

MANAGEMENT OF FROZEN SHOULDER (AVABAHUKA) THROUGH KRISHNA
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ABSTRACT

Frozen shoulder, also known as Peri-arthritis 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*. In *Ayurveda* various para-surgical procedures were mentioned for diseases of *Vata* and *Kapha*. The most common treatment for frozen shoulder is mobility, exercises and anti-inflammatory drugs. *Panchkarma* procedures have also found effective and safe in the management of the disease but these treatment modalities are costly, require a professional skilled person and are not easy to carry out at any place at any time. The main purpose of this case study is to find a cost effective, safe and easy procedure for the management of the disease. A forty five year old female patient diagnosed as *Avabahuka*; presented with pain (*Shoola*), stiffness (*Stabdhatata*) and restricted movement (*Bahupraspanditahara*) in left shoulder was reported in *Swasthviritta* O.P.D. In this disease treatment can be done with *Krishna Mrityika* along with *Yogic* practices. *Krishna Mrityika* has anti-inflammatory property as mentioned in classical text by *Acharya Sharangdhara* while *Yogic* practices are also helpful in removing the stiffness of the joint.

KEYWORDS: Frozen shoulder (*Avabahuka*), *Vata Doshha*, *Krishna Mrityika*, *Yogic* practices.**INTRODUCTION**

Avabahuka is one such disease that hampers the day-to-day activity of an individual. *Avabahuka* is a disease characterized by morbid *Vata Doshha* localizing around the *Ansa Pradesha* and thereby causing *Soshana* of *Ansa Bandha* as well as *Akunchana* of *Sira* at this site.^[1] *Acharya Vagbhata* mentioned that morbid *Vata Doshha* in *Ansa Moola* causing *Shira Sankocha* and *Bahupraspanditahara* which means impaired movement of upper limb,^[2] and *Acharya Bhavaprakasha* and *Vangasena* mentioned *Ansabandhan Shosha* and *Vedana* (pain) in *Ansa Pradesha* in *Avabahuka*.^[3]

Nidana

In classics, the causative factors for *Avabahuka* are not mentioned separately. Only the aggravated *Vayu* is considered as the prime factor. In regard to causative factors of *Vata Vyadhi*, only *Acharya Charaka*,^[4] and *Bhavaprakasha*,^[5] have explained in detail, while in *Sushruta Samhita*, *Ashtanga Samgraha*, *Ashtanga*

Hridya etc. the causes of *Vata Vyadhi* have not been clearly described.

In case of *Avabahuka*, *Hetu* (causes) may be classified into two groups;

- 1. Bahya Hetu:** Causing injury to the vital parts of the body (*Marma*) or the region surrounding the *Ansa Sandhi*, which is also known as *Bahya Abhighata*.
- 2. Abhyantra Hetu:** Indulging in the etiological factors that aggravate *Vata* leading to the vitiation of *Vata* in that region and is also known as *Doshha Prakopajanya*, which in turn leads to *Karmahani* of *Bahu*.

The *Nidana* are given below:

a) Aharaja

Rasa- Katu, Tikta, Kashaya Rasa

Guna- Laghu, Ruksha and *Sheeta Guna*

Dravya- Adhki, Chanaka, Kalaya, Masura, Mudga, Nishpava, Shushkashaka, Tinduka

Matra- Abhojana, Alpashana, Vishamashana Cause vitiation of *Vata*.

b) Viharaja

The exercises directly or indirectly influencing the shoulder or *Amsa Desha* should be considered here *Vyayama, Plavana, Bharavahana, Balawat Vighraha, Dukha Shayya*.

Roopa

In case of *Avabahuka, Sthanika Lakshana* takes important place as compared to *Sarvadaihika Lakshana*. The cardinal features of *Avabahuka* are as follows.

- ❖ *Bahupraspanditahara*
- ❖ *Ansabandhana Shosha*
- ❖ *Shoola*

In *Ayurveda*, there is no direct correlation of any disease with frozen shoulder but some symptoms of *Avabahuka* resemble the symptoms of frozen shoulder. Therefore an attempt has been made to make *Samprapti* of *Avabahuka*.

Samanya Samprapti

In case of *Avabahuka*, two ways of vitiation of *Vata* can be considered. The etiological factors like *Ruksha, Laghu, Atibharavahana* and the like causes vitiation of *Vata* directly. In another way, *Kapha Prakopaka Nidanas* like *Atisthirta, Atiguru Dravya* and so on cause an increase in the *Vikruta Kapha*, which produces the *Kaphavrita-Vata* condition. In both ways, the *Vikruta Vata Dosha* gets accumulated in the bio channels (*Srotas*) and manifests symptoms of *Avabahuka*.

Vishistha Samprapti

In case of *Avabahuka*, the examination of the etiological factor reveals the underlying predominance of *Ativyayama* and *Abhighata* causes *Vata Dushti*. The *Vata* vitiated here is *Vyana*. According to *Acharya Charaka* and *Acharya Sushruta*, *Vyana Vata* is continuously circulating in the entire body and hence its location is body as a whole. Also *Acharya* has mentioned its functions like motion, extension and movements of the body parts⁴ but because of excess walking, exercise, improper activities, taking food which is incompatible and dry, aggravates *Vyana Vayu*. *Khavaigunya* gets generated in *Ansa Sandhi* because of *Nidana Sevana* related to *Ansa Pradesha* and therefore *Vyana Vayu* of shoulder joint gets aggravated.

Morbid *Vyana Vata* and the excess use of the shoulder joint like *Plavana, Balwat Vighraha* types of *Nidana* also causes *Marmabhighata* and *Abhighata* in *Shleshama Dhara Kala*. *Marmabhighata* is one of the causes of *Shotha*^[6] and *Shotha* leads to "सिरातनुत्वं" means *Sira* becomes thin. Because of this, there is block of nutrients to affected *Dhatu* of shoulder joint and thus leads to *Bahupraspandithara*.

Even in modern medical science, the partial loss of blood supply in the area of insertion of tendons or some idiopathic cause can produce localized degeneration of the collagen. This induces an autoimmune response and

cause a tear or distortion of the tendinous sheaths and ligaments. This obliterates the integral stability of the joint and result in restricted movement with painful and stiffened joint.

In another way, *Kapha Prakopaka Nidana* like *Atisthirta, Atiguru Guna* of *Kapha Dosha* and so on cause an increase in the *Vikruta Kapha*, which produces *Kaphavrita-Vata* condition and this will lead to heaviness all over the body, pain in all joints and loss of mobility.^[7]

Samprapti Ghataka

The factors involved in the pathogenesis of the disease are known as *Samprapti Ghatakas*. The main *Samprapti Ghatakas* involved in the diseases are described here:

- Dosha - Vyana Vayu, Shleshaka Kapha*
- Dushya - Sira, Snayu, Mamsa, Kandra, Asthi*
- Srotas - Mamsavaha, Asthivaha*
- Sroto Dushti - Sanga, Vimargagamnama*
- Udbhava Sthana - Pakwashya*
- Vyakta Sthana - Bahu*
- Adhishthana - Amsa Pradesha*
- Vyadhi Swabhava - Chirkari*

CHIKITSA

Acharya Charaka in *Chikitsa* 28 and *Acharya Sushruta* in *Chikitsa* 4 has mentioned the prime *Chikitsa Sidhanta* is *Nidana Parivarjana* and here complete rest is required if the condition is much severe. *Avabahuka* being a *Vata Vyadhi*, general *Vata Upakrama* is advisable for *Vata Shamnama*. *Snehanam, Swedanam, Abhyangam, Upanaha, Upveshtanam, Unmardanam, Peedanam, Samvahanam, Parisheka, Avagahana*, different types of *Lepa* etc. all which pacifies the *Dosha* and corrects the *Gati* of *Vata* are mentioned as the treatment principle of *Vata*. All these are applicable to the disease of *Avabahuka*.

Patient Information

A 45 years old female patient came to hospital with complaint of pain and stiffness in left shoulder since 15 days giving history of fall 15 days back. On further investigation it was noted that patient was unable to move her left arm and on moving her arm she feel sharp excruciating pain in shoulder joint which was disturbing her daily activity. With these complaints she came to hospital in *Swasthvritta* OPD for needful management.

Clinical findings

On physical examination patient was found afebrile with blood pressure-110/70 mm of Hg, Pulse rate- 84/minute, respiration rate- 18/minute. On systemic examination no abnormality was found in respiratory, cardiovascular and central nervous system activity. On enquiry to patient pain is dull and regular but aggravates on movement and on goniometry the range of shoulder movement was markedly reduced.

Investigation

X-ray of left shoulder AP view- It was normal.

FBS, Serum Uric acid, Serum calcium, RA has been done which was normal.

Treatment given

- Swedana for 10 minutes
- Then apply *Krishna Mrittika Patti* on affected shoulder for 30 minutes.
- This procedure has been done for 21 days.

- Follow up- after 7 days.

Sukshama Vyayama (Wrist movement, Elbow movement, Shoulder movement, Neck movement, Wall climbing exercises, Towel stretch exercises); **Chakki challan**; **Asanas** (*Tadasana, Ardhakatichakrasana, Katichakrasna, Shashankasana*) and **Pranayama** (*Kapalbhati, Anulom-Vilom, Bhrumri*) has been advised to patient.

RESULT

CRITERIAS	(BT)*	(AT)**
Abduction (0-170°)	55°	120°
Adduction in extension (0-50°)	15°	40°
Forward flexion (0-165°)	50°	118°
Backward extension (0-60°)	No backward extension	40°
External rotation in extension (0-70°)	No external rotation	40°
Internal rotation in extension	Unable to move hand in backward direction	Able to get the hand behind the back

*Before Treatment ** After treatment

There is marked improvement in pain and patient is able to easily perform her *Yoga* practices after the *Mrittika Patti* application.

DISCUSSION**Probable mode of action of Krishna Mrittika**

Ayurveda has a unique way of explaining the mode of action of drugs. The action of drug is executed in the body through its pharmacodynamic properties like *Rasa, Guna, Veerya* and *Vipaka*. Along with these, there is *Prabhava*, which has the specific property inherited by the drugs which cannot be explained. The action of every drug is determined by the dominant pharmacodynamic factor in that particular drug and that may be anyone out of *Rasa, Guna, Veerya, Vipaka* and *Prabhava*. Frozen shoulder is the disease of *Amsa Sandhi Pradesha* in which *Vata Dosha* is vitiated that lead to the *Kshinata* of tissues like *Mamsa, Sira, Snayu, Kandra, Asthi*. So, by the *Siddhanta* of *Acharya Sushruta*

“दोषाः क्षीणा बृंहयितव्याः, कुपिताः प्रामयितव्याः” (Su.Chi.33/3)

Acharya Charaka,^[8] has mentioned that water for its properties depends upon the type of soil on which it falls. From this reference we may get an indirect indication about the property of *Krishna Mrittika* that it has *Madhura Rasa*. *Krishna Mrittika* can be used because it is rich in *Parthiv Guna* and also has *Snigdha Guna* as it has *Madhura Rasa* which helps in increasing the *Kshina Dosha* and *Dhatu* and alleviates the *Kupita Dosha*. *Acharya Sushruta*,^[9] mentioned “क्षतक्षीणहितः” means *Madhura Rasa* is good in *Kshata Kshina Awastha* and increases the *Kshina Dhatu* like *Rakta, Mamsa, Asthi* etc. in the body. It is also “कफकर चेति” means helps in increasing *Kapha*. *Acharya Charak* has also mentioned that *Madhura Rasa* helps in *Shamana* of *Vata Dosha* and on other side helps in increasing *Kapha Dosha*.^[10]

Acharya Sushruta explained that *Krishna Mrittika* have *Vish Hara* property.^[11] *Acharya Sharangdhara* has explained its anti-inflammatory property, which is *Aptopadesha Pramana* for us. We know that in frozen shoulder (Peri-arthritis) there is inflammation in the shoulder joint which cause pain and restrict the movement of the arm. So, when *Krishna Mrittika* was applied over affected shoulder, by its *Vish Hara* property *Mrittika* absorbs the metabolic waste and reduces inflammation by its *Shotha Hara* property. In this procedure first of all *Swedna Karma* was done for 10-15 minutes. *Acharya Charaka* also mentioned that *Samyak Swedna* helps in the *Shamana* of *Shoola* (pain), *Sheeta* (cold), stiffness and *Guruta* (heaviness). *Acharya Charak* mentioned that *Swedna* helps in liquefying the *Doshas* which are accumulated in the minute channels (*Sukshama Srotas*) of the body and thus helps in its precipitation on surface.^[12] *Acharya Sushruta* has also mentioned that *Swedna* enhances *Agni* and is also responsible for cleansing of *Srotas*.^[13] By this process the blood supply increases and increased blood supply hastens drug absorption as well as removal of metabolic waste occurs. After *Swedna Karma*, *Krishna Mrittika* was applied. Due to its good absorbing capacity it absorbs the metabolic waste from the body. *Mrittika* retains moisture for a long time and thus it gives cooling effect to the body. Cooling effect numb the nociceptors (Pain receptors) present beneath skin, muscles & joints and delay pain signaling. As mentioned in *Atharvaveda* (12/1/6) that *Prithavi* holds lots of essential minerals in it and by these minerals *Prithavi* nourishes the human beings.

Probable mode of action of Yoga and Pranayama

By practicing *Sukshama Vyayama* and *Asana* there is repeated contraction & relaxation of joint which increase strength and flexibility of muscles and connective tissue surrounding the joint that helps in restore the range of

movement of the joint and also helps in breaking the contractures. *Pranayama* enriches the blood with oxygen so that the affected joint gets more and more oxygen. Efficiency of oxygen utilization by the tissues is maximized leading to deeper relaxation and more energy. It increases threshold for pain, reduces oxidative stress, stress and anxiety related to disease is also reduced and helps in removing toxins from body.

CONCLUSION

Analysis of this case study reveals that frozen shoulder affects everyday life and also quality of life, although it is not a life threatening, but still it hampers quality of life. By this treatment patient got significant results in pain and also restores the movement of arm.

REFERENCES

1. Sushruta samhita with Ayurveda- Tattva-Sandipika commentary, *Sushruta Nidana Sthana* 1/82; Author Kaviraja Ambikadutta Shastri, 2013; I.
2. Ashtang Hridayam, Nidanasthana 15/43, by Dr. Bhramanada Tripathi, 2008.
3. Bhavaprakash, Madhyottar khanda, Shrihariprasadpandyana, Chi.24, Vata vyadhikara, 249.
4. Charak Samhita with Vidyotini Hindi Commentary, by Pt. Kashinath Shastri and Dr. Gorakhnath Chaturvedi, 2007; II.
5. Bhavaprakash, Madhyottar khanda, Shrihariprasadpandyana, Chi.24, Vata vyadhikara, 249.
6. Charak Samhita with Vidyotini Hindi Commentary, *Charaka Chikitsa* 12/6; Author Pt. Kashinath Shastri and Dr. Gorakhnath Chaturvedi, 2007; II.
7. Charak Samhita with Vidyotini Hindi Commentary, *Charaka Chikitsa Sthana* 28/228; Author Pt. Kashinath Shastri and Dr. Gorakhnath Chaturvedi, 2007; II.
8. Charak Samhita with Vidyotini Hindi Commentary, *Charak Sutra Sthana* 27/198; Author Pt. Kashinath Shastri and Dr. Gorakhnath Chaturvedi, 2007; I.
9. Sushruta samhita with Ayurveda- Tattva-Sandipika commentary, *Sushruta Sutra Sthana* 42/12; Author Kaviraja Ambikadutta Shastri, 2013; I.
10. Charak Samhita with Vidyotini Hindi Commentary, *Ch.Su* 1/66 & 1/67; Author Pt. Kashinath Shastri and Dr. Gorakhnath Chaturvedi, 2007; I.
11. Sushruta samhita with Ayurveda- Tattva-Sandipika commentary, *Sushruta Kalpa Sthana* 1/57; Author Kaviraja Ambikadutta Shastri, 2013; I.
12. Charak Samhita with Vidyotini Hindi Commentary, *Charaka Siddhi Sthana* 1/8; Author Pt. Kashinath Shastri and Dr. Gorakhnath Chaturvedi, 2007; II.
13. Sushruta samhita with Ayurveda- Tattva-Sandipika commentary, *Sushruta Chikitsa Sthana* 32/21; Author Kaviraja Ambikadutta Shastri, 2013; I.