JETIR.ORG ISSN: 2349-5162 | ESTD Year : 2014 | Monthly Issue

JOURNAL OF EMERGING TECHNOLOGIES AND INNOVATIVE RESEARCH (JETIR)

An International Scholarly Open Access, Peer-reviewed, Refereed Journal

Management of frozen shoulder with *Agnikarma*

Komal Dhalani[1], Tukaram Sambhaji Dudhamal[2]

[1]MS (Scholar), [2]Associate Professor & I/C HOD,

Department of Shalya tantra,

Institute of Teaching and Research in Ayurveda (ITRA) (INI),

Jamnagar, Gujarat, India

ABSTRACT

Avabahuka (frozen shoulder) is a disease of *Amsa sandhi* (shoulder joint) and it has been described under eighty types of *vata vyadhi* by Acharya Sushruta. Clinical presentation and pathogenesis of *Avabahuka* is almost similar to Frozen Shoulder. *Avabahuka*/frozen shoulder hampers the routine activity of an individual in carrying out daily activities like dressing, eating, personal hygiene and work. The disability resulting from this condition has considerable economic impact on affected individuals and society. Among all prescribed treatment modalities like, *Bheshaja Chikitsa*, *Agnikarma*, *Ksharkarma*, *Raktamokshan* and *Shastrakarma*, *Agnikarma* is the superior one with an added advantage of *Apunarbhava* (devoid of reoccurrence). Moreover, Acharya Sushruta has described that the best treatment for *Vataja* and *Kaphaja Vyadhies* is *Agnikarma*. This is a case study of a 50-year-old female patient who presented with complaints of pain in left shoulder with restriction of movements. The patient was treated in the outdoor department with 3 successive sittings of *Agnikarma* with each sitting at the interval of 7 days. Then follow-up was taken after 3 months for reoccurrence. After the treatment the symptoms of pain and restriction of movement completely relieved.

Key words: *Avabahuka*, *Agnikarma*, frozen shoulder, *Vatavyadhi*

INTRODUCTION

Avabahuka has characteristics of *soshana* of *amsa bandha*, *akunchana* (constriction) of *Sira* & *bahupraspandahara*.[1] *Avabahuka* is considered to be a disease that usually affects the shoulder joint *(amsa sandhi)* and is produced by the *Vata dosha*. Even though the term *Avabahuka* is not mentioned in the *nanatmaja Vata vyadhi*, *Acharya Sushruta* and others have considered *Avabahuka* as *Vata vyadhi*. [2] *Amsa shosha* can be considered as the preliminary stage of the disease where loss or dryness of the *Shleshaka Kapha* from the shoulder joint occurs. The next stage, that is, *Avabahuk*a, occurs due to the loss of *Shleshaka Kapha* and symptoms like *shoola* during movement, restricted movement, and so on, are manifested. Even as this is commented on in the *Madhukosha teeka*, it is mentioned that *Amsa shosha* is produced by *dhatukshaya*, that is, *shuddha Vata janya*, and *Avabahuka is Vata Kapha janya*. [3]

Frozen shoulder it is characterized by severe pain in shoulder and restricted movement both active and passive. All types of range of movements are restricted particularly external rotation is more painful to start initially then all movements become painful and restricted. It manifests clinically as shoulder pain with progressive restricted movement, both active and passive, along with normal radiographic scans of the glenohumeral joint.[4] Pain is particularly worst at night and disturbs the sleep. Prolong immobilization of shoulder due to surgery or trauma may cause this condition. It is common in age group ranging in the age group 40 to 60, more commonly seen in females. It as a self-limiting disorder that resolves in 1–3 years.[5] Other studies report ranges of between 20 and 50% of patients with Adhesive capsulitis suffer long-term ROM deficits that may last up to 10 years.[6] Having so many treatments 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. 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. [7] 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* [8].

Agnikarma is superior among all of *Bheshajakarma*, *Ksharakarma*, *Shastrakarma* and *Raktamokshana*.[9] Acharya Sushruta has mentioned *Agnikarma*, which is therapeutic burning on specific sites and can be done with various tools like *Pippali, Ajashakruta, Godanta, Shara, Shalaka* etc. [10] This is a single case report of management of frozen shoulder with 3 sittings of Agnikarma.

CASE REPORT

A 50 yrs. old female patient who is a housewife presented with severe pain in left shoulder for 3 months with unbearable pain at night and difficulty in doing chores & lifting hand for 1½ months attended Shalya Opd. The patient gradually felt dull aching pain at her left shoulder from 3 months and gradual restriction of movement in left shoulder from last 1½ months. She took some painkillers but didn't get relief. The symptoms used to get aggravated during doing home chores and at night-time. She was a known case of hypothyroidism and was on tablet thyronorm(50 mg) once a day, No any past surgical history was found. On general examination there were no signs of pallor, icterus, clubbing, cyanosis, lymphadenopathy, oedema were found with systemic examinations of RS with both lung fields clear & in CVS examination S1 S2 heard with no added sound and was well oriented to time place and person. Blood routine, blood glucose levels, urine routine/micro and were within normal range & serological investigations HIV and HbsAg were negative with normal findings of x-ray of left shoulder AP VIEW

Local examination:

Motor system

Symptom	**BT (Rt)**	**BT (Lt)**	**AT (Rt)**	**AT (Lt)**
Shoulder muscle wasting	Absent	Absent	Absent	Absent
Muscle power	Normal	Normal	Normal	Normal

Sensory System

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

LOCAL EXAMINATION

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

DIAGNOSTIC FOCUS

Based on clinical examinations patient was diagnosed with Left frozen shoulder as in right shoulder all the movements were possible with no pain. In left shoulder to exclude the possibility of rotator cuff tear, rotator cuff impingement, glenohumeral joint arthritis drop arm test, press belly test, horn blower tests and impingement test were carried out and were negative with positive Appley's scratch test for frozen shoulder with X-ray of left shoulder AP VIEW in which no abnormal findings were detected.

THERAPEUTIC INTERVENTION

The patient has been treated with 3 sittings of *Agnikarma* i.e., 1st sitting and 2nd sitting on 8th day and 3rd sitting on 15th day with follow up after 30 days.

METHOD OF *AGNIKARMA*

Informed written consent was taken from the patient before starting of procedure and the treatment protocol was explained to the patient in brief. All the vitals like pulse, BP, Spo2 were checked and ensured within normal limit. After explaining whole procedure properly most painful, tender points were marked with marker pen, skin was cleaned with spirit, *Agnikarma shalaka* was made red hot by burning it on Gas burner. *Agnikarma* was performed in *bindu* manner. The patient was observed upto half an hour for any complications. This same procedure was repeated after 7 and 15 days. Total 3 sittings of *Agnikarma* were done.

Figure 1: [materials of *Agnikarma]*

Figure 2: [procedure of *Agnikarma* with *Shalaka]*

OBSERVATIONS & RESULT

PAIN: VA Scale	
No pain	0
Very Light, barely noticeable pain. Most of the times patient never think about pain.	1
Mild Pain which is Discomforting	2
Very Noticeable pain, but patient groused to it	3
Strong deep pain. Distressing to patient. Patient notice the pain all the time and cannot completely adapt	4
Strong deep piercing pain. Very Distressing to patient. Patient notice the pain all the time and it affects normal lifestyle	5
Very strong, deep piercing pain partially dominating the senses and causing trouble holding a job	6
Very strong, deep piercing pain.	7
Very strong, deep piercing pain with severe personality changes if the pain is present for long time	**8**
Patient demand pain killers or surgery whatever be the side effects or risks	9
Unimaginable unspeakable	10

Table 1[Before treatment subjective parameter- pain/VAS score]

STIFFNESS	
No stiffness	0

Stiffness; no medication	1
Stiffness, relieved by external application	2
Stiffness, relieved by oral medication	**3**
Stiffness, not responded by medicine	4

Table 2[Before treatment subjective parameter- stiffness]

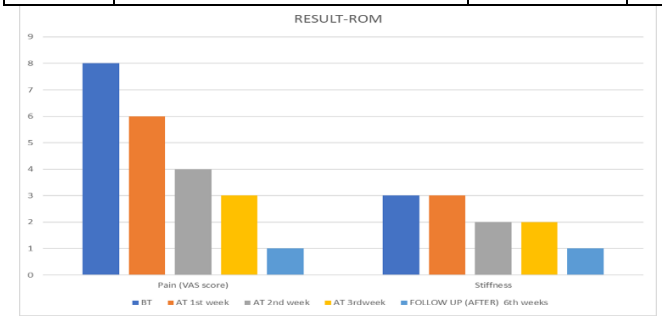
SHOULDER JOINT ROM	**Normal ROM**	**Before treatment**	**After treatment**
Abduction	170	90	160
Adduction	180	90	150
Flexion	165	100	165
Extension	60	40	60
Internal rotation in abduction	70	60	70
External rotation in abduction	100	70	100

Table3 [FOR Objective parameter-ROM]

FOLLOW UP After completion of the treatment protocol patient was assessed after 30 days for any recurrence of symptoms. The patient got complete relief from symptoms and there was no recurrence of symptoms within 3 months of the follow-up period.

Table4 [Follow up table]

Parameters		BT	AT			FOLLOW UP (AFTER)
			1st week	2nd week	3rdweek	6th week
Pain (VAS score)		VAS 8	VAS 6	VAS 4	VAS 3	VAS 1
Stiffness		3	3	2	2	1
ROM	Abduction	90	100	120	150	160
	Adduction	90	110	140	140	150
	flexion	100	120	120	160	165
	extension	40	40	40	50	60
	Internal rotation	60	60	60	60	70
	External rotation	70	80	80	90	100



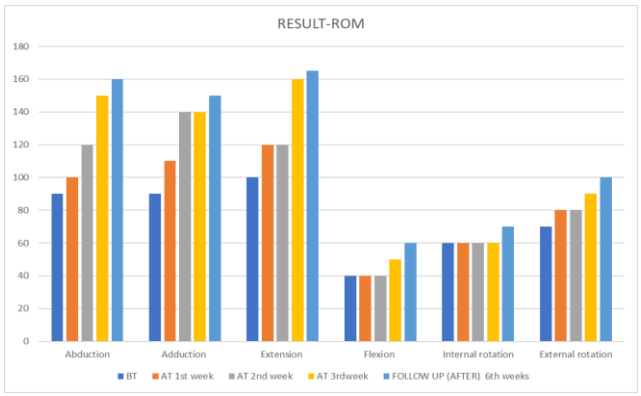


Figure 1&2 [subjective & objective parameters follow up]

Figure 3 [before treatment range of motion]

Figure 4 [after treatment range of motion]

DISCUSSION

Frozen shoulder is disabling disease of shoulder and is self-limiting, but recovery takes much longer time up to 3-4 yrs. It has 3 steps. 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 [11]. Treatment of this disease includes medications like NSAIDS, intra articular steroids, physiotherapy, hydro dilation, etc. The surgical intervention includes manipulation under anaesthesia and Arthroscopic selective capsular release, many treatment options are available for management of frozen shoulder still there is no consensus in literature regarding which therapeutic option is superior mostly because of lack of high level of evidence [12]. As the recovery period is much longer and initial stage of freezing is very painful some alternative treatment like ayurveda is very beneficial.

Acharya Sushruta in *Sutrasthana* 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] 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 *Vat*a and *Kapha* and hence brings Doshas into *Samyawastha*. *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] Hence keeping this in mind the particular intervention was carried out. Aim of treatment in frozen shoulder is to reduce pain and to increase range of mobility. This can be achieved by *Agnikarma*. So, in present case *Agnikarma* resulted in pacification of pain and increasing range of movement thus giving significant relief in symptoms.

CONCLUSION

Avbahuka or frozen shoulder can be successfully managed with the *Agnikarma* 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. Hence, the modality was executed successfully in this case & can be used in similar cases of *Avabahuka.* However, this is a single case study; further study can be extended to original research work on a significant number of patients to establish a definitive protocol for the management of *Avabahuka*.

LIMITATION OF STUDY

The study would be more scientific if the MRI study would have been taken before the procedure. As this is a single study so for its scientific validation the same protocol may be tried in more numbers of patients of Avabahuka.

CONSENT OF PATIENT

Informed written consent of the patient was taken for procedure and publication of the images without disclosing the identity of a patient

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