



## **Ayurvedic Management of Avabahuka WSR to Frozen Shoulder – A Review**

<sup>1</sup>Dr. Upendra Bhardwaj, <sup>2</sup>Dr. Vishnu Dutt Sharma

<sup>1</sup>Associate Professor, Dept. of Shayla Tantra, Government Ayurveda, Yoga & Naturopathy College Jaipur, Rajasthan, India

<sup>2</sup>Associate Professor, University Post Graduate Institute of Ayurveda Studies and Research, Dr. S.R. Rajasthan University, Jodhpur, Rajasthan, India

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**Corresponding Author:** Dr. Upendra Bhardwaj, Associate Professor, Dept. of Shayla Tantra, Government Ayurveda, Yoga & Naturopathy College Jaipur, Rajasthan, India

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### **ABSTRACT**

#### **Introduction**

*Avabahuka*, sometimes referred to as "Frozen Shoulder," is a common condition that hurts and stiffens the shoulder joint. It can be identified by a limited range of motion and discomfort that persists for a minimum of two months from the commencement of the ailment. Although the exact aetiology of *Avabahuka* is unknown, inflammation, trauma, or degenerative diseases are thought to be involved. Acharya Sushruta and others have regarded *Avabahuka* as a *Vataja vikara*, despite the fact that the term is not included in the *nanatmaja Vata vyadhi*. Shoulder wasting, or *amsa shosha*, is the initial stage of the disease, characterised by the dryness or loss of *sleshaka kapha* from *amsa sandhi*.

#### **Material & Method**

We collected information about *Avabahuka* (frozen shoulder) from the Brihatrayi and its commentaries, the Laghutrayi, and several modern and Ayurvedic books.

#### **Result**

Overall, the study's findings demonstrated the effectiveness of ayurvedic treatments in easing the discomfort brought on by *avabahuka* symptoms.

#### **Conclusion**

Ayurveda is a risk-free, all-natural, holistic approach to managing *avabahuka*, and it should be considered a viable therapeutic option.

#### **Keywords**

*Avabahuka*, Frozen Shoulder, range of motion,

Management, degenerative diseases, inflammation, trauma,

## INTRODUCTION

*Avabahuka* is considered to be a disease that affects the Amsa Sandhi (shoulder joint) and is caused 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 a *Vata Vyadhi*.<sup>1</sup> *Amsa Shosha* can be considered as the preliminary stage of the disease where loss or dryness of the *Shleshaka Kapha* (one of the types Kapha) within the shoulder joints occurs. The next stage, that is, *Avabahuka*, occurs due to the loss of *Shleshaka Kapha* and symptoms like pain during movement and restricted movement are manifested. This is commented in the Madhukosha Teeka that *Amsa Shosha* is produced by *Dhatukshaya*, that is, *Shuddha Vatajanya*, and *Avabahuka* is *Vata-Kaphajanya*.<sup>2</sup> The symptoms of *Avabahuka* are often compared with the symptoms of adhesive capsulitis, which is commonly referred to as frozen shoulder.<sup>3</sup> Adhesive capsulitis refers to a mysterious fibrosis of the glenohumeral joint capsule, manifested by diffuse, dull, aching pain within the shoulder and progressive restriction of motion, but usually no localized tenderness.<sup>4</sup> In early stages, the pain is worst at the hours of darkness and therefore the stiffness is limited to abduction and internal rotation of the shoulder. Later the pain is present most of the time with limited movements of the shoulder joint.<sup>5</sup> The prevalence rate is two to five for general population.<sup>6</sup> A number of treatment approaches are recommended for the management of frozen shoulder. These include pain management through analgesics, anti-inflammatory, steroid injections<sup>7,8</sup> and various treatment modalities like

physiotherapy, which commonly involves active and passive stretching and joint mobilizations.<sup>9</sup> In severe cases of restriction, orthographic distension,<sup>10</sup> surgical capsular release,<sup>11</sup> or manipulation under anesthetics<sup>12</sup> have been advocated. In spite of the variety of approaches, there is lack of substantial evidence to prove that treatment speeds recovery.<sup>13</sup> The general line of treatment mentioned for *Vatavyadhi* in Ayurvedic classics include *Snehana* (both internal and external), *Swedana*, *Mrudusamshodhana*, *Basti*, *sirobasti Nasya*, and so on. Charaka further states that, depending on the location and *dushya* (tissue element vitiated by *Vata*) each patient should be given specific therapies. Vagbhata has mentioned *Nasyakarma* in the *jatroordhva Vatavikaras*.

## MATERIAL & METHOD

Information about *Avabhauka* and Frozen shoulder was taken from Ayurvedic literature, commentaries, and modern medicine, in that order. Information on pertinent subjects has also been gathered from medical journals, both index and non-index.

## REVIEW OF LITRETURE

### Ayurveda View

#### *Avabahuka*

*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 a *Vata vyadhi*. *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, *Avabahuka*, 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*.<sup>14</sup>

### Aetiology (Nidana)

Cause of *Avabahuka* is mainly *vata dosh* as it is described under *vatavyadhi* and in later stage kapha dosha is also associated with *vata dosha*.<sup>15</sup> The causes of *avabahuk* may be classified in to three groups:

- 1) *Abhighataj* (trauma) or *marmabhighata*: injury to *ansa marm* (shoulder region) leads to stiffness of shoulder.
- 2) *Aaharaj* (unwholesome food): *tikta* (bitter), *ushana*, *kashaya* (astringent), *alpa*, *ruksha*, *pramita bhojanae* (food) cause vitiation of the *vata*.
- 3) *Viharaja* (activities or improper life style): due to over indulgence in things like excessive physical exercise, sudden fear, grief etc lead to depletion or loss of tissues and *vata* gets aggravated, other few factors are as below:
  - *Plavana* (swimming more than 40minutes).
  - *Bharavahan* (carrying heavy loads).
  - *Balvat vigraha* (wrestling with a more powerful person)
  - *Dukha shayya* (improper posture in bed).

### Pathogenesis (Samprapti) of Avabahuka

Acharya Sushruta states that *vata* that is vitiated around the shoulder joint depletes (*shosh* of *shleshmaka kapha*) the surrounding tissues and structures as well as causes vasoconstriction of the vessels, which causes discomfort and stiffness in the joint and, eventually, limits shoulder movement.

### Prodromal Symptoms (Purva Roopa)

*Avayakta* (minimal or no prodromal symptoms) in *vata vyadhi*

### Management Through Ayurveda

The general line of treatment mentioned for *vatavyadhi* (*avabahuka*) in Ayurvedic texts includes:

- *Snehana* (oleation both internal and external with medicated oils).
- *Swedana* (sudation with steam made from *vatashamaka* drugs)
- *Basti* (decoction or oil given through anal route like enema).
- *Agnikarma* and oral medications (in the form of guggul, decoctions etc.)
- *Nasya* (medication given through nasal route) as Acharya Vagbhata has mentioned *nasyakarma* in the *udarvajatrugata roga*.

Astanga sangraha mentioned *Navana nasaya* and *snehapana* for *avabahuk* where as Acharya Sushruta<sup>16</sup> advises *vatavyadhi chikitsa* except *siravyadha*, in Astanga Hridayam<sup>17</sup> first *nasya* then *basti*, *Baladi* or *dashmooladi kwath*<sup>18,19</sup> by Chakradatta for *avabahuka* and in Yoga Ratnakar<sup>20</sup> *bahuparivartana* (movements of shoulder joint as “*Masha tail rasonabhyam bahuvoch parivartanam, dashangim masha kwathaena jayata avabahukam*”. *Sahasrayoga* mentions *Prasaraniyadi Kashaya* in treatment of *Avabahuka*.<sup>21</sup>

A broad over view of some of the well - recognized methods today is provided below:

- *Nidana parivarjana* (avoidance of the causes) and *pathya ahar-vihar* (wholesome diet and activities).
- *Abyanga* (massage, applying pressure with warm medicated oil) like stretching.

- **Sweden** (sudation with *dosha shamak* steam) is deep heating and *Upnaha*.<sup>22</sup>
- **Pichu** - cotton swab soaked in hot medicated oil applied to the part affected.
- **Nasaya karma**<sup>23</sup>- the *Nasya karma* indicated in *Avabahuka* disease. The *Nasya* is *vatashamaka* and cures the diseases of the upper part of the body (*urdhwanga*).
- **Sanshamana aushadhi**- *Vatashamak* drugs, *kwath* and oils like *Yograj Guggul*, *Rasna*, *Erandadikshayaya*, *Mahanarayanadi* oil etc.
- *Yoga* and *aasana* like *surya namaskara* etc.
- *Bahu parivartanam* (shoulder exercise or physiotherapy).
- **Agnikarma**-. Sushruta has mentioned different methods of management of diseases, such as *Bheshaja karma*, *Kshara Karma*, *Agni karma*, *Shastrakarma* and *Raktamokshana*. The approach of *Agni karma* has been mentioned in the context of diseases like *Arsha*, *Arbuda*, *Bhagandar*, **Avabahuka**, *Sira*, *Snayu*, *Asthi*, *Sandhigata Vata Vikaras* and *Gridhrasi*. *Agnikarma* can be classified based on Type of *Akruti* is *Valaya*, *Bindu*, *Vilekha*, *Pratisarana*.<sup>24</sup> *Agnikarma* is basically a heat therapy and is able to pacify *Vata* and *Kapha Dosha* by virtue of its *ushna-guna*.<sup>25</sup> Through *Agnikarma*, the heat transfer directly to the muscular region which helps in joint movement.<sup>26</sup>

Acharya Sushruta has indicated the materials by name according to the site of **Agni Karma**:

1. *Twakadagtha* – *Pippali*, *Ajasakrida*, *Godanta*, *Shara*, *Shalaka*.
2. *Mamsadagtha* – *Jambhavsta Shalakra* and Other Metals.

### 3. *Sira*, *Snayu*, *Sandhi*, and *Asthi dagdha* – *Madhu*, *Jaggery*, and *Sneha*

The *agnikarma* tool was made of five different metals and heated until it was red hot before being applied to the most painful location. It must have done this in order to reach the troublesome joint capsule in the shoulder joint, which would have reduced inflammation and, as a result, pain. After the pain reduced, the patient's greater confidence led to an improvement in range of motion.

**Viddha Karma**- Immediately relieving pain, *Viddha karma* (*Suchivedhana*) cleanses the vitiated *dosha* and the *Avarana* of *vatadi dosha* from the body. *Avabahuk's sampratibhanga* in successively repeated settings also resulted in a reduction of stiffness. By clearing obstacles, it encourages healthy circulation around the shoulder joint.

**Marma therapy** - Marma is the vital point and defined as the centre of prana. Marma therapy increases strength and blood flow to the affected muscle thus helping in relieving pain and other symptoms in *Avabahuka*.

**Shiravedhan**- In Ayurveda, *Siravedha* is prescribed for many types of diseases including neuromuscular disorders like *Avabahuka* (Frozen shoulder/Brachialgia), *Visvachi* (Brachial neuralgia or neuritis), *Bahusosha* (Muscular wasting of arm/forearm), *Gridhrasi* (Sciatica), *Khanja* (Limping), & *Pangu* (Paraplegia). *Siravedha* as such implies puncturing of *Sira* for

bloodletting. It is a type of *Raktamokshana* (bloodletting), which is described under the *Sodhana*/purification processes of body in Ayurveda. Sushruta considers *Raktamokshana* as a regimental therapy in the months of autumn for purification of body humour (Dosha) & is also advocated as *Ardhachikitsa* or half of the treatment for surgical cases.<sup>27</sup> Frozen Shoulder or Adhesive capsulitis causes pain & stiffness in shoulder. Pain is usually located over the outer shoulder area & sometimes upper arm. *Siravedhan* done by *Brihimukha Yantra- 2Angul* above *Kshipra Marma (Padasyaangusthaangulyo Madhye)* or *Amsyo Antare*: The first place described above lies 2 Angul above the midpoint of the angle formed between thumb & index finger towards the dorsum of palm. The major superficial vein present in this area is cephalic vein. The second place to be punctured is advised as a place in between the two scapulas, thus the vein to be punctured may be probably a cutaneous vein (as dorsal scapular vein is deep seated in this area).

### Contemporary View of Frozen Shoulder

Frozen shoulder (FS) or adhesive capsulitis of the shoulder (FS) is a disorder characterized by its inflammatory and fibrotic process.<sup>28</sup> Codman first included the term “frozen shoulder” in 1934.<sup>29</sup> The glenohumeral joint's range of active and passive movement is limited, and stiffness and pain are the main symptoms experienced by those who suffer from this condition.<sup>30</sup> These symptoms impair a person's quality of life by interfering with their ability to carry

out their regular daily activities and impacting both their personal and professional lives.<sup>31</sup> For one or more years, 60% of the affected individuals may see a gradual restoration of range of motion following their shoulder impairment.<sup>32</sup> Forty percent of patients experience a chronic illness that limits their ability to do daily tasks.<sup>33</sup> It's interesting to note that the quality of life appears to be directly correlated with the affected shoulder's loss of motion; hence, a good therapy would enhance both physical function and quality of life.

### Aetiology<sup>34</sup>

There is a connective tissue capsule surrounding the shoulder joint. When the capsule surrounding the shoulder joint gets thicker and tighter, limiting movement, the condition is known as frozen shoulder. Why this occurs for some people is unknown. However, it is more likely to occur during prolonged immobilisation of the shoulder, such as following surgery or an arm fracture. There is still more to learn about the cause of frozen shoulder. Nonetheless, a few plausible risk factors have been found:

- Diabetes mellitus (with a prevalence up to 20%)
- Stroke
- Thyroid disorder
- Shoulder injury
- Dupuytren disease
- Parkinson disease
- Cancer
- Complex regional pain syndrome

### Epidemiology

Up to 5% of cases are adhesive capsulitis. The non-dominant shoulder is more likely to be impacted, and

women are four times more likely to be afflicted than men.<sup>35</sup>

### **Pathophysiology**

The common description of frozen shoulder is fibrotic, inflammatory contracture of the rotator interval, capsule, and ligaments. Nevertheless, nothing is understood about the origins of AC. There is debate, however arthroscopic observations indicate that fibroblastic proliferation and cytokine-mediated synovial inflammation is the most widely accepted pathophysiology. Additional observations include the formation of nodular bands and adhesions caused by increased collagen around the rotator gap. The coracohumeral ligament, or roof of the rotator cuff interval, is typically the first structure to be impacted. External rotation of the arm is restricted by contraction of the coracohumeral ligament, which often affects the arm first in early AC. The glenohumeral joint capsule thickens and contracts in later stages, significantly reducing range of motion in all directions.<sup>36</sup>

### **Normal range of motion**

A normal course of frozen shoulder is characterised by a progressive restriction of passive shoulder mobility. Three overlapping phases are typically used to characterise the development; literature also offers a classification of the four stages. Practically speaking, though, we advised employing a two-stage scheme: early and developed frozen shoulder.

1. Freezing (2 to 9 months): Early
2. Frozen (4 to 12 months): Developed
3. Thawing (12 to 42 months): Developed

### **Freezing**

A painful initial phase that is worse at night and is characterised by a progressive increase in the

restriction of glenohumeral joint range of motion.

### **Frozen**

The second phase was less painful than the "Freezing" stage, but it still included stiffness and a persistent limitation in glenohumeral joint motion.

### **Thawing**

the third stage, or recovery phase, during which range of motion gradually returns.

The average range of motion in frozen-stage shoulder patients is 98° of abduction, 117° of flexion, 33° external rotations and 18° of internal rotation with the shoulder abducted to 90°. While the "stiffness stage" is the longest of the stages, adhesive capsulitis is thought to be reversible in the acute pain stage.

### **Diagnosis**

Based on the results of a clinical examination and a simplex radiograph, the diagnosis should be made. Although these are frequently described as normal, some may have periarticular osteopenia as a result of inactivity. These x-rays can also help rule out other possible causes of a stiff shoulder, like rotator cuff disease, calcific tendonitis, and glenohumeral arthritis. Although MRI imaging is not usually required to diagnose adhesive capsulitis, it can reveal a modest thickening of the coracohumeral ligament and joint capsule. An MRI by itself can also be useful in ruling out tumours or infections as additional causes of a stiff shoulder. Although laboratory tests are not useful in diagnosing frozen shoulder, they can be ordered in the case of secondary frozen shoulder in order to rule out an undiagnosed co-morbidity based on history. These tests include full blood count, erythrocyte sedimentation rate, C- reactive protein, thyroid function test, lipid levels, and fasting glucose.<sup>37</sup>

### Complication

- Residual pain
- Residual stiffness
- Fracture of the humerus
- Rupture of the bicep's tendon after shoulder manipulation

### DISCUSSION

Most people with frozen shoulder do heal, but it could take one to three years. Physical therapy and arm exercises will typically lead to a gradual improvement in symptoms. Thus far, studies do not indicate that the results of people with diabetes are worse than those without the disease. Ten percent or so of individuals will still have shoulder discomfort and impairment. Following arthroscopic surgery, symptoms gradually become better, but recovery is slow. To guarantee recovery, postoperative physical therapy is necessary following surgery. According to Sushruta Samhita and Madhav Nidan, *Bahu Shosh* and *Avabahuk* can be viewed as a continuum rather than as two distinct disorders or diseases. The Ayurvedic therapy principles of *Vatanulomana*, *Sthanika Abhyanga*, *Swedana*, *Lepa*, Agni Karma, Marma therapy and oral drugs to break the *Vatakaphaja samprapti* of *Apabahuka* are beneficial in managing the condition of frozen shoulder.

### CONCLUSION

Ayurveda mentions *Avabahuka* as a *Vatavyadhi* who is closer to the cold shoulder of contemporary medicine. *Avabahuka* is a frequent musculoskeletal ailment observed in practice, a disease of the Ansha sandhi (shoulder joint). Even with a wide range of treatments available, the outcome is still unsatisfactory. People can take a complete approach to shoulder health by comprehending the special

insights offered by Ayurveda, combining age-old therapies like *nasya*, *taila*, *Agni karma*, *Panchkarma*, and *marma* therapy, and balancing them with contemporary methods like physiotherapy.

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