in pharmacy, by using *Bala kashaya, Ksheer, Tila taila*. It is a type of *Snigdhasweda* where a warm oil is kept at the *Ansapradesha* for prescribed time, the patient is kept in sitting position and the *Ansapradesha* is encircled with thick black gram paste for retention of the oil. It acts effectively as it is applied at the site.

Materials Required

1. Black gram flour-250g
2. *Ksheerbala avartana taila*-150-250 ml
3. Vessel -3
4. Spoon-1
5. Cotton
6. Hot waterbath-1
7. Attendant-1

Poorva karma

The black gram flour is well mixed with sufficient quantity of warm water into thick paste. It is then made into flat slab like structure having length about 45-60 cm, thickness of 3cm and height of 5 cm with sitting position and exposing the shoulder joint. Prepared dough is fixed to the area in circular shape, taking care not to cause any leakage of oil.

Pradhan Karma

The oil should be warmed over the hot water bath and poured slowly inside the ring. Its temperature must be maintained at 40-45^{0}C, by replacing a small quantity after reheating. After the prescribed time, oil is removed with the help of cotton. Duration - 30 minutes.

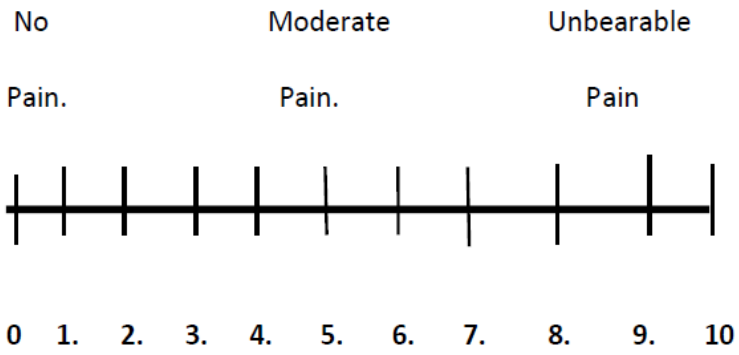
Paschat Karma

After removing the dough, the body part is cleaned lukewarm water and the patient is allowed to take rest.

CRITERIA FOR ASSESMENT OF THE STUDY

The improvements in the patients were assessed on the basis of relief in the signs and symptoms of the disease. To analyze the efficacy of the drug, scores were given for each symptom. According to severity of the symptoms, the grading was given, as mentioned here with;

Vas Scale[6]



Symptoms	**Grade**
No Pain	0
Mild pain	1
Moderate pain	2
Severe pain	3

STHAMBHA (STIFFNESS SCORE)[7]	**GRADE**
No stiffness	0
Stiffness few minutes relived by mild movement	1
Stiffness lasting for 1-2 hrs, but does not affect daily Routine work	2
Stiffness lasting more than 2 hrs and affects daily Routine work.	3
Episodes of stiffness lasting for more than 6 hrs, Daily routine is disturbed.	4

RANGE OF MOTION[8]	**GRADE**
FORWARD FLEXION OF ARM	
Upto 180 degrees	0
Upto 135 degrees	1
Upto 90 degrees	2
Upto 45 degrees	3
Cannot flex	4
HYPER EXTENSION OF ARM	
Upto 50 degrees	0
Upto 30 degrees	1
Upto 10 degress	2
Cannot hyper extense	3
INTERNAL ROTATION	
Upto 90 degrees	0
Upto 60 degrees	1
Upto 30 degrees	2
Cannot rotate	3
EXTERNAL ROTATION	
Upto 90 degrees	0
Upto 60 degrees	1
Upto 30 degrees	2
Cannot rotate	3
ABDUCTION	
Upto 180 degrees	0
Upto 135 degrees	1

Upto 90 degrees	2
Upto 45 degrees	3
Cannot Abduct	4

STATISTICAL ANALYSIS

For assessing the improvement of symptomatic relief and to analyze it statistically, the observations were recorded before and after the treatment.

OBSERVATIONS

The observations made of the 24 patients with *Avabahuka* are as follows.

Maximum number of patients were obtained in the age group of 41-50 years, that is 41%, followed by 37 .5% patients in the age group of 51-60 years and 20.8 % in the age group of 31-40 years. Most of the patients were females 66.7%. 50% of patients were non vegeterians and 50% were vegeterians. Most of the patients are of *vata pitta prakruti* 37.5%.

RESULTS

Ksheerbala Avartana Taila Ansabasti provided a moderately significant effect on the symptoms of s*hoola* (53.73%), significant effect on *stambha* (73.44%), significant effect on flexion of shoulder joint (65.79%), significant effect on extension of shoulder joint (62.50%), significant effect on internal rotation (58.33%), significant effect on external rotation (75%), significant effect on abduction (53.19.%).

DISCUSSION

DRAVYA: Bala, Ksheer, Tila taila
GUNA: Guru, Snigdha, Picchil.
VIRYA: Sheet, ushna
VIPAKA: Madhur
DOSHAGHNATA: Vataghna

MODE OF ACTION

The *Swedan karma* stimulates with thermotherapy, heat is applies for the purpose of changing the cutaneous, intra articular and core temperature of soft tissue for improving the symptoms.[9]

The superficial heating stimulates the cutaneous thermo receptors causing local release of bradykinin and nitrous oxide, resulting in localized relaxation of smooth muscles of the vessel walls to cause vasodilatation.

Change in nerve conducting resulting in relaxation of muscle contraction and thus reduction in muscle spasm.

% relief in parameters

	Group A			
Symptoms	**BT**	**AT**	**Relieved**	**% Relief**
Vas Scale	134	62	72	53.73
Stiffness	64	17	47	73.44
Flexion Of Shoulder Joint	38	13	25	65.79
Extension Of Shoulder Joint	32	12	20	62.50
Internal Rotation	36	15	21	58.33
External Rotation	32	8	24	75.00
Abduction	47	22	25	53.19
	Average % Relief			63.14

Average relief in symptoms was 63.14%.

Distribution of Patients according to relief

Overall Improvement	Trial Group	%
Unsatisfactory	0	0%
Mild	3	13%
Moderate	19	79%
Marked	2	8%
Total	24	100%

CONCLUSION

The following conclusion can be drawn from the observations of the present study.

1. Strenuous physical work and direct injury are the predisposing factors in the manifestation of the disease *Avabahuka*.
2. Maximum incidence of the disease is seen in the age group of 41-50 years.
3. *Kheerbala avartana taila ansabasti* has the *brimhan, snehan, swedan* effect brought out a significant effects on *shools, stambha* and *bahupraspandithara.*
4. The size of the sample was small to draw a generalized conclusion. Therefore, the therapy can be tried in a large sample for an appropriate duration, to observe its proper efficacy.

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