

# Effects of Siddha Therapy in Managing Pain, Stiffness and Mobility Levels Associated with Ankylosing Spondylitis - A Single Case Study

Dr. Bhuvanagiri Satya Sindhuja<sup>1</sup>, Injarapu Sankar<sup>2</sup>, Dr. Ram Mohan Reddy<sup>3</sup>, Dr. Shweta Tiwari<sup>4</sup>

<sup>1</sup>Patron, Department of Siddha Medicine, Chakrasiddh Health Centre, Hyderabad, India

<sup>2</sup>Chief Healer, Department of Siddha Medicine, Chakrasiddh Health Centre, Hyderabad, India

<sup>3,4</sup>Consultant Dr, Department of Siddha Medicine, Chakrasiddh Health Centre, Hyderabad, India

<sup>4</sup>Email id: [shweta11\\_in\[at\]yahoo.com](mailto:shweta11_in[at]yahoo.com)

**Abstract:** ***Objectives:** To study the effects of Siddha treatment in managing pain, stiffness, and mobility in a patient diagnosed with ankylosing spondylitis (AS). **Methods & Methodology:** A 38 - year - old man, a known case of Ankylosing Spondylitis since 10 years received treatment across a 32 - day period with a gap of two months in between. His pain, stiffness, and mobility were determined by Bath Ankylosing Spondylitis Disease Activity Index using visual analogue scales (VAS) daily during the initial and at closing time. Neck stiffness and spinal mobility was measured by Finger to floor test (FIF). The feedback of patient was taken for monitoring his improvement to supply pertinent information on quality of life. **Results:** All dependent variables showed improvement with stiffness intensity showing the greatest improvement, to a final value of 2 from an initial value of 9 - 10 in neck region and back. Pain in groin region reduced from 8 to 3. Duration of stiffness also showed improvement, to a final value of 2 from an initial value of 9. Improvement was also found in fatigue from initial value 8 to 3 and forward flexion reduced from 6' to 4'. Examination showed kyphosis and limited neck movement. His score on Bath Ankylosing Spondylitis Disease Activity Index was 7 at time of joining which became 3 at closure. **Conclusions:** Siddha therapeutic ways of Varmam points treatment shows positive results in almost all variables associated with Ankylosing Spondylitis with mild - to - moderate symptoms of AS.*

**Keywords:** Ankylosing spondylitis, siddha therapy, Bath Ankylosing Spondylitis Disease Activity Index, fatigue, Finger to floor test, quality of life

**Abbreviations:** CAM (Complementary Alternative Medicine). AS (Ankylosing Spondylitis). FIF (Finger to floor test)

## 1. Introduction

Ankylosing spondylitis is a type of arthritis that is progressive chronic inflammation of the axial skeleton affecting the spine and sacroiliac joints leading to lower back pain [1]. It inflames the pelvic joints called sacroiliitis, which is one of the initial signs of AS [2]. Inflammation often spreads to joints between the vertebrae, the bones that make up the spinal column. This condition is known as spondylitis. Symptoms majorly includes hip pain and stiffness in back that may lead to less flexibility in spine. Over time, vertebrae in the spinal column may fuse and become ankylosed leading to significant postural changes, forward positioning of the neck, and exaggerated kyphosis or a forward hunch posture [3].

The prevalence of Ankylosing spondylitis is ranging between 0.7% and 0.9% worldwide. In china, the prevalence is estimated about 0.3% and in Europe it can reach up to 1.8% [4]. The AS is more common between the ages of 18 and 47 with males affected more as compared to females; male-female ratio is generally around 3: 1 [5]. Studies shows Ankylosing spondylitis to be genetically linked disease and it is thought that HLA - B27 contributes to 23% transference of AS to next generation [6]. Other studies believe 6-7% patients having AS have positive HLA - B27 [7].

The management of AS aims to manage pain, reduce symptoms improves spinal flexibility and retain normal posture. It requires a combination of both non - pharmacological and pharmacological treatments. The patient has to take NSAIDs (Non - steroidal anti - inflammatory drugs) for a long duration of time in controlling pain but there is no respite in flexibility [8]. It is estimated that 25-42% of patients do not show much improvement to pharmacological treatment. Studies have showed that AS patients can get some relieve from different non - pharmacological methods like CAM (complementary and alternative medicine). The patients are advised for regular exercises under proper Physiotherapist to reduce symptoms and gain some mobility. Others take up different CAMs like Chinese massages, chiropractic treatment etc to achieve some flexibility and release in pain. Deep massages in AS are contradictory but researchers states that compression over the ribcage should be avoided and that ankylosed joints should not be forcibly mobilized (9). Its suggested that kneading, stretches, and mobilization of non - ankylosed joints are appropriate within the client's tolerance level. Thus, the management of AS may result in high costage and psychologically stressful for the patients and the healthcare system [9].

*Siddha vaidyam* is another alternative therapy used in such diseases in Southern part of India. It is gaining its popularity as there is no requirement of medications and surgery and chances of the reversal of the disease condition and return to

Volume 12 Issue 9, September 2023

[www.ijsr.net](http://www.ijsr.net)

Licensed Under Creative Commons Attribution CC BY

normalcy is faster than what is perceived by people [10]. Siddha system also offers effective treatment options for various common ailments, helps to improve the quality of life by better management of lifestyle disorders and disorder of various systems of the body.

Siddha for its universal adaptability is its unique therapeutic methods - - pressure manipulation therapy i. e. Varmam and physical manipulation therapy i. e. Tokkanam, that are skilfully carried out by trained practitioners particularly for pain management in case of trauma, postural disorders, etc. The various techniques focuses on removing blockages, improving energy flow and activating the body's internal healing mechanisms. Thus, resulting in cure and an improved lifestyle with no medications and no surgical intervention [11]. According to varma theory to stimulate the varma points, pressure should be applied in these points at a particular and given strength [12]. *Sagana Vatham* (cervical spondylosis) and *Thandaga Vatham* (Lumbar spondylosis) are among 80 vatha disease mentioned in the Siddha text book of Siddhar Yugi. These disease together affects the complete spine with symptoms bearing a resemblance to AS with more pronounced and severe symptoms.

This study aimed to identify possible improvements in managing pain, stiffness, and mobility in a patient diagnosed with ankylosing spondylitis (AS). The patient was given treatment for total 32 sessions with gap in between depending upon his improvement. Visual Analogue scale (VAS) and Bath Ankylosing Spondylitis Disease Activity Index were used for outcome measures.

## 2. Methods and Methodology

### Case Presentation

A 38 - year old male from Vijaywada, a K/C/O Ankylosing Spondylosis from 10 years reported to the centre OPD in May, 22 with chief complaints of having chronic low back pain and stiffness with limitations of spine movements for the last 10 yrs which has aggravated from last 1 year.

There is on/off history of radiation of pain to left thigh and left leg till knees. The symptoms were noticed mostly in early morning hours and were relieved by afternoon with movements earlier but from few months the movements of spine have become too much restricted in all directions. From last 10 months, the patient has developed pain and stiffness in neck and felt very less lateral movements in neck and decrease in B/L shoulder mobility. This has gradually worsened to inability to move the neck in all the directions. He cannot lift his arms especially left arm above the shoulders. The patient had pain severity 9 with stiffness in neck at 10 on VAS. The patient has stopped driving due to restricted movements of his neck which is affecting his office work and quality of life.

His complaints also included severe pain in the groin region after moving for 15 minutes and cannot sit in squatting position because of painful restriction at hip joint. From few months there is increased fatigue throughout the day & on/off inguinal numbness esp in morning time. He was

unable to bend forward and laterally and had lot of difficulty in sleeping due to pain in back and hip region (9 at VAS).

### History of Past Medical Illness

The patient is Non - diabetic and non - Hypertensive. There is no H/O fall or trauma and any other surgeries. He remembered to have gone for regular checkups due to minor neck pain. The doctor advised him to take out X - ray and some lab investigations. His HLA - B27 was found positive and the x - rays showed some stiffness indicating a bamboo spine. His orthopaedic confirmed him to have initial stage of AS and was advised for physical therapy sessions for 2 months and NSAID's to reduce pain. The patient felt better for 2 - 3 years but as soon as he left taking medications, the pain increased and slowly stiffness too increased. He had covid in 2021 and after that he noticed that pain and stiffness in back had increased two folds. His groin pain had aggravated from 5 to 9/10 on VAS and was having difficulty in bending.

When the patient came for consultation, he was using over - the - counter non - steroidal anti - inflammatory drugs (NSAIDs like naproxen or ibuprofen) as needed. In between, he had also taken Homeopathic medications for almost 2 years and Physiotherapy for 6 months for his condition. He had previously received Kerala massages and had found them to be helpful, but his last massage had been 2 years before the start of the treatment.

At time of start of treatment, the patient could not bend even 20 degrees because of marked stiffness of cervical spine. Movements of both shoulder and hip joints were painful and restricted. He could not move his lumbar spine i. e. could not bend forward, backward or sideways (anteriorly, posteriorly, and laterally). There was tenderness over both sacroiliac joints and groin region. He was unable to sit i. e. he could not flex his hip joints and any attempt at flexion of hip joints elicited severe pain. everyday tasks and dependent on functional anatomy (bending, reaching, changing position, standing, turning, and climbing steps with or without rail). He was feeling difficulty in coping with everyday work. The patient was informed about the treatment process and 50% improvement in spinal mobility, decreased stiffness, and pain in neck region.

The aim of presenting this case is to see how Siddha therapy worked on curing the Ankylosing Spondylitis by reducing pain with improved spinal flexibility without use of medicines. This was confirmed by noting her pre - post symptoms on VAS scale for pain, flexibility and Bath Ankylosing Spondylitis Disease Activity Index assessment. Clinically, pre and post x - rays also verified the success of treatment.

### Investigations

At time of admission, patient was completely examined and was found to be Conscious, oriented and afebrile. He was advised to get his CBC, RFT, LFT done (Table - 1). Chest X - ray showed abnormal thoracic spine (bamboo spine). The patient's Complete spine including cervical spine, both shoulder joints and pelvis revealed multiple abnormalities. It was clearly visible that patient had Kyphosis of thoracic

spine and severe stiffness in cervical spine. Pelvic region showed bilateral moderate sacroiliitis.

**Table 1: Blood Reports**

CBC	Hb - 14.2 Gm% WBC = 9, 500/cmm RBC=3, 900, 000/cmm Platelets =250, 000/cmm Random blood sugar= 551mg/dl Fasting blood sugar= 192 mg/dl HbA1C= 9.0%, Blood Urea=32mg/dl Serum creatinine=0.86mg/dl
LFT (Liver functions tests)	Total protein - 5.2 Gm% Albumin - 2.6 Gm% Total serum bilirubin - 0.8mg/dl Unconjugated bilirubin - 0.6mg/dl Conjugated bilirubin - 0.3mg/dl, AST - 25U/L, ALT - 27U/L ALP - 93U/L. Serum cholesterol-224mg/dl (mildly elevated) Serum triglyceride - 149mg/dl
ESR	39mm/1hr
RF, ANA and CRP	negative
Urine examination	Pus cells (20 - 30/HPF) RBC (over 55/HPF)
ECG	Normal
BP	140/70 mm of Hg

**Outcome Measures:** The Bath Ankylosing Spondylitis Disease Activity Index (BASDAI) consisted of 6 questions using a numerical rating scale (0–10) to measure the severity of fatigue, spinal pain, joint pain/swelling, localised tenderness, and morning stiffness (Table - 2). Each item is scored on a 10 cm visual analogue scale of 0 - 10. A score of 0 = none (no symptoms), and a score of 10 = very severe symptoms. Spinal mobility was assessed by the Finger to Floor (FTF) Test. FTF is the distance between fingertips and floor measured with tape at maximal flexion of spine and pelvis while the knees are kept in extension.

### 3. Treatment Protocol

The treatment was started on 16th May, 2022; it was planned for 32 days with 25 days in initial phase and a week after gap of 1 month. The treatment included Complete spine and B/L hips with both legs and limited pressure on the hip area. The patient was kept on strict anti - inflammatory diet to reduce inflammation and daily physio exercise for 1/2 hr to strengthen his legs. The following varmam points were stimulated by the chief healer. For cervical and dorsal pain and stiffness, *Mudichu Varmam*, *Chippi Varmam* and *Kakkatai Kaalam* were pressured and manipulated. For lower back; *Komberi Kalam*, *Keelh Maanai Varmam* and

*Nangana Potu* were initiated everytime the patient came for treatment.

The client was asked maintain a daily diary, which included a VAS to assess general pain (no pain to excruciating pain), fatigue (no fatigue to severely fatigued), morning stiffness intensity (no stiffness to intense stiffness), and morning stiffness duration (0 – 2 hours or more).

In initial week, patient had less difference in pain but could see difference in his walking style. He could notice that he was able to stand for 20 mins while earlier he could not stand even for 5 mins. He could identify his stiffness reduction in both lower back and groin as now he was able to bend which was very difficult earlier. Even the movement in neck sideways was improving. Reduction in morning stiffness and increased mobility were some of the most noticeable changes in first week. The patient by 5th day was able to sleep straight for an hour without much pain and stiffness and was gradually increasing the time.

In 2nd week, he could see lot of improvement in B/L shoulder flexibility and now was able to drive car. The patient was now able to walk for 1 km with very less discomfort in his groin area while before treatment he could barely walk for 5 mins. He tried standing for 40 mins and was able to do 5 - 8 squats without any difficulty. Earlier he felt pain while doing exercises but now he was able to do exercises without any much discomfort. In 3rd week, there was 50% improvement in stiffness in hip region and almost no radiating pain in left leg. On the VAS scale pain had reduced from 9/10 to 5/10. According to the plan, he was given break for a month but was advised to continue diet restrictions and physio strictly. After break, his treatment was again started with mild pressures. The patient was having low intensity pain 4 - 5/10 on VAS of all 3 variables on taking complete symptom wise report. The treatment was again given to him for 14 days.

### 4. Results

On completion, the patient had recovered 60% from his initial condition. All dependent variables showed improvement with stiffness intensity showing the greatest improvement, to a final value of 2 from an initial value of 9 - 10 in neck region and back on VAS scale (Table3). Pain in groin region reduced from 8 to 3. Duration of stiffness also showed improvement, to a final value of 2 from an initial value of 9. Improvement was also found in fatigue from initial value 8 to 3 and forward flexion reduced from 6' to 4'. His score on Bath Ankylosing Spondylitis Disease Activity Index was 7 at time of joining which became 3 at closure (Table2).

**Table 2: Bath Ankylosing Spondylitis Disease Activity Index**

Question	Score	Score at time of admission	Score at time of closure
How would you describe the overall level of pain and swelling you have had in joints other than the neck, back or hip?	1–10	8	2
How would you describe the overall level of neck, back or hip pain you have had?	1–10	9	3
Describe the overall level of fatigue or tiredness you have experienced?	1–10	9	3
How would you describe the overall level of discomfort you have had from any areas tender to touch or pressure?	1–10	8.2	2

Describe the overall level of discomfort you have had from the time you wake up?	1-10	9	3
How long does your morning stiffness last from the time you wake up?	0 - 120 mins	8	2.5

Note: The patient is asked to complete each question. The score is calculated by taking the average of all 6 questions, where duration of morning stiffness in minutes is coded in 12 - minute increments from none (1) to 120 (10).

**Table 3:** Pre and post pain rating on VAS scale

Regions	Pre treatment	post treatment
Neck	9- 10	3
Lower back	8	2
Groin region	9	2
Lt and Rt shoulder	Lt - 9; rt - 6	Lt - 3; rt - no pain
B/L Legs	Lt - 9; rt - 5	Lt - 3; rt - no pain
Pain rating (overall)	9- 10	3- 10

Overall, the patient was pleased with the outcomes of the siddha treatment, and he was advised to continue using massages to maintain levels of mobility. The therapist also noticed that the mood of the patient had improved across the study period, as now the patient felt more positive and less disheartened about his condition.

## 5. Conclusion

This case study proved that *Siddha Vaidya*, an ancient science that treats by aligning body energies (mind, body and spirit), to empower and activate the body's internal healing mechanisms had a positive outcome in this Ankylosing Spondylitis patient. This study can further help in areas of investigation, providing some indications that siddha could be used as another alternative therapy with good results in patients with AS who have mild - to - moderate symptoms. The study clearly shows the improvement in patients variables of stiffness, fatigue and pain thus, resulting in cure and an improved lifestyle. *Siddha* therapy along with diet and physiotherapy rehabilitation played a vital role in this case in reducing pain; enhancing muscle strength, functional independence, and quality of life in patients with Ankylosing Spondylitis.

## References

- [1] Zhu W., He X., Cheng K., Zhang L., Chen D., Wang X., Qiu G., Cao X., Weng X. Ankylosing spondylitis: Etiology, pathogenesis, and treatments. *Bone Res.*2019; 7: 22. doi: 10.1038/s41413 - 019 - 0057 - 8. [PMC free article] [PubMed] [CrossRef] [Google Scholar] [Ref list]
- [2] Calin A. Ankylosingspondylitis. *Medicine.*2002; 30 (9): 54-57. doi: 10.1383/medc.30.9.54.28240. [CrossRef] [Google Scholar] [Ref list]
- [3] Shahid A., Mushtaq H. S., Azfar S. M. Spontaneous bilateral quadriceps rupture in a patient with ankylosing spondylitis: A case report. *J. Pak. Med. Assoc.*2017; 67: 150-152. [PubMed] [Google Scholar] [Ref list]
- [4] Stolwijk C., Boonen A., van Tubergen A., Reveille J. D. Epidemiology of spondyloarthritis. *Rheum. Dis. Clin. N. Am.*2012; 38: 455-478. doi: 10.1016/j.rdc.2012.09.003.
- [5] Chen H. H., Chen Y. M., Lai K. L., Hsieh T. Y., Hung W. T., Lin C. T., Tseng C. W., Tang K. T., Chou Y. Y., Wu Y. D., et al. Gender difference in ASAS HI among patients with ankylosing spondylitis. *PLoS*

*ONE.*2020; 15: e0235678. doi: 10.1371/journal.pone.0235678.

- [6] International Genetics of Ankylosing Spondylitis Consortium. Cortes A., Hadler J., Pointon J. P., Robinson P. C., Karaderi T., Leo P., Cremin K., Pryce K., Harris J., et al. Identification of multiple risk variants for ankylosing spondylitis through high - density genotyping of immune - related loci. *Nat. Genet.*2013; 45: 730-738. doi: 10.1038/ng.2667.
- [7] Reveille J. D., Weisman M. H. The epidemiology of back pain, axial spondyloarthritis and HLA - B27 in the United States. *Am. J. Med. Sci.*2013; 345: 431-436. doi: 10.1097/MAJ.0b013e318294457
- [8] Braun J., van den Berg R., Baraliakos X., Boehm H., Burgos - Vargas R., Collantes - Estevez E., Dagfinrud H., Dijkmans B., Dougados M., Emery P., et al.2010 update of the ASAS/EULAR recommendations for the management of ankylosing spondylitis. *Ann. Rheum. Dis.*2011; 70: 896-904. doi: 10.1136/ard.2011.151027.
- [9] Daikh D. I., Chen P. P. Advances in managing ankylosing spondylitis. *F1000Prime Rep.*2014; 6: 78. doi: 10.12703/P6 - 78.
- [10] www.nischennai. org National Institute of Siddha, Chennai
- [11] Eugene Wilson, Herbs used in siddha medicine for Arthritis - A review, Indian Journal of Traditional Knowledge Vol 6 (4), October 2007, pp.678 - 686
- [12] Kuppusamy Mudaliar K. N, Vazhi Noi, Siddha Maruthuvam, Tamil Nadu Siddha Maruthuva varyiam, 1987: 580 - 599
- [13] <http://varmathrapy.in>
- [14] <http://siddhabooks.com>
- [15] <http://www.varmam.org>