



## CASE STUDY

### AGNIKARMA IN THE MANAGEMENT OF AVABAHUKA (FROZEN SHOULDER)

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#### ABSTRACT

Frozen shoulder, also known as Periarthritis or Adhesive capsulitis causes a significant loss in range of motion typically occurs in cycle of 3 stages. It predominantly occurs in females in their fifties. In textual references of Ayurveda Frozen Shoulder is closely related to Avabahuka. In this condition, Vata is localized in the shoulder region, getting aggravated, dries up the bindings (ligaments) of the shoulders, constricts the siras present there and causes Avabahuka. Modern medical science plays very less role in the management of Frozen Shoulder. In Ayurveda various para-surgical procedures were mentioned for diseases of Vata and Kapha, in which Agni karma is one of them, that has been recommended in various musculoskeletal disorders. Hence a case study was conducted to evaluate the effectiveness of *Agnikarma* in frozen shoulder.

## INTRODUCTION

Frozen shoulder clinically known as adhesive capsulitis, is characterized by pain, stiffness, and limited function of the glenohumeral joint, which adversely affects the entire upper extremity. In this condition shoulder capsule becomes adherent to the humeral head that why it termed as "adhesive capsulitis" Frozen shoulder patients usually present in the sixth decade of life, and onset before the age of 40 is very uncommon. The peak age is 56, and the condition occurs slightly more often in women than men. (NCBI, PMC1315655) The exact cause of this pathology remains elusive. There are two types identified –primary (idiopathic) & secondary. Idiopathic adhesive capsulitis results from a chronic inflammatory response with fibroblastic proliferation, which may actually be an abnormal response from the immune system. Secondary adhesive capsulitis occurs after a shoulder injury or surgery, or may be associated with another condition such as diabetes, rotator cuff injury, cerebrovascular accident (CVA) or cardiovascular disease, thyroid disease. There are two principal characteristics of frozen shoulder: pain & contracture (loss of range of movement). Pain associated with it is progressive & initially felt mostly at night. The contracture of the shoulder ligaments decreases the volume of the capsule, thus limiting range of motion. There is

progressive loss of passive range of movement (PROM) & active range of movement (AROM) of the glenohumeral joint. The most common limitations in range of motion are flexion, abduction, and external rotation.

#### The normal course of frozen shoulder has been described as having three stages

**Stage one:** The "freezing" or painful stage, which may last from six weeks to nine months, & in which the patient has a slow onset of pain. As the pain worsens, the shoulder loses motion.

**Stage two:** The "frozen" or adhesive stage is marked by slow improvement in pain but the stiffness remains. This stage generally lasts from four to nine months.

**Stage three:** The "thawing" or recovery, when shoulder motion slowly returns towards normal. This generally lasts from 5 to 26 months. Management of adhesive capsulitis by contemporary medicine mainly includes management of pain with analgesics and NSAIDs or sometime surgery is required. As far as modern medical science is concerned no promising management is available in Frozen Shoulder and when the disease condition become worse steroid therapy is advised which have more adverse effects and high economical cost. On the basis of sign & symptoms this disease can be correlated with *Avabahuka* in *ayurvedic* texts. *Avabhauka* is *vata-kapha* dominated disease. *Avbhauka* (Frozen Shoulder) is produced

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by vitiated *vata dosha* with *anubhandha* of *kapha*. *Agnikarma* is considered as best therapy to pacify these *dohas* due to its *Ushan*, *Sukshma*, *Ashukari guna*. Therefore *vatakapha* pacifying management was planned for the present case.

### Case report

A male of age 42 year visited OPD of Sri Siddarudha Charitable Hospital, Bidar on 3<sup>th</sup>, January 2017 with the complaints of pain and stiffness of right shoulder joint along with severe restriction of upward elevation of shoulder joints. There is no history of any trauma or physical injury. Onset is insidious starting with pain & stiffness that progress in restriction of shoulder joints movement both active as well as passive movements of upper limb are restricted. Pain is constant in nature that become worst at night, & when weather is colder. She is unable to perform even small tasks due to restricted upward movement of limb. There was a history of treatment for frozen shoulder under a private orthopedic surgeon for last 03 months with no significant relief.

### Clinical Examination

- Muscle Power- 5/5 in both Upper & lower limb
- Muscle tone – Normal. Muscular Atrophy – Not present.
- Musculoskeletal System- Right Shoulder joint examination
- Swelling - mild Tenderness- +++
- Restriction of range of movement – Adduction- 0°
- Abduction-60°
- Flexion - 60°
- Extension -20°

### Investigation

X - ray findings suggests degeneration of collagen in sub synovial layer of shoulder joint.

### Treatment

After careful assessment and examination, patient was treated with *Agnikarma* and oral medication of *Ashwagandha* powder 4 g, and *Navajivana Rasa* 250 mg, twice a day with luke warm water for 03 weeks.

### Procedure of Agnikarma

After taking written informed consent, *Agnikarma* was done. The affected part was wiped up with betadine & sterilized gauze piece. *Agnikarma* in the form of *samyak twak dagdha* (therapeutic superficial skin burn) was done by making multiple dots (*Bindu Agnikarma*) with red hot *pancha dhatu shalaka* covering pain points. During entire procedure, a swab soaked in *Kumari Swarasa* (fresh pulp of *Aloe vera*) was applied just after making each dot. Appropriate precaution was taken not to produce *asamyak dagdha vrana* (neither superficial nor too deep burn). After completion of the procedure, wound was covered with *Haridra* powder dusting. The entire procedure was repeated three times at the interval of 7 days. Patient was advised to apply the paste of *Haridra* powder mixed with aloe vera pulp 2 times. *Vata vardhak ahara-vihar* (diet and activities which aggravate *vata dosha*) was also restricted during the treatment and follow-up period.

## RESULTS

*Avbahuka* (Frozen Shoulder) is produced by vitiated *vata dosha* with *anubhandha* of *kapha*, so *Agnikarma* is considered as best parasurgical therapy to pacify these *dohas*. The properties of *agni* are *sukhsma*, *laghu*, *thikhsna* and *usnaguna*. It works on both *vata* and *kapha dosa*. It works on *vata* by its *usna* and *tikhsnaguna* and on the *kaphadosa* by *laghu*, *sukhsma*, *tikhsna* and *usnaguna*. After the treatment Pain & stiffness was decreased. The overall increment in the range of movement was as follows: abduction – 80 °(+20 °increment), flexion- 80 °(+20 ° increment), Extension-30 °(+10 ° increment), external and internal rotation – moderate improvement. Superficial multiple wounds produced by *Agnikarma* healed within 5-7 days. Patient visited for follow up for 1 month after completion of treatment. The scars of wound disappeared in due course of time (3-4 weeks) and there was no adverse effect noted of the treatment.

### Probable Mode of Action

In the process of *Agnikarma*, transferring of therapeutic heat to *twak dhatu* (skin) and gradually to deeper structure which would have acted eventually to pacify *ama dosha* and *srotovagunya* which gives relief in symptoms of *shoth* and *shool*. Pain receptors are located in the skin and the motor end plates of the muscles. These pain receptors are stimulated by application of heat at about 45°C. Pathway for transmission of thermal signals and pain signals are almost parallel, but terminate at same area. So out of these two i.e. thermal and pain only the stronger one can be felt (Samson Wright's applied physiology). Concomitantly administered oral drugs of *Ashwagandha* 4 gm & *Navajivana Rasa* 250 mg along with lukewarm water for 3 weeks might have played role with *Agnikarma* to pacify the *dosha* and related pathogenesis to achieve the desired result. Here, the role of internal medication can be elaborated by considering the pharmacological properties of the drugs used. *Aswagandha* and *Navajivana Rasa* are known to exhibit *vata kapha shamak*, *shothahara* (anti-infl ammatory), *vedana sthapan* (analgesic), and *rasayana* (immune modulator and anti-oxidant) effect.

### Conclusion

Frozen shoulder is one of the most common problems which effect mostly in middle age group of patients. After *Agni karma* there is relief of signs and symptoms of Frozen Shoulder. Local tenderness and stiffness are decreased markedly. No adverse effects were observed during the course of treatment. The treatment applied was simple, economical and required no hospitalization and could be done at OPD level. Detailed study should be conducted on a large sample to evaluate the efficacy of *Agni karma* in the management of Frozen Shoulder.

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