

**A CASE STUDY TO EVALUATE THE EFFECT OF NIRGUNDI GUGGULU IN THE
MANAGEMENT OF AVABAHUKA****Dr. Punam Sahadev Shirodkar^{1*} and Dr. Rupali Khobragade²**¹Post Graduate Scholar, Department of Kayachikitsa, PDEA'S College of Ayurveda and Research Centre, Nigdi Pune, Maharashtra, India.²Professor and HOD, Department of Kayachikitsa, PDEA'S College of Ayurveda and Research Centre, Nigdi Pune, Maharashtra, India.***Corresponding Author: Dr. Punam Sahadev Shirodkar**

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ABSTRACT

Avabahuka, comparable to frozen shoulder in modern medicine, is a condition caused by the vitiation of vata dosha. This imbalance leads to pain, stiffness, and restricted movement in the shoulder joints, significantly impairing a patient's mobility and quality of life. The present case study evaluates the therapeutic role of Nirgundi Guggulu, a traditional Ayurvedic formulation, in managing Avabahuka. A 54-year-old female patient presented with severe pain, stiffness, and limited mobility in both shoulders joints for three months. Despite prior treatments, including NSAIDs, she experienced only temporary relief. She was subsequently treated with Nirgundi Guggulu (500 mg, twice daily) as a part of shamana chikitsa for 21 days. Nirgundi (*Vitex nirgundo*) is known for its anti-inflammatory and analgesic properties, while Guggulu (*Commiphora mukul*) acts as a muscle relaxant and vata dosha balancer. After 21 days of treatment, the patient showed significant improvement in her shoulder mobility, with pain reducing from severe to none, as measured by the Visual Analogue Scale (VAS). Her range of movement was also restored to near normal levels. These results suggest that Nirgundi Guggulu can effectively treat musculoskeletal disorders like Avabahuka by balancing vata dosha and reducing inflammation.

KEYWORDS: Avabahuka, Frozen Shoulder, Vata Dosha, Nirgundi Guggulu, Pain Management, Ayurveda.**INTRODUCTION**

Avabahuka is one such disease that hampers the day-to-day activity of an individual. It is one of the vata vyadhi caused by vitiated Doshas and is considered to be a disease that usually affects the shoulder joint (Amsa sandhi). This vitiated vata gets located at amsa moola causing constriction of sira which leads to clinical features like loss of movement especially abduction, adduction, elevation, medial rotation and lateral rotation of the arm which are reduced to a quarter or a half of their normal range of movements. The other symptoms like shoola during movement occurs, and due to the soshan of Amsa Bandha as well as Akunchana of sira at amsa sandhi pradesha, it leads to symptoms like Bahuprasandita Hara i.e. restricted shoulder joint (amsa sandhi) movements.^[1]

In textual references of Ayurveda, Avabahuka is not mentioned in the Nanatmaja Vata Vyadhi, Acharya Sushruta and others have considered Avabahuka as a Vataja vikara.^[2] While commenting on this, Acharya Vijayarakshita in his Madhukosh Tika has mentioned that Amsa Soshana is caused due to Dhatu kshya i.e. shuddha

vatajanya where else Avabahuka is vata kapha janya vikara.^[3]

The nidana of avabahuka includes vataprakopa janya ahara and vihara like ativyayama (excessive exercise), vishamashana, bharavahana (lifting heavy weight), raatri jagarana and divaswapa, due to the occupation (labour work), irregular sleeping postures etc. causing dosha prakopa at the amsa sandhi pradesha which leads to karmhani of the amsa sandhi.

The classical treatment for avabahuka according to the ancient literatures includes nasya, nasyapana and shamanaushadhi.^[4] Drugs mainly having vatahara, shoolahara actions and which correct the dushti of the involved srotasa are adopted. Guggulu kalps which acts as Shoolhara (analgesic), Todhara, Stabhdatahara (muscle relaxant) have synergistic effect in the management of Avabahuka.

AIMS AND OBJECTIVES

To study the Clinical efficacy of Nirgundi Guggulu in the management of Avabahuka.

MATERIAL AND METHODS

Present study was Interventional, Single Arm Clinical Trial for the duration of 21 days.

Subjective parameters for Assessment

1. Pain according VAS Scale
2. Amsa sandhi Sparsha Asahatwa
3. Amsa sandhi Graha

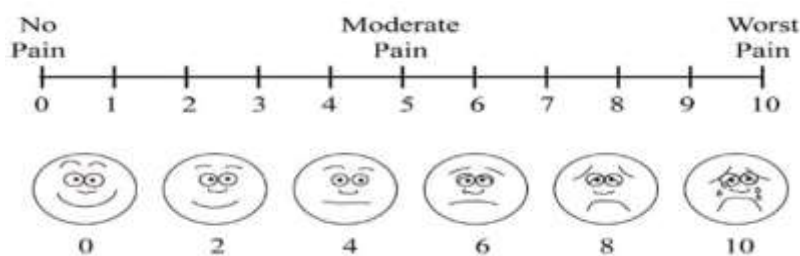


Figure: Amsa Shool (Pain) on VAS Scale.

Table 1 (a, b): Criteria for Assessment – Subjective.

1a. Amsa sandhi Sparsha Asahatwa - Tenderness was evaluated on the basis of standard criteria of RAI (Ritchie Articular Index).

Grade 1	No Tenderness
Grade 2	Tenderness
Grade 3	Tender And Winced
Grade 4	Tender Winced Withdrawn

1b. Amsa sandhi Graha

Grade 1	No stiffness
Grade 2	Mild stiffness, difficulty in moving the shoulder joint without support
Grade 3	Moderate, has difficulty in moving can lift only with support
Grade 4	Severe stiffness unable to lift

Objective parameters for assessment

1. Bahupraspanditaharam (Restricted range of movement of shoulder joint) by using Goniometer.

Intervention

Nirgundi Guggulu 500mg 2 tabs vyanodane kala (twice a day after meals) with kosha jala (lukewarm water) for 21 days. Patient had follow up of 7 days interval i.e. on 7th day, 14th day and 21st day of treatment period.

CASE PRESENTATION

A 54 years old Vata Kaphaja Prakruti female patient presented to the Kayachikitsa O.P.D., with complains of shool (Severe pain), Sparsha Asahatwa (Tenderness), Amsa sandhi Graha (stiffness) and Bahupraspanditaharam (Restricted range of movement) of bilateral shoulder joint for three months.

Besides from heavy household work there was no history of trauma. She had taken orthopedic treatment but noted temporary relief with long-term use of painkillers (NSAIDs).

Asthvidh Pariksha (Eight- Fold Ayurvedic Examination)

Nadi (pulse) - Vata predominant Kapha, 88/min; Mala - irregular unsatisfactory; Mutra (Urine) – Normal 4-5 times / day; Jivha (tongue) - Saam; Shabda (speech) - Normal; Sparsha (touch)- Normal; Drik (eyes)- Normal; Akrti (body built)- Medium.

Vital Examination

Blood Pressure (B.P.) - 130/80 mmHg; Pulse (P)- 88/min; Weight- 68 kg; Temperature- 97.2 F.

Therapeutic intervention

Nirgundi Guggulu 500mg 2 tab twice a day after meals (Vyanodana kala) wih lukewarm water (kosha jala) was given for the duration of 21 days with follow up of 7 days interval.

Table 2: Ingredients of Nirgundi Guggulu.^[5]

Drug Name	Latin Name	Family	Prayogyanga
Nirgundi	<i>Vitex nirgundo</i> Linn.	Verbenaceae	Mool
Guggulu	<i>Commiphora mukul</i> Engl.	Burseraceae	Shuddha Guggulu
Ghee	Clarified butter		

Progress of treatment

The overall reduction in symptoms was assessed based on the patient's presentation and doctors observations,

and it was documented before and after treatment. Table 3 and 4 explains the method of scoring and assessment.

Table 3: Observations of Subjective Criteria.

Sr.no	Lakshan	Duration			
		0 th day	7 th day	14 th day	21 st day
1	Amsa Sandhi School	9	7	2	0
2	Amsa Sandhi Sparsha Asahatwa	3	2	1	0
3	Amsa Sandhi Graha	3	1	1	0

Table 4: Assessment of Objective criteria- Range of Movement.

Sr. No	Objective	Range Of Moment Normal	Day 0 (Right Left)	7th day Right Left)	14th day (Right Left)	21st day (Right Left)
1	Abduction	170 -180	60, 60	80, 90	140, 150	180, 180
2	Scapular elevation	170 -180	100, 110	130, 140	160, 160	180, 180
3	Internal Rotation	60 -100	50, 55	70, 65	90, 80	100, 90
4	External Rotation	80 - 90	40, 50	55, 65	70, 85	90, 90
5	Adduction	50 -75	40, 40	50, 50	70, 65	75, 70
6	Horizontal Adduction and Abduction	130	80, 70	90, 85	110, 100	130, 125
7	Circumduction	200	130, 130	150, 145	180, 175	200,180

RESULT

With this 21 days of treatment the patient experienced a considerable reduction in pain and stiffness, along with significant improvement in range of movement (ROM) of bilateral shoulder joint, with no adverse effects. Table 3 and 4 indicates the improvement in gradation of symptoms accordingly. The pain levels were even reduced significantly as assessed by VAS Scale (visual Analogue Scale). On the first day the pain level were 9 (severe) which improved to 7 (moderate) on 7th day then to 2 (mild pain) on 14th day to no pain and any other symptoms on 21st day of treatment.

DISCUSSION

The present study aimed to study the effect of Nirgundi Guggulu in the management of Avabahuka (frozen shoulder). The result indicates that it significantly alleviated pain, reduced stiffness and improved range of motion in shoulder joint. The dual action of Nirgundi in reducing inflammation and enhancing joint lubrication aligns with Ayurvedic concept of restoring balance to the doshas. According to Bhavaprakasha Nighantu the combination of Nirgundi and Guggulu effectively addresses pain due to vata disorders, reinforcing the findings of this study.

Role of Nirgundi Guggulu in Avabahuka

The study investigates the effectiveness of Nirgundi Guggulu, a classical Ayurvedic formulation, which is composed primarily of Nirgundi (*Vitex nirgundo*) and Guggulu (*Commiphora mukul*). This formulation has properties that directly address the imbalanced vata dosha, providing anti-inflammatory, analgesic, and muscle-relaxing effects.^[6]

Nirgundi (*Vitex nirgundo*)

Nirgundi is known in Ayurveda for its potent vatahara (vata-balancing) properties. It reduces pain and inflammation, making it effective in managing musculoskeletal disorders like Avabahuka. Nirgundi's ushna veerya (hot potency) helps counteract the cold and dry qualities of aggravated vata, bringing warmth and reducing stiffness in the affected joints. Its anti-inflammatory action alleviates the pain associated with frozen shoulder.^[7]

Guggulu (*Commiphora mukul*)

Guggulu is another potent vata-kapha hara (balancer of vata and kapha dosha), with strong anti-inflammatory and analgesic properties. It helps in reducing joint stiffness by improving circulation and clearing the constricted channels (sira sankocha). Guggulu is also well-known for promoting dhatu agni (tissue metabolism), which supports tissue repair and joint lubrication. By restoring the balance of shleshaka kapha, it allows for smoother movement in the joints.

Mechanism of Action

The combined action of Nirgundi Guggulu targets both the vata dosha and the shleshaka kapha imbalance. In the case of Avabahuka, the vitiation of vata causes the drying up of synovial fluid in the shoulder joint, leading to friction and pain. Nirgundi Guggulu helps replenish the joint's lubrication, improving movement while reducing inflammation. It also relaxes the stambha (muscle stiffness) and clears srotas dushti (blockages in the channels).

The significant improvement in shoulder mobility from baseline to day 21 can be attributed to the ability of Nirgundi Guggulu to restore vata balance, were as reduction in stiffness correlates with the ayurvedic

principle of alleviating Amsa sandhi graha, where the constriction of vessels (sira sankocha) and loss of shleshaka kapha are reversed.

As indicated in Sushruta Samhita, Nidan sthana, the drying effect on the shoulder joint precedes the onset of avabahuka; the restoration of fluid balance through Nirgundi Guggulu can reverse the pathological changes.

The primary outcomes measured were pain reduction (using the visual analogue scale) improvement in shoulder joint mobility (abduction, adduction, rotation and circumduction) and reduction in joint stiffness (amsa sandhi graha). A substantial reduction in pain levels, underscoring Nirgundi Guggulu's effectiveness as an analgesic in the management of vata induced pain.

The notable increase in range of movement (ROM) of shoulder joint indicates effectivity of Nirgundi Guggulu in reducing stiffness and improving joint flexibility.

CONCLUSION

The case study highlights the effectiveness of Nirgundi Guggulu in the management of Avabahuka. It showed significant improvement in patients shoulder mobility and reduced pain, stiffness and tenderness. Nirgundi Guggulu proved to be safe and cost effective approach in managing vata- related musculoskeletal disorder like Avabahuka (frozen shoulder). Further studies on large are recommended to explore its long term benefits.

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