

## Case Report



### Integrative Ayurvedic approach in the management of *Avabahuka* (Frozen Shoulder) - A case report

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#### ABSTRACT:

**Background:** *Avabahuka* is one among the *Vatavyadhi* which affects the *Amsa sandhi* (Shoulder joint) and causes *Shoshana* (wasting) of the local binding structures (tendons, ligaments and muscles). This leads to *Sankocha* (constriction) of local *Sira* (vessels) and leads to symptoms like *Bahuprasapanditahara* (inability to lift the upper limb) and *Shoola* (pain). Due to its clinical manifestation, it can be correlated with Frozen shoulder (Adhesive capsulitis) where there will be loss of range of movements and pain in the shoulder. **Clinical findings:** Here, a case report of 48 years old female patient with no comorbidities, complaining of severe pain in left shoulder region with stiffness and difficulty to raise the left hand for 1 month. On examination, there was severe tenderness and range of movements was affected. **Intervention:** 3 Sittings *Marma chikitsa* followed by 1 sitting of *Agni karma and Pratimarsha Nasya* with *Anutaila* for 1 week along with internal medications *Prasaranyadi Kashaya* & Capsule Cervilon were advised. **Outcome:** Within a week, pain and stiffness were reduced with increased range of movements in her left upper limb leading to a better quality of life. **Conclusion:** The treatment approach in the management of *Avabahuka* has shown significant results in the presenting complaints of the patient within a period of 1 week. Here, *Marma chikitsa* helped in enhancing the flow of *Prana*, thereby balancing *Vata dosha* and also acts in *Srotorodha Nivarana*. *Agnikarma* helped to remove the *Avarodha* from the *Srotas* caused by vitiated *Vata* and *Kapha*. *Nasya* helps in *Vatanulomana* and does *Srotoshodhana* along with *Shamana Oushadhis*.

**KEYWORDS:** *Avabahuka*, *Agnikarma*, Case report, Frozen shoulder, *Marma Chikitsa*.

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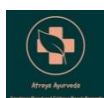
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## 1. INTRODUCTION

*Avabahuka* is considered to be a *Vatavyadhi* (disorders due to vitiated *vata dosha*). *Acharya Charaka* has not included it in *Nanatmaja vata vyadhi*, *Acharya Sushruta* has considered it as *Vata vaydhi* and *Madhavakara* has considered it as *Vata kapha pradhana vyadhi*. *Avabahuka* impairs the normal functioning of the upper limb. The prefix 'Ava' means *Viyoga* or *Vikruta* which means dysfunction or separation. The word 'Bahu', according to *Acharya Sushruta* is one among the *Shadargas* (6 parts of the body), meaning upper limb. Hence, the term *Avabahuka* is "dysfunction of *Bahu*" (stiffness or disability in the arm). *Avabahuka* is caused due to vitiated *Vata* located at *Amsamoola* (root of shoulder) leading to *Sira sankocha* (constriction of veins) resulting in *Bahupraspanditahara* (loss of movement of arm). *Acharya Sushruta* says aggravated *Vata dosha* localised in *Amsa desha* (shoulder region) dries up *sneha* present there, resulting in constriction of *Siras* (veins) and finally leading to *Avabahuka*. [1] In *Madhava nidhana*, two conditions has been explained, *Amsa shosha* and *Avabahuka*. *Amsa shosha* is the preliminary stage of the disease where loss or dryness of *Sleshaka kapha* at *Ama sandhi* occurs. In next stage, due to loss of *Shleshaka kapha*, symptoms like *Shoola* during movement and restricted movements are manifested by causing *Avabahuka*. [2] The prevalence of Frozen shoulder in India is 2-10% in non-diabetic patients and 50% in older patients with diabetes. In comparison, the general population has a life-time prevalence of 2-5%. [3] As per contemporary science,

treatment includes analgesics, steroid injection, hydro dilatation, shoulder manipulation and surgery. [4]

## 2. CASE REPORT

### Patient information:

A 48 years old female presented to Shalya OPD (OPD number: 2419611) with chief complaints of pain in the left shoulder region with stiffness and difficulty to raise the left hand since 1 month. The patient was apparently normal 1 month back. While doing housework by lifting heavy weight, she experienced sudden pain over left shoulder region along with inability to lift her left hand. The pain gets aggravated while working and during hand movements and gets relieved slightly during rest. For this she approached Allopathic hospital and took treatment for the same (NSAIDs, Analgesics). As there was no symptomatic relief. In this condition, she consulted Shalya Tantra OPD for Ayurvedic management. Based on symptoms and history given by patient, she was diagnosed as Frozen shoulder (*Vama Avabahuka*). There was no history of drug allergy, Type 2 Diabetes Mellitus, Hypertension, Thyroid dysfunction or any other comorbidities. Personal history of patient includes mixed diet and good appetite. Bowel movements were regular, occurring once daily and micturition was regular and 5-6 times per day. The patient had a habit of consuming tea twice a day. On Cardiovascular system examination, S1 S2 was heard with no added sounds. The respiratory system showed normal bronchovesicular breath sounds with bilateral air entry being normal. Per abdomen examination revealed a soft, non-tender abdomen with no organomegaly.

**Clinical findings:** On physical examination, the patient had stable vitals (BP-110/80mmHg, RR-18/min, Pulse rate-72bpm, Temperature- 98.7<sup>o</sup> F).

**Local Examination of Left Shoulder:** The patient was examined in sitting position. Severe tenderness was present. Wasting of the arm and swelling were absent. The patient was afebrile. The range of movements of the left shoulder joint revealed that there was mild restriction for active flexion, moderate restriction for active & passive extension and external and internal rotation were actively & passively restricted due to pain. Abduction was actively restricted but passively possible with mild pain as shown in figure.1.

**Figure 1: Before & After treatment**



Before Treatment



After Treatment

**Diagnostic Assessment:** To rule out the general health of the patient routine haematological investigations were done. Haemoglobin level 11.1gm/dl, Total white blood cells measures 7,300 cells/cu mm and random blood sugar level was 80mg/dl. Ultrasonography of Left Shoulder revealed reduced anterior rotation interval - Frozen Shoulder/Adhesive capsulitis. Based on clinical correlation and imaging, a diagnosis of frozen shoulder was confirmed.

**Differential Diagnosis:** Frozen shoulder should be differentiated from other conditions presenting with shoulder pain and movement restriction. Rotator cuff tears usually cause weakness during arm elevation, but passive range of motion is largely preserved, which helps to distinguish them from the global stiffness of adhesive capsulitis. Osteoarthritis of shoulder joint can mimic frozen shoulder with pain and stiffness and difficulty in flexion and extension, however radiographic evidence of joint space narrowing, osteophyte formation and subchondral sclerosis differentiates it.

**Therapeutic Intervention:** The treatment was planned as per *Avabahuka line of management described in Ayurveda classics* with due importance to dosha involvement. 3 Sittings of *Marma* therapy followed by 1 sitting of *Agni karma and Pratimarsha Nasya* with *Anutaila* for 1 week was carried out. All the procedures were conducted as per the Standard Operating Procedures. During this period, internal medications *Prasaranyadi Kashaya* & Capsule *Cervilon* were advised. The intervention, medicines and sourcing are detailed in Table.1 and Table.3 respectively.

#### **Interventional SOPs:**

**Marma therapy SOP:** According to *Agastya Marma chikitsa* & Kerala school of *Marma chikitsa*, pressure gradation is discussed in terms of *Matra*.

**Purvakarma:** Before beginning *Marma chikitsa*, the patient should be positioned comfortably, either sitting or lying down, ensuring that the limb to be treated is fully relaxed. Practitioner's hands should be clean and warm. Apply suitable medicated oil, if necessary.

Identify the *Marma* point accurately by palpation. Pressure intensity to be chosen as per *Marma* type.

**Pradhanakarma:** For *Apastambha marma*, the hypothenar part of the palm is placed horizontally over the *Marma* point and steady uniform pressure of  $\frac{1}{2}$  *matra* was applied and then released. Press & release pattern was adopted. For *Amsa marma*, the thumb is positioned directly over the *Marma* point and slow vertical pressure of  $\frac{3}{4}$  *matra* applied using pulp of thumb and then released. For *Kakshadhara marma*, the pulp of the middle three fingers is placed over the *Marma* point while the thumb is positioned posteriorly to provide support, and firm, controlled pressure of  $\frac{1}{2}$  *matra* is applied and released. For *Urvi Marma*, the first interphalangeal joint of the thumb is placed on the *Marma* point, with the remaining four fingers resting along the outer side of the arm for support, and pressure of 1 *matra* is applied and then released. For *Kshipra Marma*, either the pulp of the middle three fingers or the thumb is placed along the direction of the patient's thumb, gentle pressure of  $\frac{1}{4}$  *matra* applied and released. For *Manibandha Marma*, the first interphalangeal joint of the thumb is placed directly over the *Marma* point,  $\frac{1}{4}$  *matra* pressure is applied, held for the therapeutic duration, and then released as shown in figure.2.

**Paschatkarma:** After completion of *Marma chikitsa*, patient is advised to take adequate rest for some time. Patient should be observed for any undesirable effects. Appropriate follow up instructions must be given.



**Figure 2: Stimulated marma points**

**Agnikarma SOP:** *Purvakarma:* Fitness of the patient for the procedure, preparation of the required materials such as *Shalaka*, gas stove, *Ghrita Kumari rasa*, area demarcation for *Agnikarma* and *Panchadhatu shalaka* must be heated up to red hot.

*Pradhanakarma:* After painting of demarcated area with *Panchvalkala kwatha*, red hot *Shalaka* touched to the most painful area. *Agnikarma* with *Panchadhatu Shalaka* is done in *bindu* pattern leaving 0.5 cm gap between 2 points of *dagdha* as shown in figure.3. 20 points of touch were done over left shoulder region and immediately *Ghrita Kumari* was applied over the site.

*Paschatkarma:* The patient is advised to keep open the burnt part. Frequent application of *Shatadhouta ghrita* is advised. Post procedure evaluation of stiffness and pain in the left shoulder region assessed.



**Figure 3: Agni karma**

**Nasya karma:** Administered using *Anu Taila*, instilling 2 consecutive days.  
drops in each nostril once daily in the morning for 7

**Table 1: Timeline of Clinical Course, Therapeutic interventions & Observed outcomes**

Date	Clinical Presentation	Intervention given	Observed outcome
06-07-2024 (Day 1)	Pain +++ Tenderness +++ ROM: Abduction 40° External rotation: Restricted due to pain	1. <i>Marma chikitsa</i> 2. <i>Prasaranyadi kashaya</i> 15ml with 45ml warm water, BD B/F. 3. Cap. <i>Cervilon</i> 2-0-2 A/F. 4. <i>Anutaila Nasya</i> 2 drops to each nostril, at morning 5. <i>Prasaranyadi taila</i> for local application over nape of neck and left shoulder region.	Pain ++ Tenderness ++ Abduction :70° External rotation: Improvement in the movement
07-07-2024 (Day 2)	Pain ++ Tenderness ++ Abduction(ROM) : 90° External rotation- mild pain during movement noted	1. <i>Marma chikitsa</i> Cont.2, 3, 4 and 5 as mentioned above for day 1	Pain + Tenderness + Abduction : 110° External rotation- improvement in the (ROM)
08-07-2024 (Day 3)	Pain + Tenderness + Abduction: 110° External rotation-Minimal pain	1. <i>Agnikarma</i> Cont.2, 3, 4, 5 as mentioned above for day 1.	Very minimal pain Tenderness Absent Abduction : 120° External rotation-pain absent
09-07-2024 (Day 4)	Pain & tenderness reduced completely Abduction : 120°	1. <i>Marma chikitsa</i> Cont.2, 3, 4, 5 as mentioned above for day 1.	Abduction : 120°
10-7-24 to 12-7-24 (Day 5 to 7)	Abduction : 120°	<i>Anutaila Nasya</i> - 2 drops to each nostril, at morning	Abduction : 130°
13-7-24 Follow up	Symptomatic relief noted, pain and stiffness were completely absent with increased ROM		

\*ROM: Range of Movements

**Table 2: Marma points with anatomical site and duration**

SN No	Marma Name	Anatomical site	Stimulation Time	Frequency	Duration
1	<i>Apasthamba</i>	Both side of the <i>Ura</i> (Chest)	2sec	15 Times	Once a day

2	<i>Amsa</i>	In between arms, head and neck which bind the shoulder blade and shoulder.	2sec	15 Times	Once a day
3	<i>Kakshadhara</i>	In between chest and axilla	2sec	15 Times	Once a day
4	<i>Urvi</i>	Middle of the arm above the <i>Ani marma</i>	2sec	15 Times	Once a day
5	<i>Kurpara</i>	At the junction of forearm and arm, i.e., elbow joint	2sec	15 Times	Once a day
6	<i>Kshipra</i>	In between thumb and index finger	2sec	15 Times	Once a day
7	<i>Manibandha</i>	Junction of forearm and hand	2sec	15 Times	Once a day

**Table 3: Medicines and Sourcing**

Name of Drugs	Form	Dose	Anupana	Company	Batch / Lot	Mfg/Exp date	Storage	Certificate
Cap Cervilon	Capsule	2-0-2 A/F	Luke warm water	AVN Ayurveda Formulations	T565 8	02/2025 to 01/2028	Cool dry place	GMP Certified
<i>Prasaranyadi Taila</i>	Medicated oil	Local application	-	Nagarjuna Herbal Concentrates	Z8ML	03/2025 to 02/2028	Keep the bottle tightly closed. Store in cool dry place	GMP Certified; Classical formulation
<i>Prasaranyadi Kashaya</i>	<i>Kashaya</i>	15ml BD, B/F	Luke warm water	AVN Ayurveda Formulations	L1643 7	10/2023 to 09/2026	"	GMP certified ; Classical preparation
<i>Anu Taila</i>	<i>Nasya</i> oil	2 drops in each nostril, morning	-	Vaidyaratnam Oushadhasala	25A1 639	06/2025 to 05/2027	"	GMP certified;Nasya grade

**Assessment Criteria:** Visual Analogue Scale (VAS), Range of movements using Goniometer were assessed before and after treatment as in Table 4. All shoulder ROMs were measured using the universal goniometer. The axis of goniometer was placed at 2.5cm inferior to the lateral aspect of the acromion process for shoulder flexion and extension at 1.3cm inferior and lateral to coracoid process for abduction.

**Table 4: Assessment criteria**

Parameter	Pain	Ab	F	E	IR	ER
Before Treatment	3	40 <sup>0</sup>	40 <sup>0</sup>	40 <sup>0</sup>	40 <sup>0</sup>	30 <sup>0</sup>
After Treatment	0	130 <sup>0</sup>	115 <sup>0</sup>	60 <sup>0</sup>	80 <sup>0</sup>	60 <sup>0</sup>

\*Ab- Abduction, \*F-Flexion,\* E-Extension,\* ER-External Rotation,\* IR-Internal Rotation

**3. FOLLOW UP AND OUTCOME:** After 7 days of treatment, patient showed a marked improvement in

the symptoms with no any adverse effects. The outcomes observed during the treatment period are listed in Table 1. Improvements in the range of movements of left shoulder joint were appreciated after treatment as shown in figure 1. On follow up, i.e. on day 8 complete restoration of range of movements was noted.

**Adherence and tolerability:** Patient reported to the OPD on daily basis and monitored for any adverse effects/ complications. She was adherent to the treatment regimen and was asked to report for any adverse effects during treatment and follow up period. Progressive symptomatic relief was noted with high patient satisfaction.

#### 4. DISCUSSION

All the *Samhitas* and *Sangrahas* classify *Avabahuka* as *Vatavyadhi*. Due to fast-paced lifestyles and strenuous work schedules, along with improper dietary habits, can create a variety of health problems, particularly *Vatavyadhi*. *Avabahuka* is one such painful condition that can seriously interfere with a patient's day-to-day activities. *Marma chikitsa*, *Agnikarm* and *Nasya karma* are the technique that can improve both pain levels and restrictions in shoulder movement. If *Marma* points are stimulated by applying the right amount of pressure as mentioned, it reduces the symptoms like pain, stiffness and restricted range of movements as mentioned in Table 4. The intended outcome is meant to be both immediate and long lasting. As *Marma* points are the places where *Tridosha* (*Vata*, *pitta* and *Kapha*) and *Triguna* (*Satva*, *Raja* and *Tama*) are present, its stimulation helps in balancing *Tridosha* and *Triguna*

leading to restoration of health. [6] *Prana*, which controls all the bodily functions also resides in *Marma* points and is connected to *Vata dosha*. By stimulating relevant *Marma* points, it helps on enhancing the flow of *Prana*, thereby balancing *Vata dosha*, and also helps in *Srotorodha Nivarana*. This aids in reducing stiffness, increasing joint lubrication, improves mobility of the shoulder and also helps in also promotes better healing and tissue regeneration. *Marma chikitsa* can be considered as an ancient neuromodulation therapy. When pressure is applied to specific *Marma* points, it triggers the releases of neurotransmitters and neuropeptides such as endorphins, which are natural pain relievers. [7] This mechanism can be explained through the Gate Control Theory of Pain, where the stimulation of certain nerve fibres at *Marma* points can inhibit the transmission of pain signals to central nervous system, providing relief from pain. For *Avabahuka*, where pain and restricted movement are primary symptoms, the application of *Marma Chikitsa* can effectively reduce pain perception and promote relaxation in the surrounding muscles, leading to improved range of motion as shown in figure 1. *Agnikarma* can be done when there is severe pain in *twak*, *mamsa*, *sira*, *snayu*, *asthi* or *sandhi*. [8] *Agnikarma* helped to remove the *Avarodha* from the *Srotas* caused by vitiated *Vata* and *Kapha*. When *Agni* (heat) is applied, due to increased local temperature, the local blood vessels dilate and increase tissue perfusion. This prompt clears the local inflammatory mediators and resolves inflammation and reduces pain. [9] *Nasya karma* is one among the *Panchakarma*, which

is mainly used in *Urdhvajatrugata vikaras* and helps in *Vatanulomana* and does *Srotoshodhana*. The maximum drugs in *Anu taila* have *Vatahara, Shula prashamana, Sthothahara and Ushna* properties which helps in alleviating *Vata dosha* and reduces symptoms of *Apabahuka*. [10] *Prasaranyadi taila abhyanga* helps in nourishing the shoulder region and pacifies the *Dosha*. It helps in relieving pain and stiffness in the shoulder. [11] The main ingredients of *Prasaranyadi Kashaya* are *Prasarani, Masha, Bala, Rasana, Rasna* and *Shunti*. [12] This helps in abolishing the *Vatavyadhis* especially *Avabahuka*.

## 5. CONCLUSION

This case highlights the successful management of *Avabahuka* through an integrative Ayurvedic approach combining Marma Chikitsa, Agnikarma and Pratimarsha Nasya with Anutaila, along with internal administration of *Prasaranyadi Kashaya* and Capsule Cervilon. The total duration of treatment was seven days, followed by regular monitoring during the follow-up period. Significant improvement was observed in pain, tenderness, and restoration of shoulder movements, as demonstrated in Figure 1. No adverse effects were noted throughout the intervention, confirming the safety and tolerability of the procedures. The main outcomes of this study were rapid symptomatic relief, improved neuromuscular coordination, reduction of inflammation and sustained functional recovery. Key message: An integrative approach combining Bahya and Shamana Chikitsa provides a safe, economical and reproducible modality for managing chronic musculoskeletal conditions like *Avabahuka*. These

procedures can be effectively performed at the OPD level without the need for hospitalization, making them practical and accessible. However, results may vary depending on the chronicity of the condition and patient adherence to therapy and lifestyle regulations. In the future, larger sample studies and controlled clinical trials are warranted to further validate the efficacy of this integrative management approach. This case supports the potential of holistic Ayurvedic therapies in providing effective and functional recovery in *Avabahuka*, addressing both the root cause and associated impairment.

**Declaration of Patient Consent** – The authors confirm that they have acquired a patient consent form, in which the patient or caregiver has granted permission for the publication of the case, including accompanying images and other clinical details, in the journal. The patient or caregiver acknowledges that their name and initials will not be disclosed, and sincere attempts will be undertaken to safeguard their identity. However, complete anonymity cannot be assured.

**Patient perspective** - My condition used to be that, I was unable to lift my arm and had severe pain and stiffness while doing daily household works and day to day activities. After undergoing *Marma Chikitsa* and *Agnikarma* session, my pain and stiffness has reduced remarkably, I can now lift my arm almost fully and can do my routine work. I am really satisfied with the treatment and the results it showed in just a span of 1 week.

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