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Effect of Nasapana in the management of *avabahuka* W.S.R. to frozen shoulder: A case study

Dr. Ashok Kumar Patel ^{1*}, Dr. Bharati Patel ²

¹ Associate Professor, Department of Panchakarma, Rajiv Lochan Ayurved Medical College & Hospital, Durg, Chhattisgarh, India

² Department of PTSR, SJG Ayurved Medical College, Hospital, PG Studies & Research Centre, Koppal, Karnataka, India

* Corresponding Author: Dr. Ashok Kumar Patel

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Abstract

Avabahuka is a disease in which Vitiated Vata Dosha Localizes in *Amsapradesha* and does the *Sankocha* of *Shiras* leading to the manifestation of *Sira Sankocha* and *Bahupraspanditahara* where pain and stiffness of shoulder joint leads to severely restricted movements of hand. Hence it can be correlated with the Frozen Shoulder in modern also adhesive capsulitis which carries the similar complaints of *Avabahuka*. In the fast developing technological era, most of the disease may not be life threatening but will hamper day to day life and human productivity. *Avabahuka* is one such disease which is Painful and affects the normal routine life style of an individual. The lifetime prevalence of frozen shoulder is estimated to be 2-5% in general population the condition is most common in 5th and 6th decades of life with peak age in mid50's; women are often affected than men. Total more than 10 million per year in India suffers from Frozen Shoulder. Chakradatta in *Vatavyadi chikitsa* mentioned *Nasapana* in *Avabahuka*, *Viswachi*, *Pakshaghata*, *Ardita* and *Manyastambha*. *Nasapana* is the nasal administration of internal medication in larger dose. The drug administered through nose nourishes the *Shiras*, *Skandha*, *Greeva* and *Vaksha*. *Balamula kwatha* is *Vatahara* in nature. Hence an effort will be made to evaluate the effect of *Nasapana* by *Balamulakwatha* in the management of *Avabahuka*.

Keywords: *Avabahuka*, *Nasapana*, *Balamulakwatha*

Introduction

According to *Ayurveda*, body is supported by three *Doshas* ie; *Vata*, *Pitta* and *Kapha*. These three doshas support the body as vital forces in their normalcy; impart development, strength, complexion and cheerfulness to the body. And also the impairment of these *Doshas* leads to disease; the treatment is decided and done after considering these impaired *Doshas*. *Ayurveda* is the rich store house of time tested and effective recipes for the treatment of several diseases including some of the challenging diseases of current era. Due to the advancement in life style people undergo many unwanted practices like faulty dietary habits, improper sitting posture, continuous work in one posture and overexertion, load bearing movements during travelling and sports. All these factors create undue pressure and compressive injury to the spine and also responsible for early degenerative changes in bodily tissue which play an important role in producing disease like Frozen Shoulder.

Avabahuka is a disease in which Vitiated *Vata Dosha* Localizes in *Amsa pradesha* and does the *Sankocha* of *Shiras* leading to the manifestation of *Sira sankocha* and *Bahupraspanditahara* [2]. Hence it can be correlated with the Frozen Shoulder in modern system of medicine. Most of the disease may not be life threatening but will hamper day to day life and human productivity. *Avabahuka* is one among those diseases which is Painful and affects the normal routine life style of an individual.

Generally the patient suffering from Frozen Shoulder uses Analgesics, Corticosteroids and Anti-inflammatory drugs. These approaches may only give a temporary cure but not permanent relief of the pain.

The life time prevalence of frozen shoulder is estimated to be 2-5% in general population. It is rare in children and the condition is most common in 5th and 6th decades of life with peak age in mid-50; women are often affected than men.

Frozen Shoulder was found to affect 8.2% of men and 10.1 % of women of working age. Total more than 10 million per year in India suffer from Frozen Shoulder [3].

The general line of treatment for *Avabahuka* Specifically emphasizes on the adoption of *Nasya* [4]. "*Nasahi Shiraso Dwaram*" i.e., *Nasa* is told as *Dwara* for *Shiras* which is *Uttamanga*. *Nasya* is considered as the prime modality of treatment in *Urdhwajatrugata Vikaras* and it also nourishes the *Shiras*, *Skandha*, *Greeva* and *Kaksha*. It has the important action in clearing the dosha which are deep rooted in the channels of head. Similarly a unique contribution by Chakradatta explained in *Vatavaydhi chikitsa adhyaya* i.e. *Nasapana* has carried out by administering in *Kashaya* form with high dose via nasal route.

Nasapana is mentioned in several contexts by different *Acharyas* also. The words "*Nasyanipeeto*" [5], "*Pibennasyam*" [6] etc. are used in the context of *Nasapana*. Some yogas are mentioned for *Nasapana* while explaining the treatment of *Manyasthambha*, *Apabahukam*, *Arditam* and *Pakshaghata* in different texts.

The word *Nasyanipeeto* is considered as *Nasapana*. It is said that by the practice of this procedure in *Avabahuka* a person makes his arms strong like *Vajra* i.e., *Vajrasamana bahu* [7]. The therapies and medicine which are easily available, easily applicable, painless, cost effective as well as safe and unique one. Considering all these factors *Balamula kwatha Nasapana* has been selected as a remedy towards cure of the disease *Avabahuka*.

The present study is an effort towards elimination of disease *Avabahuka* and improving daily activities with safe and effective measure.

Material and Methods

It is a single case study. Informed consent was taken from the patient in his own language.

Case Report

A 35 year female patient from Durg, approached to the *Panchakarma* OPD of RLAMC & H, Durg on 15th December 2021, complaints of pain and stiffness in nape of the neck, right arm, shoulder joint and difficulty in performing routine works since 6 months.

History of Present Illness

The patient was having pain and stiffness in right shoulder joint for last 6 months. For this she consulted to a nearby doctor and advised NSAID's, Multivitamins and Folic acid tablets for 20 days. During medication she felt better & use to do her daily routine work but after few days of completion of medication course pain reoccurs and hampers her daily routine work, so this time she continued same medication for 1 month but then also she didn't get marked relief from pain. There is stiffness and pain in neck region also gradual radiating pain from shoulder joint to fingers along with tingling sensation. So then she injected *Nerobion*, *Diclo* (SOS) along with physiotherapy for one month but then also she unable to do her household works. So then she visited our hospital for better treatment.

Past History

No deformity in shoulder joint. No history of trauma or fall. No history of major medical illness (e.g., HTN/DM/

bronchial asthma/dengue).

No history of any surgical intervention.

Medication History

Patient had taken medicine, Inj. *Diclo* (SOS) and Inj. *Nerobion*

Tab. *Zerodol SP* 1 BD, Vit D3 1BD, Tab. *Pan-D* 1BD, Tab. *mecobalamin* 1BD

Advised physiotherapy for one month.

Personal History

- *Ahara*: *Vyamishra*, *Ruksha*, *Katu ahara*
- *Vihara*: long hours of house hold works
- *Vyasana*: Tea 3-4times/day.
- *Nidra*: Disturbed sleep (due to pain)

Family History: All are said to be healthy

- *Nidana*: *Ahara*: *Ruksh*, *Katu ahara*, *Akala bhojana*
Vihara: *Diwaswapna*, Heavy house hold works
- *Purvarupa*: pain in neck and right shoulder joint
- *Rupa*: Pain in neck and shoulder joint radiating to right upper limb, associated with restricted range of movements.
- *Upashaya*: At rest and under analgesics pain reduces
- *Anupashaya*: Pain increases on postural change while sleeping, heavy house hold works.
- *Samprapti*: Due to *Nidana sevana* leads to *Vyanavata Vruddhi* with vitiation of *Sira*, *Snayu*, *Khandara*, *Mamsa* and *Ashti*. *Sthanasamshraya* in *Bahupradesha* will causes *Sira Sankocha* locally and produces *Bahupraspanditahara*, manifesting *Avabahuka*
- *Samprapti Ghatak*: *Dosha*: *Vyana Vata* and *Shleshmaka Kapha* *Dushya*: *Mamsa*, *Ashti Sira*, *Kandara*, *And Snayu* *Srotas*: *Mamsavaha Srotodushti*: *Sanga*, *Vimargagamana* *Rogamarga*: *Madhyama Agni*: *Jathargni* and *Dhatvagni* *Adhishtana*: *Amsapradesha* *Vyaktasthana*: *Bahu*

Diagnosis: *Avabahuka*

Investigation: MRI cervical spine

Impression: Mild disc bulges seen at C4-5, C5-6, C6-7
Normal signal in cord

Clinical Examination: She was examined through both locally and systemically. The general condition of the patient was stable, fully conscious and well oriented. Her vitals were found to be normal limits, Blood pressure- 110/80 mmHg, and Pulse rate-76/min. body height was 5 feet and 3 inch and body weight was 65 kg. Cardiovascular system was found normal.

Local Examination of shoulder joint revealed normal curvature of both the shoulder joints, no bony tenderness, no swelling, no scar was found. The local temperature was raised. The range of movement was decreased due to pain and stiffness in shoulder joint.

Table 1: Diagnosis of *Avabahuka*

S.N	Sign & Symptoms	
1.	Amshashoola	Present
2.	Stambha (Shoulder stiffness)	Present
3.	<i>Bahupraspanditahara</i> (Restriction in shoulder joint range of motion)	Present

Table 2: Assessment Criteria

S.N.	Sign & Sysmptom	Gradings
1.	Pain in shoulder joint	0 - Absent
		1 - Mild
		2 - Moderate
		3 - Severe
2.	Shoulder stiffness	0 - Absent
		1 - Mild
		2 - Moderate
		3 - Severe
3.	Restriction in shoulder joint range of motion	0 - Absent
		1 - Mild
		2 - Moderate
		3 - Severe

Table 3: *Ashtavidha pareeksha* (Eight fold examination)

S. No.	Sthana	Lakshana
1.	Nadi	74/min
2.	Mutra	Prakrit
3.	Mala	Prakrit
4.	Jihva	Alipta
5.	Shabd	Mild crepitus present
6.	Sparsh	Ushna, Ruksha
7.	Drik	Prakrit
8.	Akriti	Madhyama

Treatment protocol

<i>Purvakarma</i>	<i>Sthanika Abhyanga of Urdhwajatrugata bhaga with Murchita tila taila and Bashpa Swedana</i>
<i>Pradhanakarma</i>	<i>Nasapana with Balamulakwatha (with hingu and saindava lavana) Dose- 24ml/nostril (Avicchinna dhara) for 7 days</i>
<i>Paschatkarma</i>	<i>Bashpa Swedana, Dhumapana and Kavala with Sukhoshna saindhava jala</i>

Follow up period: In this Duration patient was advised to avoid *Ashtamahadoshaka Bhava*. She was doing mild exercise regularly and asked to take light food and luke warm water to drink. Proper posture was maintained during sleeping and sitting. After 15 days, patient was visited again. There was no persistent of symptoms like earlier.

Table 4: Observations, A. Subjective parameters

Parameters	Before treatment 0 th day	After treatment 8 th day	After follow up 22 nd day
Amshashoola	02	01	01
Stambha	02	00	00

Table 4: B. Objective parameters

Range of movement of Shoulder joint	Before treatment 0 th day	After treatment 8 th day	After follow up 22 nd day
Flexion	01	00	00
Extension	01	00	00
Abduction	02	01	01
Adduction	01	00	00
Internal rotation	02	01	01

By the end of the 7th day of treatment and 14th day follow up period, the patient found a significant reduction of pain and stiffness in shoulder joint. Here for subjective parameter-pain and stiffness and for objective parameter-range of movement of shoulder joint was taken. Before treatment, pain

and stiffness was 2 and after treatment it was 1(pain) and 0 stiffness. In ROM parameters like flexion, extension, abduction and adduction it was 1 and after treatment and follow-up it was 0 except abduction (1). Internal and external rotation it was 2 and after treatment and follow-up it was 1. The patient got symptomatic relief up to 69. 23% relief after treatment and follow-up without any shamana aushadhi added during follow-up period. In follow up period she was able to do her daily activities with ease and sound sleep. Treatment had shown clinically significant results in reducing symptoms specially stiffness of shoulder joint.

Discussion

There is no such specifications seen in classics about the procedure *Nasapana*, as the procedure *Nasapana* is considered to be followed *Nasyavat*, for *Nasya*, it has been explained in the classics that the position of head should be little lowered and on the same time legs should be raised little. But practically it was found difficult for the patient to swallow *kashaya* in this position, so the best position for *Nasapana* is sitting posture and at the same time the head was to be slightly elevated.

It was observed that usually after the administration of *kashaya* there is severe irritation in nasal mucosa and throat. Patients usually developed cough, headache, watering from eyes and throat pain. Since the above said conditions were temporary, the same procedure was followed for 7 days.

Nasapana is indicated in specific conditions like *Ardita*, *Pakshaghata*, *Apabahuka*, *Vishwachi*, *Manyastamba*, *Bahu Shosha* and *Shirogata Vata*. The fact which is common among these indications is almost all are *Urdhwa jatru gata vikara* and are resultant of *Margavarana Samprapti* and *Dhatukshaya*. The involvement of *Vyana Vata* and *Prana Vata* in the manifestation of these *Vatavyadis* is definite; in order to nourish this *Prana vata* we need to administer the *dravya* via nose, as the nose is the doorway to consciousness. *Prana* or energy of life enters the body through breath taken in through the nose. Nasal administration of medication helps to correct the disorders affecting the higher cerebral, sensory and motor functions. So the mentioning of *pibennasyam* by Chakradatta appears to be more scientific in this context.

Nasapana with Balamula Kashaya

Here ingredients are having *Madhura* and *Katu rasa*, *Snigdha* and *Teekshna guna* and having *Kapha hara*, *Vatahara*, *Balya*, *Brumhana* effect. Here in the study it is administered in the form of *Nasapana*. *Nasapana* being a procedure similar to *Nasya* in its route of administration and mode of action, it differs in its dosage and method of administration. Here

medicine is administered in a larger dose than *Nasya* and the patient is advised to drink the medicine. So here there are chances of double action, which is through nasal mucosa and at the level of GIT.

Hingu and *saindava* due to its *Ushna Veerya*, *Laghu* and *Teekshnadi Gunas* does *Vata Kapha shamana* and *srotoshodana*, they helps in relieving *Sirasankocha* and probably may lead to dilatation of nutrient artery thus facilitate better absorption of *poshakamsha* and mean while *Bala* due to their *Madhura* rasa and *Madhura Vipaka* does *Brumhana* of *Shoshita Sira*, *Snayu*, *Asthi* And *Sandhi*. Thus serve the purpose of *Brumhana*. Action of *Nasapana* can be better interpreted as it acts at level of *Brumhana*, *Shamana* as well as *shodhana* (*shirovirechana*). The *lakshanas* of *Avabahuka* like *shoola* and *Stambha* are pacified during *Nasapana* and improves the range of movements in this way it acts as *Shamana*. It Improves *Sandhi Shosha* and acts as *Brumhana*. Due to, *Katu Dravya* discussed earlier resolves *Margavarana* and help to clear *Srotorodha* so it also acts as *Shodhana*. In this way combined effect of dravyas provides relief from *Avabahuka*.

Moreover *Nasapana* is unique in itself due to its *Matra*. It is taken in equal quantity as that is given orally, so administration of larger amount of *Nasapana dravya* through nostrils enables high rate of absorption via nasal mucosa and when compared to *Nasya*. It also stimulates *Pranavata* which controls all other *vayu*. Stimulation of nasal mucosa nourishes *Pranavata* and activates *Vyanavata* and help to improve Pain and *Stambha* in *Avabahuka*.

Conclusion

Involvement of *Vyana Vayu* and *Shleshaka Kaphakshaya* is the prime pathology of the *Avabahuka*. *This morbidity can happen either due to Dhatukshaya or Kapha Avarana*. Vitiated *Vata Dosha* invariably involves the *Sira*, *Khandara*, *Mamsa*, *Asthi Dhatu* and *Sandhi* at the *Bahu Pradesha*.

Nasapana with *Balamula kwatha* helps to pacify the *Vataprakopa* and *Brihmana* due to its *Balya* in nature and since we used in *Kashaya* form in high dose clears *Sroto Avarodha* it helps to reduce stiffness.

This case study demonstrated that *Nasapana* seems very effective for the treatment of *Avabahuka* i.e., frozen shoulder and this attempt was made to provide safe and effective treatment to the patient within short period.

From the above case, it can be said that *Avabahuka* i. e., frozen shoulder can be successfully managed through *Nasapana*, as it relives pain along with stiffness which makes patient to feel relax and able to sleep better and can do daily activities without much difficulty. Further and long-term study is required to evaluate the effect of *Nasapana* with other *yogas* in the management of *Avabahuka*.

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