

Agnikarma with Adjuvant Drug in the Management of Frozen Shoulder (*Avabahuka*) – A Case Report

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ABSTRACT

Agnikarma is superior to all parasurgical interventions narrated by father of surgery. *Avabahuka* can be correlated with frozen shoulder that affects routine activity by painful shoulder and restricted shoulder joint movements. This case report is an evidence to support alternative therapy in the management of frozen shoulder. A 50-year-old female presented with a 1 year history of gradual onset of painful restricted movements of the right shoulder, radiating pain from the right shoulder to elbow joint. The patient was diagnosed as a case of frozen shoulder and was treated with four sittings of *Bindu Dagdha Agnikarma* with *Pachadhatu Shalaka* along with orally *Dashmooladi kwatha* 50 ml at evening with empty stomach once daily and *Haritaki Churna* 3 g with lukewarm water at bed time for 28 days. After completion of the treatment, the patient got relieved from pain and restricted shoulder joint movement along with improvement in complete abduction, flexion, extension, adduction, and external rotation. Promising role of *Agnikarma* and adjuvant medicines is supposed to subside *Vata Kapha* dominant *Sthanika Shotha* (localized swelling) and as a result of this, it may have improved the shoulder joint movements.

Keywords: *Agnikarma*, *Avabahuka*, Frozen shoulder, Parasurgical procedure

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INTRODUCTION

Avabahuka is one such disease that hampers the routine activity of an individual to carry out ~daily activities such as dressing, eating, personal hygiene, and routine work. Among the *Doshas*, *Vata Dosh* is superior in all aspects, strong in its ability and activity. *Vata* disorders occupy top most position in the field of pathological condition due to faulty life style. Acharyas mentioned *Avabahuka* in *Vatavyadhi* chapter. *Vatavyadhi* is one among *Astamahagada* (~difficult to treat),^[1] is itself explanatory with regard to the consequence caused by *Avabahuka* and its prognosis. It is considered to be a disease that usually affects the shoulder joint. It is evident from clinical features such as pain (~*sandhi shoala*), stiffness (~*sandhigraha*), and restricted movement of shoulder joint (~*Bahupraspanda Haratvam*) from that vitiation of *vata* and *kapha* is predominant. Vitiating *Vyan vayu* is a prime cause which affects the *sirabandhana* of shoulder joint and dried it which causes restricted movement of shoulder joint.

The frozen shoulder is characterized by gradually progressive, painful restricted movements of shoulder joint (particularly internal rotation and abduction), night pain (rendering the patient unable to sleep on the affected side), with normal radiograph. The chronicity of disease and slow spontaneous restoration of partial or complete motion of shoulder joint over months to years.^[2]

In general population, prevalence of frozen shoulder is 2–5% and 15% in diabetic patients with women preponderance.^[3] Disease incidence found mostly between 35 and 65 years of age group but can affect younger generation also who are involved in frequently overhead activity such as volleyball, tennis, and basketball.^[4]

Agnikarma is the superior one with an added advantage of *Apunarbhava* (~devoid of reoccurrence). Moreover, *Acharya Sushruta*, father of surgery, recommended *Agnikarma* as *Anushastra Karma* (~a parasurgical procedure) for *Vata Kapha* painful pathologies in different layers of body tissue with different indicated tools.^[5]

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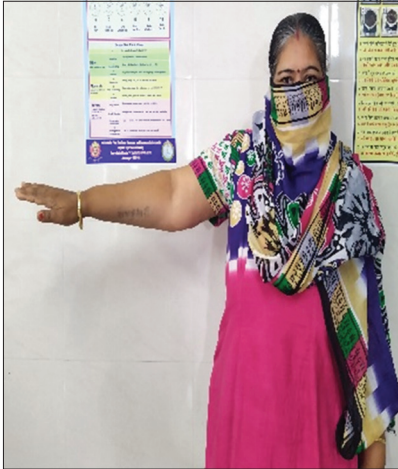
CASE HISTORY

Patient Information

A 50-year-old female housewife presented with a 1 year history of painful restricted movement of the right shoulder radiating to the right elbow joint. Initially, it was intermittent type of dull ache and later on it was increasing specially during nighttime, sleeping on same side and in cold weather. Previously, she was advised for physiotherapy and oral analgesic (Tab. Aceclofenac 100 mg + paracetamol 500 mg) twice a day after meal for 15 days.

Clinical Findings

On general examination, the patient was well oriented and conscious with normal vitals. On local examination, there was Grade II tenderness in the right shoulder joint, restricted abduction [Figure 1], flexion [Figure 2], internal rotation [Figure 3] with normal muscle power, and muscle tone without shoulder muscle wasting. Apley's scratch test was found positive in this case.^[6] Sensory perceptions of superficial stimuli (soft touch), deep stimuli (pain sensation), and temperature were found normal.

ROM of shoulder joint: Before treatment**Figure 1:** Abduction**Figure 2:** Flexion**Figure 3:** Internal rotation in extension

Radiological investigations of the right shoulder joint revealed normal study and the patient was diagnosed as a case of Stage II frozen shoulder according to Reeves.

Interventions

Case management was initiated after taking informed written consent from the patient for the therapeutic procedure and publication purpose both. The patient was treated in serial manner of procedures and oral medicaments including *Pachana Anulomana* (~regularize the digestion and motion of *Dosha*) *Shothahara* (~anti-inflammatory) medicines and *Pathya Ahara* (~Therapeutic diet regimen) as systemic management for consecutive 28 days and *Agnikarma* by *Panchadahatu Shalaka* for 28 days on 7 days interval periodically [Table 1].

Local Management

After antiseptic painting of local part (right shoulder) with povidone iodine solution and dry gauze piece, 10–12 *Bindu Vishesha Dahana* (~Therapeutic heat spots) were produced by red hot *Pancha Dhatu Shalaka* in most tender part of the right shoulder joint followed by immediate application of *Kumari Majja* (*Aloe vera* (L.) Burm. f. pulp) and *Haridra Churna* (*Curcuma longa* Linn.).

Systemic Management

The patient was prescribed to take 50 ml of *Dashmooladi kwatha* orally at evening time empty stomach for 30 days.^[7] *Haritaki churna* (*Terminalia chebula* Retz.) was prescribed in dose of 3 g powder at morning time empty stomach with *Guda* (~jaggary) for 30 days.

***Pathya-Apathya* (Do's and Don'ts's)**

During the time of treatment and follow-up period milk, milk products except ghee, bakery items, fermented foods, dairy foods, weight lifting, overhead activity of shoulder joint, daytime sleep, late night awakening, pulses except green gram, and cold water for drinking were restricted.

Outcome and Follow-up

The assessment was done on the basis of symptomatic relief and Disabilities of the Arm, Shoulder, and Hand (DASH) score.^[8]

On 1st consultation, shoulder pain (visual analog score [VAS 6]) was diagnosed continuous and dull type of pain. It attributes to disturbance of sleep. After 1st sitting of *Agnikarma*, pain significantly decreased from VAS 6 to VAS 3. After 2nd sitting of *Agnikarma*, night pain decreased and continues pain change into intermittent pain. Due to relief in pain, the patient initiates shoulder joint movement and improvement noticed in abduction, flexion, and internal rotation. By 3rd sitting of *Agnikarma*, VAS 2 found from VAS 3. After 4th sitting of *Agnikarma*, VAS score was 0, there was complete pain less abduction [Figure 4] and flexion [Figure 5] achieved while internal rotation [Figure 6] did not completely achieve after the 28th day of treatment. In the laboratory investigation, erythrocyte sedimentation rate significantly reduced from 48 mm to 4 mm while DASH score condensed from 68% to 25% after treatment [Table 2].

Follow-up

The patient was followed up to 6 months to observe any detrimental effects and recurrence of symptoms. There was consistence relief in symptoms.

Table 1: Case timeline for management of frozen shoulder

Date	Event	Intervention
September 2019	Sudden continue type dull ache pain started at right shoulder to elbow joint	Nonsteroidal anti-inflammatory drugs started by orthopedic doctor. Patient got pain relief
January 2020	Painful movement of shoulder joint	Nonsteroidal anti-inflammatory drugs with physiotherapy started for 1 months
Day of visit	Summaries from initial and follow-up visit and descriptions of disease condition	Interventions
September 2020 (Day 0)	Came to OPD with complaints of restricted painful movement of right shoulder joint for 1 year. More pain during night which was disturbing the sleep	Hb%, DC, CT, erythrocyte sedimentation rate, fasting blood sugar, postprandial blood sugar, serum creatinine, urine routine and micro were done, advised for <i>pathy-apathya ahara</i> and <i>vihar</i>
September 2020 (Day 01)	Tenderness Grade II VAS 6, Abduction, flexion, internal rotation in extension of shoulder joint restricted	1 st sitting of <i>Bindu dagdha Agnikarma</i> with <i>Panchadhathu shalaka</i> done at right shoulder at most tender area. Approximately 16-20 points applied with red hot <i>Shalaka</i> Orally 50 ml <i>Dashmooladi kwatha</i> at evening time empty stomach, <i>Haritaki churna</i> 3 g at bed time advised
September 2020 (Day 07)	Pain (VAS 3) significantly decreased at shoulder joint	2 nd sitting <i>Agnikarma</i> done and oral medication given
September 2020 (Day 14)	Intermittent pain present (VAS 2). Night pain decreased. ROM (abduction and flexion) increased	3 rd sitting <i>Agnikarma</i> done and oral medication given
October (Day 21)	Mild pain (VAS 1) present at shoulder region. Abduction and flexion increased	4 th sitting <i>Agnikarma</i> done and oral medication given
October (Day 28)	Complete pain less abduction, flexion achieved and painful internal rotation	Oral medications given
March 2021 – follow-up period	Painless abduction and flexion of shoulder joint. Improved internal rotation. Slight restriction to get hand far up the back. But internal rotation in extension not completely achieved	No any oral medication given during follow-up period

ROM of shoulder joint: After treatment



Figure 4: Abduction



Figure 5: Flexion

DISCUSSION

Ayurvedic diagnosis of this condition can be correlated to *Avabahuka* or *Apabahuka* due to similarities in symptomatic condition. *Vata* is vitiated due to *Dhatukshaya* (~diminution of dhatu/emaciation), *Margavarana* (~occlusion of *vata*), and another etiological factor. *Sira yukta shleshma* responsible for a *sandhi bandhana* (fibrous capsule of shoulder joint) of shoulder joint. Due to *nidana sevan* (repeated minor trauma to shoulder joint), *Ruksha* (~dryness), *Laghu* (~lightness), *Khara guna* (~roughness) of vitiated *Vata* dried up *Shleshma*, it leads to *Sira Ankushana*(~constriction) due to lack of lubrication. It causes *karmahani* (~loss of functions) of shoulder joint

leads to *Bahupraspanda Haratvam* (restricted movement of shoulder joint).^[9] This is *Dhatukshayajanya Vata Vyadhi* because it decays *Drava dhatu (Shleshma)*. Prolong minor trauma to shoulder joint produce some tearing of the degenerative shoulder cuff, it may initiate the low-grade prolonged inflammatory changes creates shoulder pain and contraction of the shoulder cuff responsible for symptoms.

For *Avabahuka* (frozen shoulder), no definite site mentions for *Agnikarma* in *samhita*. In *Vasavrajivayam*, author has narrated site for *Agnikarma* at *bahushiro* (~gleno-humeral joint). *Agnikarma* to *Asthi sandhi* by approaching *Twaka dhatu* (~skin), it improves *Mahabhutagni* through *Ushna* (~hotness), *Sukshma* (~penetrating), *Ashukari* (~fast acting), properties of *Agni*. *Ushna guna* supposed to improve *Rasa-Rakta* circulation and remove degenerated and



Figure 6: Internal rotation in extension

Table 2: Laboratory investigation

Findings	Before treatment	After treatment
Clinical findings		
Pain at right shoulder and arm	Present	Absent
Restricted painful movement of right shoulder	Present	Absent
Local examinations		
Pain	VAS 6	VAS 0
Tenderness	Grade II	Grade 0
Swelling	Present	Absent
ROM		
Abduction	90°	170°
Flexion	100°	165°
Internal rotation in extension	Severe	Severe
Muscle power	5	5
Sensory examination (by soft touch, pain sensation, temperature)	Normal	Normal
Muscle wasting (Goutallier classification)	0	0
Apley's scratch test	Present	Present
Disabilities of the Arm, Shoulder, and Hand score	68%	25%
Classification		
Frozen shoulder according to reeves classification	Stage II	Stage 0
Investigations		
Total count	7700/Cumm	7390/Cumm
Differential count(N/L/E/M/B)	48/47/02/03/00 %	58/38/02/02/00%
Hb%	10.6 Gms%	10.7 Gms%
Erythrocyte sedimentation rate	48 mm	04 mm
Fasting blood sugar	80 mg/dl	86 mg/dl
Postprandial blood sugar	99 mg/dl	93 mg/dl
Serum creatinine	1.0 mg/dl	0.90 mg/dl

necrotized tissue, fibrous tissue aggregated in joint. By establishing proper nourishment to shoulder joint, it recommences proper shoulder joint function. Establishment of direct therapeutic heat to most tender part of affected joint provides permanent pain relief and improves range of motion of joint.

Dashmooladi kwatha having *Shothahara* (~anti-inflammatory), *kapha-pitta-vata pachaka* properties. *Masha* (*Phaseolus mungo* Linn.) is one ingredient of *Dashmooladi kwatha* and having *kapha vardhak* and *Vatashamaka*, *Snigdha* (~unctuousness), *Tarpan* (~satiating) property.^[10] It may inhibit further dried up of fibrous capsule Increases *shleshma* and nourish the joint capsule. *Atibala* (*Abutilon indicum* Linn.) having *Balya* (~tonic) and *Snigdha* (~unctuousness) properties.^[11] Through *balya guna*, it provides sufficient energy and nourish the muscle to restore joint movement. *Vatanuloman* (~proper functioning of *vayu*) effect and *amla rasa* of *haritaki* corrects function of *Vata dosha* in the body and might be improve nourishment to capsule in the shoulder joint.

CONCLUSION

A single case report demonstrates effectiveness of the Ayurveda treatment protocol to manage *Avabahuka* (frozen shoulder).

Limitation of Study

Limitation of the study was the complete internal rotation in extension did not achieve after 1 month of treatment. Only pain management not sufficient for a frozen shoulder it requires rehabilitation also.

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