

# AYURVEDIC MANAGEMENT OF ASTHI-MAJJAGATA VATA W.R.T. ANKYLOSING SPONDYLITIS THROUGH PANCHATIKTA KSHEERA BASTI-A CASE REPORT

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## KEYWORDS

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## ABSTRACT

Ankylosing spondylitis(AS) is a chronic inflammatory disease of the spine that often leads to vertebral fusion limiting movement, causing stiffness of spine and a forward stooped posture. In Ayurveda, we can co-relate with asthi-majja gata vata whereby similar symptoms of AS are found that are asthi-parva bheda, sandhi shula, mamsa bala kshaya<sup>1</sup>, santata ruja<sup>2</sup> sandhi. Clinical studies have shown the importance of Ayurveda and Panchakarma in the management of AS. In this case study, a female patient aged 40 years age diagnosed with AS 2 years back was presenting typical symptoms of lumbar AS such as chronic low back pain, stiffness, difficulty in walking,etc. She was treated with panchatikta ksheera basti for 16 days alongside oral medications . Main assessment criteria before and after the intervention was BASDAI(Bath Ankylosing Spondylitis Disease Activity Index) scale founded by Calin et al., Bath, 1994, Range of motion of the lumbar spine and VAS(Visual Analog Scale). Patient showed significant relief in lumbosacral pain, reduced intensity, tenderness and duration of morning stiffness, reduced levels of ESR and CRP. Thus, this case supports the prominent role of Ayurveda in the management of AS through Panchakarma.

## INTRODUCTION

Ankylosing Spondylitis is a challenging chronic condition affecting the axial skeleton causing severe pain, stiffness and reduced mobility in the long run. It is one among the spectrum of spondyloarthropathies. Spondyloarthritis(SpA) is a common inflammatory rheumatic disease in India second only to rheumatoid arthritis<sup>3</sup>. As per various epidemiological studies, the prevalence rate roughly corresponds to 7-9 per 10,000. Despite the lower prevalence as compared to other diseases, it has been mentioned that AS can have a profound impact on an have a patient's quality of life, emphasizing the need for effective management strategies (Rudwaleit et al., 2012 in *Rheumatology International*)<sup>4</sup>. In addition, reduced quality of life in patients with axSpA is mainly associated with disease activity and worsening of functionality<sup>5</sup> .It involves administration of many external and internal Panchakarma procedures with Panchatikta Ksheera Basti being a key specialized enema treatment and having gained recognition for its effective management of chief symptoms of many musculoskeletal disorders such as bone and joints pain, stiffness with reduced range of mobility. From an Ayurvedic perspective, AS is linked to the vitiation of Asthi-majja Dhatu (bone and marrow tissue) and Vata dosha and

main aim of treatment is to pacify or eliminate these vitiated dosas that are mentioned as the key pathogenic factors in all ayurvedic rogas. In this regard, the main pathogenesis of AS is found to be linked to HLAB-27 where by auto-antibodies triggers inflammation within the tissues of joints and bones along with involvement of other system often such as cardiovascular, pulmonary, renal, ocular system etc. with inflammation due to autoimmunity being the highlight of the disease. Ayurveda, the traditional system of Indian medicine provides effective holistic therapies to manage/slow down the progression of the disease with simultaneous reduction in the major symptoms such as bone and joint pain, stiffness, reduced functional mobility, etc. through a specialized branch known as Panchakarma/Detoxification therapy. Among various external and internal Panchakarma therapies, Panchatikta Ksheera Basti, a specialized enema treatment has been recognized for its efficacy in management of many musculoskeletal disorders because of its known anti-inflammatory and rejuvenating properties. This case study explores the application of Panchatikta Ksheera Basti in a patient diagnosed with Asthi-majjagata Vata and Ankylosing Spondylitis, shedding light on its potential efficacy in

alleviating the symptoms and overall improving the quality of life for AS patients.

**AIM**-To manage Ankylosing Spondylitis/Asthi-majja gata vata through Pancha-tikta Ksheera basti.

**OBJECTIVES**-To assess the efficacy and role of Panchatikta Ksheera basti in the management of Asthi-majtagata Vata w.r.t AS.

#### MATERIAL AND METHODS

**Case Report:** A 40 year-old female patient diagnosed earlier with Ankylosing Spondylitis 2 years back was presenting with

**Table 1: History of the patient**

Chief complaints with duration	Aggravating low back pain for 1 week with increased stiffness and difficulty in walking
Past history	K/C/O Ankylosing Spondylitis since 2 years
Familial History	Mother
Medication history	Pain-relief medications(mentioned by the patient)
<b>Personal history</b>	
Diet	Vegetarian
Addictions	Tea
Occupation	Tailor, working hour-6 to 7 hours
Bowel habit	1-2/day
Bladder	2-3/day

#### Clinical Examination

General examination-thin built, anxious look, antalgic gait, BP, pulse within normal range, pallor/icterus/oedema absent.

aggravating low back pain with stiffness since 2 weeks. She had discontinued allopathic treatment since a year or so as she didn't get proper relief. But due to increasing pain, difficulty in walking with severe stiffness and difficulty to perform daily routine tasks, she came to OPD of Panchakarma Dept. of PAH, Vadodara, Gujarat. After proper examination and taking detailed history, she was diagnosed with asthi-majtagata vata and was admitted in the Panchakarma female IPD ward for needful.

**Table 2: Examination Of The Spine**

Inspection	Mild loss of lumbar lordosis, no local swelling or scar marks visible
Palpation	Tenderness in L4-L5 vertebral region and posterior superior iliac spine
Special tests (Modified Schober's test)	Distance from the center of line joining the two posterior superior iliac spines to a point 10 cm above the previous mark is 12.5cm; signifying reduced lumbar flexion
Ranges of motion	Cervical and thoracic spine-flexion and lateral movement within normal range, pain elicited during extension
	Lumbar spine-extension=0°, flexion=45°, right lateral movement-less than 20°, left lateral movement-less than 20, axial rotation not possible

**Table 3: Dasavidh Pareeksha**

Prakriti	Vata-pittaja	Satwa	Raja
Vikriti	Vataja	Satmya	Madhyam
Sara	Avara	Ahara sakti	Madhyam
Samhana	Avara	Vyayam sakti	Avara
Pramana	Madhyam	Vaya	Madhyam

#### Treatment Plan:

The treatment plan involved a combination of Ayurvedic therapies, herbal medications, and lifestyle modifications,

with Panchatikta Ksheera Basti as a central therapeutic modality.

**Table 4: Intervention administered**

Sarvanga abhyanga with murchita til taila	16 days
Parisheka with Dasamoola Kashaya	16 days
Panchatikta ksheera basti	16 days
Sr. No.	Oral medicines
1	Yogaraj guggulu
2	Rasayan vati
3	Rasnaspatak kwath

#### Panchatikta Ksheera Basti:

1. Preparation of Tikta Ksheera: The preparation was done according to the Ayurvedic texts and under the supervision of an experienced Ayurvedic physician.

**Table 5: Basti ingredients**

Madhu	60ml
Saindhav	6gm
Sneha	Mahatikta ghrta-30ml, Dasamoola taila-40ml
Kalka	Guduci, Yastimadhu, Nimba, Patol, Manjistha, Bala, Satapushpa, Aswagandha-30 gm
Kashaya	Panchatikta Kashaya(Nimba, Patol, Vasa, Kantakari, Guduci)-200ml

#### 2. Assessment of condition of the patient:

Before commencing any panchakarma and related procedures, a thorough examination of the health status,

involvement of co-morbidities, and any specific conditions has to be done by the physician for effective therapeutic results. This includes evaluation of the vyadhi avastha of

the patient as acute or chronic, involvement of ama, etc., dosas and dhatus involved, prakriti, bala, etc. as well as assessment whether the patient is actually fit for therapy. The patient in this case was selected for the said basti therapy as she fulfilled the criteria of the mentioned intervention i.e. Panchatikta ksheera basti.

### 3. Administration of basti:

Poorvakarma- Patient was advised to have empty stomach before basti session and basti was given in the morning hours in a comfortable and quiet room ensuring privacy and relaxation. After ensuring stable vitals, Abhyanga with bala taila followed by Parisheka with Dasamoola Kashaya were performed as pre-operative procedures.

Pradhan karma-The patient was positioned comfortably on a specialized table designed for Basti therapy in left recumbent position with the left leg extended and right knee bent, providing easy access to the rectum. The Ayurvedic practitioner or therapist administers the Tikta Ksheera enema through a sterile catheter or nozzle, gently and skillfully

introducing the medicated decoction into the rectum. The patient was encouraged to relax and breathe deeply during the process to ensure a comfortable experience. The basti plan was given in kala basti pattern of total 16 days.

Paschat karma- patient was given instruction to retain the medicated enema for a specific duration, typically around 15-20 minutes during which the patient was advised to remain as still and relaxed as possible. After the recommended retention period, the patient was allowed to evacuate the enema, which lead to the expulsion of toxins and waste from the colon. The patient was then provided with a warm bath to enhance the benefits of the therapy and to ensure comfort.

### Follow up

Patient was advised for follow up on 30<sup>th</sup> day with discharge medicines as panchatikta guggulu 250 mg 2 tablets BD A/F, Rasayan vati 250 mg 1 tab TDS A/F, balamoola ksheerapaka 50ml BD/BF.

Table 6: Kala basti schedule

Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8
AB	AB	KB	AB	KB	AB	KB	AB
Day 9	Day10	Day11	Day12	Day13	Day14	Day15	Day16
KB	AB	KB	AB	KB	AB	AB	AB

### Assessment criteria

The patient was assessed before and after treatment using practicable clinical outcome measures to assess the effect of panchatikta ksheera basti in the symptomatic management of asthi-majtagata vata or AS alongside slowing down of disease progression. They are as follows:

1. Visual analog scale(VAS): Pain level was assessed using the VAS scale ranging from 0 to 10 which is widely

used for assessment of rheumatic and musculoskeletal disease.

2. Bath Ankylosing Spondylitis disease activity index(BASDAI) was adopted to find out disease activity and physical well-being of the patient. BASDAI is a questionnaire consisting of 6 VAS items assessing fatigue, axial joint pain, peripheral joint pain, soft tissue tenderness to touch, and severity and duration of morning stiffness<sup>6</sup>.

Table 7:BASDAI<sup>7</sup>

BASDAI(score of 4 or more means active disease state requiring therapy, score of 1.4 to 2 means remission, 2.8 to 4 means low disease activity), BASDAI score=Q1+Q2+Q3+Q4+(Q5+Q6)/2	Visual analog scale 0=none 10=very severe
5	
BASDAI(score of 4 or more means active disease state, score of	
1. How would you describe the overall level of fatigue/tiredness you have?	0 to 10
2. How would you describe the overall level of neck, back, or hip pain you have?	0 to 10
3. How would you describe the overall level of pain/swelling in joints other than the time you wake up?	0 to 10
4. How would you describe the overall level of discomfort you have had from the time you wake up?	0 to 10
5. How would you describe the overall level of morning stiffness from the time you wake up	0 to 10
6. How long does your morning stiffness last from the time you wake up?	0 to 10

3. Inflammatory markers-blood levels of C-Reactive Protein and ESR were assessed to evaluate the effect of Panchatikta Ksheera Basti on subsiding the inflammatory activity of the disease.
4. Ranges of movement of lumbosacral spine including Modified Schober test.

### RESULTS

The patient showed marked improvement during the treatment period of 16 days as seen by 40-50% relief of major symptom which is low back pain, commonly involved in AS. The patient's stiffness in the spine and peripheral joints significantly reduced, allowing for improved mobility. This improvement aligns with Ayurvedic principles of reducing Vata dosha, which is responsible for stiffness and reduced mobility in AS. There was adequate enhancement of ROM of the lumbosacral spine.

**Table 8: Scoring of Assessment Criteria; BT-before treatment, AT-after treatment**

	Scores		
	BT	AT	Follow-up
BASDAI	6.2	4.4	4
VAS	7	4	4
ROM of lumbar spine			
Flexion	45°	45°	60°
Extension	0°	10°	10°
Left lateral flexion	<20°	20°	20°
Right lateral	<20°	20°	20°
Modified Schober	12.5cm	13.5cm	14cm
CRP	21.3mg/dl	16.1mg/l	12.5mg/l
ESR	25 mm/hr	22mm/hr	20mm/hr

## DISCUSSION

The end results obtained in this case study provide important insights regarding the use of this Panchatikta Ksheera basti as an important therapy in Ayurveda for the management of Ankylosing Spondylitis(AS). The therapy's anti-inflammatory properties are evident in the reduction of inflammatory markers such as C-reactive protein(CRP) and ESR thereby mitigating one of the core challenges in AS management which is the underlying inflammation. The improvement in joints mobility, reduced fatigue, relief of stiffness and pain, increased energy levels overall enhance the quality of life of the patient. Apart from reduction of physical symptoms, the mental state of the patient significantly improved reflecting the holistic approach of Ayurvedic management.

Basti-Basti itself is mentioned as the best therapy for management of vata dosa and ksheera bastis are known to be dosa shamana, brimhana, rasayana and balya. That means it not only removes harmful toxins from the body but also provides dhatu poshana simultaneously. According to ayurvedic literature, vata dosa has ashraya-ashrayi relation<sup>8</sup> with asthi dhatu. Through the nourishment of asthi and majja dhatus, vayu is pacified. The used of tikta dravyas, ksheera and ghrita siddha bastis and Madhuratikta ausadhi have been mentioned respectively for asthijanya and majjajanya rogas<sup>9</sup>. Ksheera possesses the properties of madhu, sheeta, snigdha, stanya and is pushtikarak. Due to its Mrdu, Shlakshna and Picchila Guna, it counters Rukshatva and sclerosing effects on the bone, thus increases Sleshmaka Kapha in the joint and thus allows the joints to move freely without any restriction and nourishes the Asthikhatu<sup>10</sup>. All the ingredients of panchatikta are dominant of tikta-kashaya rasa, laghu, ruksha, usna virya which performs Deepana, pachana, sothagna, amapachana, kapha-pitta hara. But when panchatikta dravyas are administered with milk or ghee, it causes vata shamana as well which is the main aim of treatment in asthi-majjagata vata. Here, Ksheera is the medium of the basti materials. It is rich source of calcium and is known to nourish asthi dhatu. Also, because of Suksma guna of lavana and lipophilic nature of ghee and taila used in basti, srotas are opened up properly and the active principles of the drug penetrate the body easily with the help of the lipid materials via the rectal route. Madhu being yogavahi potentiates the drug action of the basti materials. Ghee by nature is snigdha, guru, mrdu with Madhura vipak which causes vata shamana; it is also a good source of fat- soluble vitamins(K,A,E,D), butyrate and linoleic acid which are important for bone nutrition and preventing or reducing bone degeneration and joint damage respectively. When ghee is medicated with pancha-tikta gana dravyas, synergistic action is achieved .Also Dasamoola taila used in preparation of ksheera basti in this case is already known for its vata-hara, sothagna, vedana sthapak properties because of its various compositions. Hence, by this basti, the toxins are eliminated from the body while simultaneously supplying nutrients to asthi and majja dhatus. The composition of pancha tikta gana are known to be anti-inflammatory, immunomodulatory, anti-oxidant, rejuvenative and also antimicrobial. So, it is commonly used for chronic skin diseases, metabolic diseases, respiratory, arthritis and other inflammatory conditions. For example in various studies involving in-vivo and in-vitro models, anti-inflammatory and immunomodulation has been shown such as

inhibition of COX-1, COX-2 and cytokines(IL-1 and TNF-alpha) by neem extract<sup>11</sup>, reduction of pro-inflammatory cytokines by *Tinospora cordifolia*(guduchi) extract<sup>12</sup>, anti-nociceptive and anti-inflammatory activity of triterpenoid enriched extract of *Trichosanthes dioica*(patol)<sup>13</sup>, lowering of pro-inflammatory cytokines in serum and synovial fluid by methanolic extract of *Adhatoda vasica*(vasa)<sup>14</sup>, and also reported anti-oxidant/free radical scavenging properties of *Solanum nigrum* in many studies . In the context of Asthimajaja gata vata, the combined therapeutic potential is purification of blood, reducing inflammation, supporting joints and bone health and immunity. In Ayurveda, Pakwashaya is considered as the main sthana of vayu<sup>15</sup>. As per Dalhana, Purishadvara kala is Asthidhara kala<sup>16</sup> which therefore establishes the relation between the two, so basti given via pakwashaya helps in strengthening of asthi dhatu.

Samana chikitsa: Yogaraj guggulu is widely used in Ayurveda for shula prashamana, sothagna, deepan and amapachan purposes. Rasayan vati by name itself is a rejuvenative/adaptogenic medication .i.e it is rasayana, balya, medhya, ojaskara and nourishes bones, nerves and muscles. Rasnadi Kashaya is also Vedana sthapak, sothahara, Deepana, pacana, ama-pachak. The conglomerative action of this adjunctive oral therapy aided in reducing pain, joint stiffness, inflammation, chronic debility and also increasing energy levels of the patient alongside Panchatikta Ksheera basti.

## CONCLUSION

Ayurveda emphasizes on personalized and holistic care taking into consideration individual's unique constitution and specialized health needs. The selection of panchatikta ksheera basti is therefore tailored to patient's condition which is the fundamental aspect of Ayurvedic treatment. Due to the chronic nature of the AS and the effects it has on the overall physical and mental functioning of the patients with AS, its management is challenging. This case study highlights the potential efficacy of Panchatikta Ksheera Basti, a specialized Ayurvedic enema therapy in the management of AS. The results demonstrate the promising role of Ayurveda and Panchakarma, a specialized branch of Ayurveda in pain management, enhancing joints mobility, decreasing inflammation and improving quality of life of the patient with AS. For further supportive evidences, it is essential to carry out clinical and pharmacological researches on various bastis involving randomized controlled trials on bigger sample size/population, larger cohort studies, long term follow-up studies. This way, we can establish standard protocols and safety profile to proving that Ayurvedic therapies fulfill scientific principles so as to build better acceptance and public trust for integrating Ayurveda into mainstream health care.

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