



A Comprehensive Review of *Avabahuka* (Frozen Shoulder) in Ayurveda: Pathogenesis, Diagnostic Criteria, and Integrative Therapeutic Approaches

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ABSTRACT

Avabahuka, commonly known as frozen shoulder, is a debilitating condition characterized by restricted movement, stiffness, and pain in the shoulder joint due to *Vata Dosha* imbalance. This review explores the Ayurvedic perspective on *Avabahuka*, detailing its etiopathogenesis, diagnostic criteria, and therapeutic interventions. The underlying pathology is linked to *Vata Dosha* vitiation, with additional involvement of *Kapha* in obstructive cases (*Kaphavrita Vata*), leading to joint immobility and *Ansashosha* (shoulder muscle wasting) in chronic conditions. Management strategies in Ayurveda focus on balancing *Vata* through therapies like *Abhyanga* (oil massage), *Swedana* (fomentation), *Basti* (medicated enema), and *Nasya* (nasal therapy), which collectively enhance circulation, relieve stiffness, and support joint function.

The chronic nature of *Avabahuka* makes it a *krichrasadhya* (difficult to cure) or *Asadhya* (incurable) condition when untreated, underscoring the importance of early intervention. Ayurvedic principles offer a holistic approach to treatment, emphasizing both preventive and therapeutic measures that align with the goals of modern rehabilitation. This review suggests that integrating Ayurvedic therapies with contemporary medical practices could enhance patient outcomes, offering an effective, comprehensive pathway for managing frozen shoulder. Further research is recommended to validate these integrative approaches and optimize treatment protocols.

Keywords: *Avabahuka*, frozen shoulder, *Abhyanga*, *Swedana*, *Basti*, *Nasya*, *Vata Vyadhi*

Introduction

Avabahuka, known as frozen shoulder or adhesive capsulitis in modern medicine, is a debilitating condition resulting in shoulder joint stiffness, pain, and restricted movement, which significantly affects daily activities. In Ayurveda, *Avabahuka* is classified as a *Vata Vyadhi*—a disorder primarily caused by *Vata Dosha* aggravation. The purpose of this review is to integrate Ayurvedic concepts and therapeutic approaches with insights from modern medicine, providing a comprehensive understanding of *Avabahuka*'s pathophysiology, diagnosis, and management. The scope of this article includes both preventive and curative measures, covering therapies ranging from Panchakarma procedures to lifestyle modifications.

The organization of this review follows a structured analysis of *Avabahuka*, beginning with its etiological and pathogenic factors, moving through diagnostic criteria, and finally presenting therapeutic protocols from both *Ayurveda* and modern practices. While previous reviews on shoulder disorders often focus on individual therapies, this article addresses *Avabahuka* in its entirety, offering a holistic perspective that bridges classical and contemporary insights. Currently, there is a knowledge gap regarding clinical trials and studies comparing Ayurvedic treatments for *Avabahuka* with conventional therapies for frozen shoulder. By synthesizing Ayurvedic knowledge with modern research, this review aims to highlight potential avenues for future studies, advocating for integrative, patient-centered approaches that enhance both treatment efficacy and quality of life for patients.

Etiology and Pathogenesis

Avabahuka is primarily considered a *Vata Vyadhi*, or disorder rooted in *Vata Dosha* aggravation, manifesting as a progressive degeneration of *Shleshaka Kapha*, the lubricating component in joints. Contributing factors include improper dietary habits, such as consumption of dry or cold foods, and lifestyle elements like excessive physical strain or sudden trauma to the shoulder region. Pathogenesis begins with *Vata* vitiation, leading to depletion of *Shleshaka Kapha* in the shoulder, specifically affecting the *Sira* (veins) and *Snayu* (ligaments) around the joint, resulting in *Amsa Shosha*

(degeneration of shoulder tissues).ⁱ The progressive restriction in shoulder movement, termed *Bahupraspandahara*, is akin to the "frozen shoulder" of modern medicine, characterized by limited abduction and rotation due to stiffness.

Nidana Panchaka

Nidana Panchaka in Ayurveda provides five foundational methods to understand disease manifestation, essential for accurate diagnosis. *Avabahuka* (frozen shoulder), although not individually detailed in Ayurvedic texts, is recognized as a *Vata Vyadhi* (*Vata* disorder), with general causes of *Vata* disorders applied to it.ⁱⁱ

Nidana

The specific cause of *Avabahuka* (frozen shoulder) is not directly mentioned in Ayurvedic texts, but it is classified as a *Vata vyadhi* (*Vata* disorder), meaning that general causes of *Vata* imbalance apply.ⁱⁱⁱ These causes are divided into:

Bahya Hetu (External Causes): Injury to vital points, especially around the shoulder joint (*Ansa Sandhi*), can disturb *Vata*, leading to *Avabahuka*.

Abhyantara Hetu (Internal Causes): Dietary and lifestyle factors that aggravate *Vata* contribute to the disease. Foods with *Katu* (pungent), *Tikta* (bitter), and *Sheeta* (cold) qualities, as well as activities like excessive strain from swimming, wrestling, or heavy lifting, increase *Vata* and affect shoulder function.

Poorva Roopa (Prodromal Symptoms)

Poorva Roopa refers to early, subtle symptoms that appear before a disease is fully manifested, signaling the potential onset of illness. Although the specific *Poorva Roopa* for *Avabahuka* (frozen shoulder) is not detailed in classical texts, the general prodromal symptoms of *Vata Vyadhi* (*Vata* disorders) can be referenced. Ayurvedic texts describe the *Poorva Roopa* for *Vata* disorders as *Avyakta lakshana*^{iv} (unmanifested symptoms), indicating symptoms that are mild or barely noticeable. *Chakrapanidatta* clarifies that *Avyakta* implies symptoms that are *Alpa* (mild) or *Ishat Vyakta* (slightly apparent).^v

In the context of *Avabahuka*, these *Poorva Roopa* may include minor symptoms that precede full disease development, such as *Alpa Stabdhatata* (mild stiffness), *Alpa Shoola* (vague pain in the shoulder), and slight movement restrictions, all with minimal severity. Recognizing these subtle signs can aid in early intervention, potentially preventing the progression to full-blown *Avabahuka*.

Roopa (Symptoms)

The signs and symptoms that appear when a disease fully manifests are referred to as *Roopa* and become prominent during the *Vyakta Avastha* (stage of full manifestation). For *Avabahuka*, *Acharya Dalhana* clarifies the terminology related to the shoulder area, where *Ansa* indicates the upper arm (*bahu shira*), *Ansa Pradesha* refers to the surrounding shoulder region, and *Ansa Bandanam* signifies the *Shleshaka Kapha* residing in the joint.^{vi} According to *Nyaya Chandrika*, aggravated *Vata* due to *Dhatukshaya* (tissue depletion) leads to the drying of *Ansa Bandhana*, resulting in the development of *Avabahuka*.^{vii}

Madhukosha Vyaakhya further divides *Avabahuka* into two types based on the causative *Dosha*: *Vata janya* (*Vata* -related) and *Kaphajanya* (*Kapha*-related). In *Avabahuka*, the *Sthanika Lakshana* (local symptoms) are more prominent than the *Sarvadaihika Lakshana* (general symptoms), making local shoulder symptoms the primary diagnostic features. The cardinal symptoms of *Avabahuka* include pronounced stiffness, pain, and restricted movement in the shoulder joint, reflecting the involvement of both *Vata* and *Kapha Dosha*'s in the affected region.

Key Symptoms of Avabahuka

Bahupraspanditahara (Impaired Limb Movement): A core symptom in *Avabahuka*, reflecting *Vyana Vata* dysfunction. It signifies difficulty in moving the upper limb, specifically in shoulder flexion, extension, and contraction. This impairment depends on the extent of structural injury and is highly disruptive to shoulder function.

Anasabandhana Shosha (Degeneration of Shoulder Structures): Refers to the drying or degeneration of shoulder-supporting structures like synovial fluid and veins, essential for movement. Channel blockage (*Srotorodha*) hinders nourishment, leading to further degeneration and restricted joint function.

Shoola (Pain): Pain is a common complaint in *Avabahuka*, usually localized to the shoulder joint or radiating down the arm. Tenderness (*Sparsh Asahatva*) is often observed in the coraco-acromial and acromioclavicular joints, indicating sensitivity upon touch.

Upashaya and Anupashaya

Upashaya and *Anupashaya* are valuable diagnostic tools, especially when a disease is challenging to identify. *Upashaya* refers to interventions that relieve symptoms, while *Anupashaya* involves actions or treatments that worsen the condition. Though specific *Upashaya* for *Avabahuka* is not mentioned in classical texts, it is observed that activities involving shoulder movement tend to aggravate symptoms, especially at night. Conversely, hot fomentation and rest provide relief, making them effective *Upashaya* measures.^{viii}

In *Avabahuka*, factors causing *Vata* aggravation, as noted in the *Nidana* (causes), act as *Anupashaya*, whereas measures that calm *Vata Dosha*, such as warmth and rest, are classified as *Upashaya*.

Samprapti (Pathogenesis)

In *Avabahuka* (frozen shoulder), *Vata* imbalance can occur in two ways: either through direct aggravation from factors like dryness and strain (*Dhatukshayajanya Avabahuka*)^x causing tissue depletion and *Ansashosha* (shoulder dryness), or through excessive *Kapha*, leading to *Kaphavrita-Vata*,^x where *Kapha* blocks *Vata* and creates stiffness in the shoulder. As *Vata* localizes in the shoulder (*Ansa Pradesha*), it causes degeneration by reducing *Shleshaka Kapha* (lubrication), resulting in restricted movement (*Bahupraspandita hara*) and shoulder pain (*Shoola*).

The *Madhukosha* commentary distinguishes *Ansa Shosha* and *Avabahuka* as stages in disease progression.^{xi} External trauma (*Marmabhighata*) to the shoulder also affects joint components like *Sira* (vessels) and *Snayu* (ligaments), resulting in restricted movement and a mix of musculoskeletal and neurological symptoms due to *Vata*'s drying effect on local *Kapha*.

Table No. *Samprapti ghataka of Avabahuka*^{vii, xiii}

<i>Dosha</i>	<i>Vata (Vyana Vata, Prana Vata)</i>
<i>Anubandha Dosha</i>	<i>Kapha (Sleshaka)</i>
<i>Dooshya</i>	<i>Mamsa, Asthi, Sira, Snayu, Kandara</i>
<i>Srotas</i>	<i>Rasavaha, Raktavaha, Mansavaha, Asthivaha</i>
<i>Sroto Dusti</i>	<i>Sanga</i>
<i>Rogamarga</i>	<i>Madhyam</i>
<i>Vyadhi Swabhava</i>	<i>Chirakari, ashukari in case of abhighataja</i>
<i>Agni</i>	<i>Jataragni and Dhatwagnis</i>
<i>Udbhavasthana</i>	<i>Amapakwashaya</i>
<i>Sancharasthana</i>	<i>Rasayanis</i>
<i>Adhithana</i>	<i>Amsa Pradesh</i>
<i>Vyaktastana</i>	<i>Bahu Pradesh, Amsasandhi</i>

Chikitsa (Management)

The treatment of *Avabahuka* (frozen shoulder) focuses on balancing *Vata Dosha*, originating from the *pakwashaya* (colon), and may also address *Kapha Dosha* in cases of *Avaranajanya* (*Kapha*-obstructed) *Avabahuka*. Treatments are categorized broadly into *Santarpana* (nourishing therapies) for tissue-depleted (*Dhatukshayajanya*) cases, and *Apatarpana* (depleting therapies) for *Kapha*-related cases.^{xiv} Based on the disease's cause, the following therapeutic measures are applied:

Ayurveda Management

1. **Nidana Parivarjana:** Avoidance of causative factors is emphasized by Acharya Sushruta as a primary treatment approach to prevent disease aggravation.^{xv}
2. **Abhyanga (Massage):** Oil massage nourishes tissues, enhances circulation, and alleviates pain by strengthening muscles and nerves, making it a core therapy for *Vata* disorders.
3. **Swedana (Fomentation):** Fomentation therapies like *Nadi Sweda* improve circulation and aid in absorption of massage oils, relieving stiffness and promoting flexibility.
4. **Virechana (Mild Purgation):** Recommended for *Vata vyadhi*,^{xvi} mild purgation helps regulate body functions without fully evacuating the colon, assisting in *Vata* balance.
5. **Basti (Medicated Enema):** As *Vata* primarily resides in the colon, Basti is highly effective in pacifying aggravated *Vata* and is a key treatment for *Vata*-related disorders.^{xvii, xviii}
6. **Agnikarma (Thermal Cauterization):** Used for *Snayugata Vata* (ligament disorders), Agnikarma alleviates pain and improves mobility by targeting the tendons, muscles, and vessels affected in *Avabahuka*.^{xix}
7. **Sira Vyadha (Venesection):** Sushruta recommends bloodletting for shoulder region congestion, except in tissue-depleted cases, helping to alleviate symptoms by relieving local blood stagnation.^{xx}

8. **Nasya (Nasal Administration):** Nasya strengthens the upper body, particularly the neck, shoulders, and chest, supporting *Avabahuka* management by nourishing and stimulating shoulder-related nerves and tissues.^{xxi}
9. **Marmachikitsa (Vital Point Therapy):** *Marmachikitsa* focuses on activating and treating specific *marma* (vital) points around the shoulder region to relieve pain, restore mobility, and support recovery. Stimulating the *Marma* points like *Amsa Marma* (shoulder region) helps regulate energy flow and relieve blockages, thereby enhancing muscle and joint health. This therapy is particularly beneficial for improving both the physical and energetic functions of the shoulder joint.^{xxii}

Contemporary Medical Treatments for Frozen Shoulder

Contemporary management of frozen shoulder, or adhesive capsulitis, includes a variety of non-surgical and surgical methods aimed at reducing pain and improving mobility. Key treatments include:

1. **Physical Therapy:** Stretching and strengthening exercises are the primary methods used to gradually restore range of motion and alleviate stiffness.^{xxiii}
2. **Medications and Injections:** NSAIDs (non-steroidal anti-inflammatory drugs) reduce pain and inflammation, while corticosteroid injections target joint inflammation, offering short-term relief to support physical therapy.^{xxiv}
3. **Joint Distension:** Injecting saline or corticosteroids into the shoulder capsule helps expand it, breaking adhesions and enhancing mobility.^{xxv}
4. **Manipulation Under Anesthesia:** For severe cases, manipulation under anesthesia can release the tight shoulder joint, improving mobility.
5. **Ultrasound Therapy:** Ultrasound generates deep heat, easing stiffness and pain, and is used in combination with physical therapy.^{xxvi}
6. **Arthroscopic Surgery:** In chronic cases, minimally invasive surgery removes scar tissue, followed by a structured rehab program to maintain movement.^{xxvii}

Sadhya Asadhyata (Prognosis)

There is no explicit reference to the prognosis of *Avabahuka* in Ayurvedic classics, but it is generally regarded as a *Vata Vyadhi* (*Vata* disorder) and classified as a "maharoga," which indicates a challenging condition. *Vata Vyadhi* disorders are known to be difficult to cure, especially when accompanied by *Mamsa Kshaya* (muscle wasting). According to *Yogaratanakar*, *Vata* disorders are typically *Asadhya* (incurable),^{xxviii} with recovery possible only through divine intervention. However, classical texts suggest that if the patient is physically strong and without other complications, treatment can yield positive outcomes, making the condition *sadhya* (curable) under favorable conditions.^{xxix}

Acharyas like Sushruta, *Madhavakara*, *Bhavaprakasha*, *Vagbhatta*, and *Yogaratanakar* indicate that pure *Vata* disorders are *krichra sadhya* (difficult to cure), tissue-depletion-related (*dhatukshaya*) disorders are *asadhya* (incurable), and muscle-involved (*aamsaraga*) disorders are *yapya* (manageable but not fully curable).^{xxx} Charaka also notes that *Vata* disorders become *krichrasadhya* or *asadhya* if left untreated for over a year.^{xxxi} Therefore, *Avabahuka* is *sadhya* (curable) in its initial stages but becomes *krichrasadhya* (difficult to cure) or *asadhya* over time.

Upadrava

Sushruta lists complications of *Vata Vyadhi*, including *Shotha* (swelling), *Kampa* (tremors), *Suptatwacha* (numbness), *Adhmana* (distension), and *Antah Ruja* (internal pain).^{xxxii} Vijayarakshita considers *ansashosha* (shoulder muscle wasting) a specific complication of *Avabahuka*,^{xxxiii} often resulting from chronic cases that lead to muscle atrophy around the shoulder joint.

Discussion

The Ayurvedic understanding of *Avabahuka* (frozen shoulder) highlights the critical role of *Vata Dosha* in its pathogenesis, particularly in cases where tissue depletion (*Dhatukshaya*) and *Vata-Kapha* obstruction (*Kaphavrita Vata*) are involved. The management principles of *Avabahuka* emphasize a holistic approach targeting both preventive and therapeutic strategies to restore functional movement. Treatments such as *Abhyanga* (oil massage), *Swedana* (fomentation), and *Basti* (enema) serve to balance *Vata*, alleviate joint stiffness, and improve circulation to the affected region. Additionally, specialized therapies like *Agnikarma* and *Nasya* provide localized benefits, helping relieve chronic symptoms while supporting shoulder mobility. Ayurvedic approaches align with the concept of maintaining shoulder strength, flexibility, and nourishment, which modern interventions also address in similar conditions like adhesive capsulitis.^{xxxiv, xxxv, xxxvi, xxxvii}

Notably, complications such as *Ansashosha* (shoulder muscle wasting) underscore the chronic nature of *Avabahuka* and its classification as a *Maharoga* (major disease). Sushruta's identification of *Upadhravas* (complications) in *Vata Vyadhi* supports the need for early intervention, as prolonged conditions tend to become *krichrasadhya* (difficult to cure) or *asadhya* (incurable) over time. Integrating Ayurvedic therapies with modern rehabilitative practices could offer a more comprehensive, effective treatment pathway for patients, reducing the risk of long-term complications and enhancing outcomes.^{xxxviii}

Conclusion

In conclusion, *Avabahuka*, a debilitating *Vata Vyadhi*, requires a tailored approach in Ayurvedic management, combining preventive and therapeutic measures aimed at balancing *Vata* and preserving shoulder function. Initial stages of *Avabahuka* are often *Sadhya* (curable), but progression without treatment can lead to complications and make the condition challenging to manage. Effective treatment, grounded in Ayurvedic principles of *Vata* pacification and *Kapha* balance, includes *Abhyanga*, *Swedana*, *Basti*, and *Nasya*, each contributing to mobility, pain relief, and tissue rejuvenation. Further studies exploring the integration of Ayurvedic and modern approaches could offer promising insights for optimizing shoulder health and managing conditions like frozen shoulder comprehensively.

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