



Case Study

A CASE STUDY ON AVBAHUKA W.S.R TO FROZEN SHOULDER

Neha Uniyal^{1*}, Pankaj Kumar Sharma² Sunil Gupta², Shishir Prasad³

*1P.G Scholar, ²Professor, ³Associate Professor, Dept. of Shalya Tantra, Uttarakhand Ayurved University, Gurukul Campus, Haridwar, India.

Article info

Article History:

Received: 24-03-2022

Revised: 01-04-2022

Accepted: 08-04-2022

KEYWORDS:

Avbahuka,
Agnikarma, *Bala*,
Frozen shoulder.

ABSTRACT

Avbahuka is a disease caused by vitiation of *Vatadosha* in the *Ansa Pradesha* or *Ansa Sandhi* (shoulder joint). It affects the *Bahugata Siras* by constricting them, further causing *Shoola* (pain), and *Bahupraspanditahara* (stiffness) causing restriction in the motion of shoulder joint. The symptomatology of disease *Avbahuka* closely resembles frozen shoulder or adhesive capsulitis in modern medical science. The hallmark sign of this disease is severe pain especially when the patient moves the affected arm. Also, gradually there is restriction in the range of motion of shoulder joint. This is a disease that highly hampers one’s way of living by causing hindrances in personal and professional life both. So, there is a need to find immediate relief as well as long lasting effective treatment for the patient. The present single case study was done to evaluate the efficacy of *Agnikarma* and *Balamoolghanvati* in the treatment of disease *Avbahuka*. The study was carried out at *Shalya Tantra* OPD of Gurukul Campus, Haridwar, Uttarakhand. A female patient came up with complaint of pain and stiffness along with loss of motion of right shoulder joint since last 1 year. After taking the history and doing the necessary investigations she was diagnosed as a case of frozen shoulder. *Agnikarma* and *Balamoolghanvati* was advised to patient for duration of 2 months. Proper assessment before, during and after treatment was done with follow up period of 1 month. Patient got significant relief just after the treatment only and after 15 days the range of motion gradually increased without much pain in the joint. The symptoms almost got dwindled after the 2 months of study with contentment to the patient.

INTRODUCTION

According to Ayurveda, *Vata* is responsible for all the movements in our body [1]. When *Vata Dosha* is in equilibrium state in our body along with other *Dosha* the body functions properly but when the *Vata Dosha* get vitiated or there is dominance of disturbed *Vata Dosha* it causes *Vatavyadhi*. *Acharya Sushruta* mentioned that “*Vatadrute Naasti Ruja*” that means without *Vata* or *Vikrita Vata* there cannot be pain in the body [2]. This line very well states the importance of *Vata* in the pain management.

Avbahuka is one among the *Vata Vyadhis* described in our Ayurveda classics. *Acharya Charaka* in *Sutra Sthan* mentioned the term *Bahushosha* under *Vata Nanatmaja Vyadhis* [3] and *Bahuvata* in *Chikitsa Sthan* instead of *Avbahuka* [4].

According to *Acharya Madhava* *Avbahuka* is *Dwandaja* which means that it involves two *Doshas* *Vata* and *Kapaha*. He was the first one to differentiate *Ansa Shosha* from *Avbahuka* and so considered them two different diseases [5]. Nowadays generalized hypermobility associated with occupation that involves heavy weight lifting, carrying heavy loads, twisting, trauma, etc contributes to increase in *Vata Dosha* and manifestation of *Vata Vyadhi* called *Avbahuka*. The vitiated *Vata Dosha* affects the *Ansa Pradesh* constricts the *Bahugatasiras* which causes pain, stiffness and restricted movement of shoulder joint [6]. The disease *Avbahuka* is correlated with frozen shoulder or adhesive capsulitis. Frozen shoulder results from gradual loss of movement in the shoulder

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joint or glenohumeral joint. The three hallmarks of frozen shoulder includes insidious onset of shoulder stiffness, severe pain specially at night and partial or complete loss of passive and active external rotation of the shoulder joint [7]. This disease has unknown aetiology however some probable risk factors have been recognized which includes, diabetes mellitus, shoulder injury, dupuytren disease, complex regional pain syndrome, thyroid disorder, etc. The pathophysiology of disease can be understood as fibrotic, inflammatory contracture of rotator interval capsule and ligaments. The pathology which is commonly recognized is cytokine mediated synovial inflammation with fibroblastic proliferation based on arthroscopic observations. There are also adhesions around the rotator interval caused by increased collagen and nodular band development [8]. Frozen shoulder has three phases of clinical presentation that represents the disease progression. First phase is early phase or freezing phase with duration of 2 to 9 months. It is initially painful and the pain gets worse at night with gradual rise in glenohumeral joint range of motion restriction. Second is frozen stage with duration of 4 to 12 months. In this stage the stiffness gets dominant over the pain and there is persistent limitation of glenohumeral joint movement. The third phase is thawing or recovery phase with duration of 12 to 42 months. This phase comes with gradual return of range of motion of shoulder joint [9].

Treatment of this disease includes medications like NSAIDS, intra articular steroids, physiotherapy, hydrodilation, etc. The surgical intervention includes manipulation under anaesthesia and Arthroscopic selective capsular release. Having so many treatment of this disease practitioners are still failing to provide efficient management of disease which is cost effective as well provide easy treatment without any side effects. Ayurveda surely provide answers to all these queries regarding the treatment. *Acharya Sushruta* has mentioned one of the best ways to treat *Vata Kapha* predominant disease with *Agnikarma* that is helpful in treating the *Ruja* or pain associated with *Vata Dosha* and stiffness caused by *Kapha Dosha*. Hence for disease like *Avbahuka* where there is dominance of *Vata* and *Kapha Agnikarma* is one of the best choices of treatment. *Acharya Sushruta* established the eminence of *Agnikarma* by saying that there is no reoccurrence of disease once they are treated with *Agnikarma* [10]. *Acharya Chakrapani Dutta* is a renowned name in field of Ayurveda and is known by his significant contributions to the Ayurveda system of medicines. In his text he stated that consuming *Balamool kwath* in *Vatavyadhi* named *Avbahuka* for one month can make *Bahu* as strong as *Vajra* [11]. *Bala* has *Snigdha* and *Madhura Guna* which makes it a *Vata Shamaka* drug.

Also it has *Balya*, *Brimhaniya*, *Vednasthapan* and *Shothhar* effects making it a potent drug for *Vata* disorder like *Avbahuka* [12].

Case report

A 45 yrs old female patient visited *Shalya Tantra* OPD of Gurukul campus, Haridwar on 30/9/2021 with following details:

Patient name: XYZ

OPD no: 3991

DOA: 30/9/2021

DOD: 30/9/2021

Address: Bahadurpur

Chief Complaint

Pain and stiffness in right shoulder joint since one year.

Difficulty in performing shoulder movements since one year.

H/O Present Illness

According to patient she was asymptomatic before one year then she gradually developed symptoms like pain in the shoulder joint with stiffness. Also, she was unable to do shoulder movements that caused her difficulty to perform daily chores. For these complaints she took allopathic medicines that gave her relief only for few days without any recovery so she then visited *Shalya Tantra* OPD, Gurukul campus hospital for the ayurvedic management of the disease.

Past History

N/H/O DM / HTN

N/H/O Trauma or fall

N/H/O/ Thyroid

Personal History

Diet - mixed

Appetite - normal

Bowel - constipated

Micturition - normal (5-6 times a day)

Sleep - normal (7 hrs in a day)

Astavidha Pariksha

Naadi - Vata-Kaphaj

Mala - Niram

Mutra - Niram

Jihva - Swach

Shabda - Prakrita

Sparsha - Ushna, Mridu

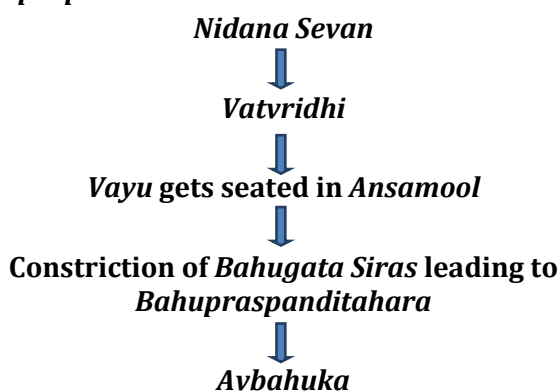
Drik - Shukla

Akriti - Madhyama

Nidan Panchaka

- **Hetu (etiology):** All *Vata Vardhaka Ahara* and *Vihar*
- **Purvarroopa** : not observed
- **Roopa:** *Shoola* (pain) in *Ansa Pradesha* (shoulder region), *Bahupraspandita hara* (stiffness in shoulder joint).
- **Upshaya:** By movement of shoulder joint

Samprapti



Systemic Examination

- **CNS:** conscious and well oriented to time, place and person
- **CVS:** S1 and S2 heard normally
- **RS:** Normal sound heard no added sound present
- **P/A:** NAD

Motor System

Symptom	BT (Rt)	BT (Lt)	AT (Rt)	AT (Lt)
Shoulder muscle wasting	Absent	Absent	Absent	Absent
Muscle power	Active movement against gravity but not resistance	Absent	Active movement against gravity with full resistance	Absent

Sensory System

Sensory symptom	BT		AT	
	R	L	R	L
Superficial stimuli (soft touch)	Absent	Absent	Absent	Absent
Deep stimuli (Pain sensation)	Present	Absent	Absent	Absent
Temperature	Absent	Absent	Absent	Absent

Specific Examinations (Shoulder Joint)

Inspection

- Swelling- Absent
- Wasting of Hands- Absent

Palpation

- Crepitation during flexion and extension: Absent

Symptom	BT		AT	
	R	L	R	L
Tenderness	Present	Absent	Absent	Absent
Swelling	Absent	Absent	Absent	Absent
Wasting of Shoulder muscle	Absent	Absent	Absent	Absent

Investigations

CBC: normal

X ray Rt shoulder joint -Ap, lateral: not any deformity

RBS: 154.8

Treatment

1. **Balamoolghanvati:** One tablet of 500 mg each was given twice a day to the patient for period of 2 months.
2. **Agnikarma:** Under full aseptic condition first sitting of *Agnikarma* was done with *Panchdhatu Shalaka*. Site was cleaned with *Triphala Kwath* and then *Agnikarma* was done at the tender points on

the shoulder joint in *Bindu* manner. *Aloe vera* was then applied at the *Dahana* site and further with turmeric powder dressing was done. Patient was then asked to come continuously for 7 days for dressing. The second sitting was then repeated after 30 days. Follow up was done for 1 month after the completion of treatment.

3. **Assessment of patient:** It was done on the basis of subjective and objective parameters.

Subjective Parameters

Bahupraspandita Hara (Stiffness)

Observation	Grade	BT	1 st day	15 th day	30 th day	45 th day	60 th day
Nil (total absence of stiffness)	0						0
Mild (stiffness with movement on and off and does not interfere with routine work)	1					1	
Moderate (stiffness on movements and does not interfere with routine work)	2		2	2	2		
Severe (stiffness on movements as well as on rest which interferes with routine work)	3	3					

Shoola (Pain)

Observation	Grade	BT	1 st day	15 th day	30 th day	45 th day	60 th day
Nil (total absence of pain)	0					Nil	Nil
Mild (tolerable pain with movements on and off which does not interfere with routine work)	1		1	1	1		
Moderate (Continuous tolerable pain with movements which does not interfere with routine work)	2	2					
Severe (intolerable pain on movements as well as rest which interferes with routine work)	3						

Tenderness

Observation	Grade	BT	1 day	15 day	30 day	45 day	60 day
Nil No tenderness	0			Nil	Nil	Nil	Nil
Mild The patient winces with pain	1	1	1				
Moderate The patient winces with pain and withdraws the affected part	2						
Severe The patient does not allow the joint to be touched	3						

Objective Parameters

Range of Movements (ROM) by Goniometry

Flexion	BT	1 st day	30 th day	60 th day	Extension	BT	1 st day	30 th day	60 th day
Upto 150°→0					Upto 60°→0				
Upto 90°→1				1	Upto 30°→1				1
Upto 30°→2	2	2	2		Upto 20°→2	2	2	2	
Cannot flex→3					Cannot extend →3				

Abduction	BT	1 st day	30 th day	60 th day	External Rotation	BT	1 st day	30 th day	60 th day
Up to 150°→0					Upto 90°→0				
Up to 90°→1			1	1	Up to 60°→1				
Up to 30°→2	2	2			Up to 30°→2				2
Cannot abduct →3					Cannot rotate externally →3	3	3	3	

Shoulder Pain and Disability Index (SPADI)

Pain scale (How severe is your pain?)

		BT	AT
At its worst?	0,1,2,3,4,5,6,7,8,9,10	9	2
When lying on the involved side?	0,1,2,3,4,5,6,7,8,9,10	9	1
Reaching for something on a high shelf?	0,1,2,3,4,5,6,7,8,9,10	8	5
Touching the back of your neck?	0,1,2,3,4,5,6,7,8,9,10	9	5
Pushing with the involved arm?	0,1,2,3,4,5,6,7,8,9,10	9	5

Disability scale (How much difficulty do you have?)

Washing your hair?	0,1,2,3,4,5,6,7,8,9,10	BT	AT
Washing your back?	0,1,2,3,4,5,6,7,8,9,10	9	5
Putting on an undershirt or jumper?	0,1,2,3,4,5,6,7,8,9,10	8	5
Putting on a shirt that buttons down the front?	0,1,2,3,4,5,6,7,8,9,10	6	2
Putting on your pants?	0,1,2,3,4,5,6,7,8,9,10	6	2
Placing an object on a high shelf?	0,1,2,3,4,5,6,7,8,9,10	8	5
Carrying a heavy object of 10 pounds (4.5 kilograms)	0,1,2,3,4,5,6,7,8,9,10	9	5
Removing something from your back pocket?	0,1,2,3,4,5,6,7,8,9,10	9	5

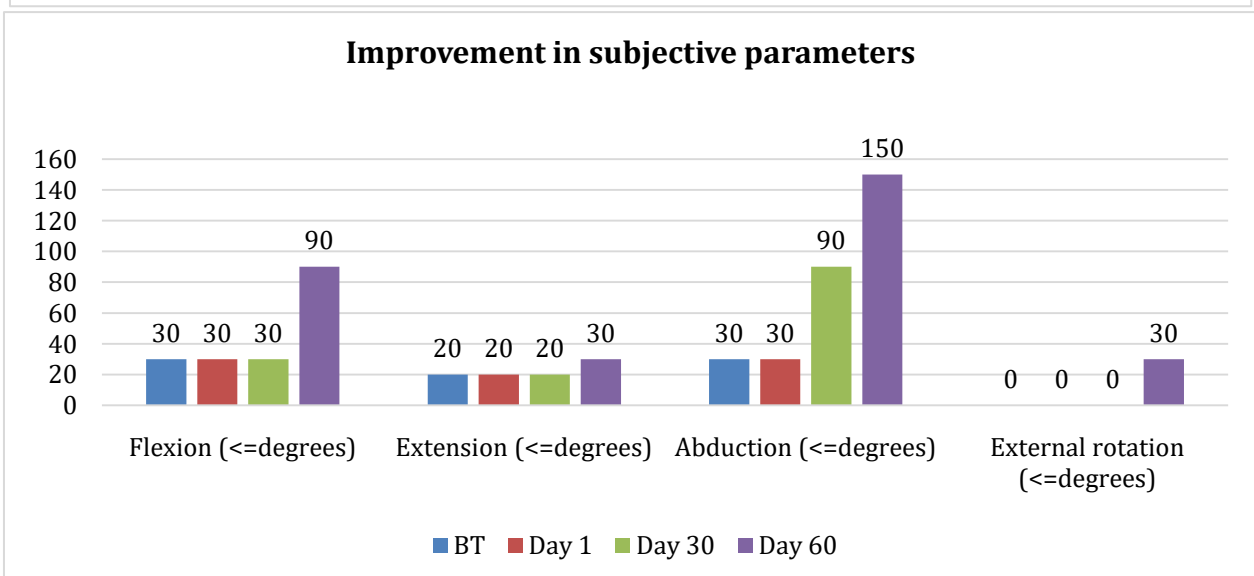
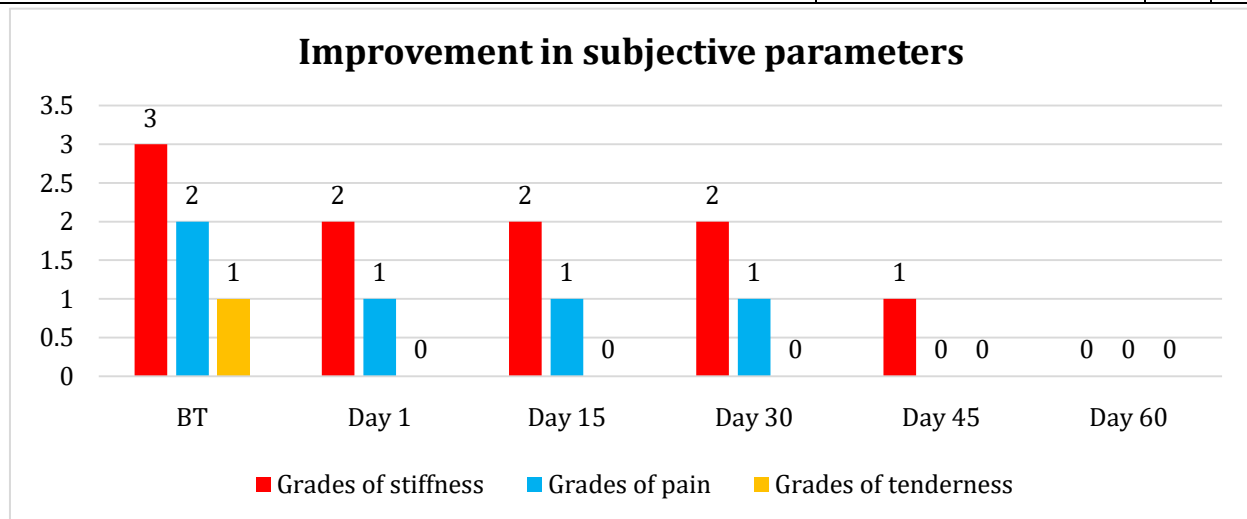


Figure 1 and 2: Graphical representation of Subjective and Objective parameters

Interpretation of Scores

Total Spadi score (BT): $99 / 130 \times 100 = 76\%$

Total Spadi score (AT): $47 / 130 \times 100 = 36\%$

OBSERVATION AND RESULT

After completion of treatment that was of 2 months patient got significant relief. *Agnikarma* gave instant effects in terms of pain and stiffness. The pain during movement and that was getting worse at night got diminished after the first sitting of *Agnikarma*. The range of motion of the shoulder joint also got improved. The assessment of the patient was carried out by specific subjective, objective criteria and the Shoulder Pain and Disability Index (SPADI) questionnaire mentioned in the above tables. Parameters shows remarkable improvement and there is significant decrease in SPADI score where overall total scale range from 0 to 130 with a percentage score of 0 indicating less shoulder disability and 100 indicating more shoulder dysfunction. According to patient she was now able to do the daily routine activities without much discomfort.

DISCUSSION

Acharya Sushruta in *Sutrasthan* has mentioned that if there is severe pain in *Twaka, Mansa, Sira, Snayu, Asthi* or *Sandhi* then in all these condition *Agnikarma* can be done [13]. So in *Avbahuka* where *Ansa sandhi* gets affected to an extent that it loses its movement either partially or completely *Agnikarma* should be indicated. Among all *Dahan Kriyas*, *Acharya Sushruta* and *Acharya Vagbhatta* both have given superior place to *Agnikarma*. *Agni* possesses *Tikshna, Sukshma* and *Laghu Guna* that removes the *Avarodh* from the *Srotas* caused by *Vitiated Vata* and *Kapha* and hence brings *Doshas* into *Samyavastha*. *Agnikarma* not only proves itself as a boon in pain management but also has anti inflammatory properties too. According to Vant Hoff's principle the basal metabolism of the body increases by certain percentage for every 1 degree rise in body temperature. Rise in temperature induces relaxation of muscles and hence muscle spasm with inflammation and pain gets reduced. Muscle relaxes most readily when tissues are warm which in turn reduces the spasm, inflammation and pain. [14] *Bala* is a potent herb that is used generally for *Vata* disorders. *Acharya Charaka* has mentioned that *Bala* has *Rasayana* (rejuvenative) properties that essentially nourishes the body at all level from macro to micro cellular level and so strengthens the muscle tissue (*Mansa Dhatu*) and muscular system (*Mansvaha Srotasa*). In this case study both the treatments showed significant results by removing the stiffness and pain of shoulder joint and regaining its movements. Patient was fully satisfied with treatment

as the discomfort she was facing while performing day today activities was no more present.

Providing a pain free life to people has always been a rewarding experience for all health care practitioners as it is very well said that "we must all die. But I can save him from days of torture, that is what I feel as my great and ever new privilege. Pain is a more terrible lord of mankind than even death itself". [15]

CONCLUSION

Avbahuka or frozen shoulder can be successfully managed with the Ayurvedic treatment after proper assessment of the disease. *Agnikarma* procedure is economical and simple and can be performed at OPD level without necessarily asking for any hospitalization. If performed under skilled guidance it gives best results in terms of pain management. Also, *Bala* is easily available and economical drug and when used in proper dosage it shows significant results. So, both these treatment can be implemented in case of *Avbahuka* without using any allopathic interventions or surgical intervention that is not as simple and economical like the above mentioned Ayurvedic treatment.

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Cite this article as:

Neha Uniyal, Pankaj Kumar Sharma, Sunil Gupta, Shishir Prasad. A Case Study on Avbahuka w.s.r to Frozen shoulder. AYUSHDHARA, 2022;9(2):90-96.

<https://doi.org/10.47070/ayushdhara.v9i2.894>

Source of support: Nil, Conflict of interest: None Declared

***Address for correspondence**

Dr. Neha Uniyal

P.G Scholar,

Dept. of Shalya Tantra,

Uttarakhand Ayurved University,

Gurukul Campus, Haridwar.

Email: neha30uniyal@gmail.com

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