



World Journal of Pharmaceutical Science & Technology

Journal homepage: www.wjpst.com

CASE STUDY

A CASE STUDY ON AYURVEDIC APPROACH IN MANAGEMENT OF ANKYLOSING SPONDYLITIS

Deep Mala¹, Dr Rashmi Mutha², Dr. Abhishek Upadhyay,³ Dr. Ranbir Rajpurohit⁴

1. MD(Ayu) Scholar, Department of Kayachikitsa,, National Institute of Ayurveda, Jaipur, Rajasthan ,India.
2. Assistant Professor, Department of Kayachikitsa,, National Institute of Ayurveda, Jaipur, Rajasthan ,India.
3. Assistant Professor, Department of Kayachikitsa,, National Institute of Ayurveda, Jaipur, Rajasthan ,India.
4. Ayurvedic Medical Officer Government of Rajasthan.

Address for correspondence:

Deep Mala, MD(Ayu) Scholar, Department of Kayachikitsa,,National Institute of Ayurveda, Jaipur, Rajasthan ,India.
Email Id:- deep.choba24@gmail.com

Received: 15-05-2023, Revised: 01-07-2023, Accepted: 29-8-2023

ABSTRACT

Introduction: Ankylosing spondylitis (AS) is a challenging and gradually progressing condition that can lead to significant disability. People with symptomatic AS may experience a decrease in their ability to work, leading to job loss, and a diminished quality of life.¹ Sacroiliitis one of the earliest manifestations of AS and site of ligamentous attachment to bone (enthesitis) is primary site of pathology. **Material and methods:** Here we are reporting a case of AS with a 6 month history of pain and stiffness in B/L ankle joint, shoulder joint, hip joint and pain and stiffness in lower back associated with difficulty in walking. Based on his signs and symptoms he was considered as a case of Amavata according to Ayurveda and was successfully managed with Shaman Chikitsa on OPD basis for 6 months with internal medicines and dietary and lifestyle modification. The patient's state was evaluated for signs and symptoms of Amavata and assessment was done according to ASAS (Assessment of Spondyloarthritis International Society) criteria. This study suggests that Ayurvedic therapy could effectively treat cases of Ankylosing Spondylitis (AS). **Result:** The patient reported

clinically significant improvement in pain, stiffness and swelling in all joints. By the end of treatment, the need of conventional analgesics drugs was not felt by the patient. The quality of life of the patient was improved significantly.

Keywords: Ankylosing spondylitis, Amavata, Ayurveda.

INTRODUCTION

Ankylosing Spondylitis (AS) is a chronic inflammatory rheumatic disorder that predominantly impacts the axial skeleton, peripheral joints, as well as extraarticular structures. One of the earliest manifestations of AS is sacroiliitis, which is the inflammation of the sites where ligaments attach to bones (entheses). The exact cause of AS is not fully understood, but there is a strong association with the HLA-B27 antigen in approximately 90% of AS cases. AS is more common in males, who are three times more likely to develop the disease than females. It typically begins in the second or third decade of life.²

The detection of sacroiliitis through radiography, magnetic resonance imaging, or computed tomography in the presence of clinical symptoms is diagnostic for AS. Alternatively, the presence of inflammatory back pain along with at least two other typical features of spondyloarthropathy, such as enthesitis and uveitis, can be highly predictive of early AS.

The primary approach to managing AS, involves treatment with non-steroidal anti-inflammatory agents (NSAIDs) and physiotherapy. NSAIDs are effective in relieving inflammatory symptoms and are the first-line drug treatment. Emerging biological therapies aim to target the underlying inflammatory processes in AS, potentially altering the disease's course and providing symptom relief.³

Prolonged use of NSAIDs and corticosteroids can lead to adverse effects, causing concerns for many patients. Additionally, stress and anxiety can contribute to the progression of this disease. The characteristics of Ankylosing spondylitis align with the descriptions of Amavata in classical Ayurvedic texts.

Amavata is a condition in Ayurveda characterized by the vitiation of Vata Dosha and the accumulation of Ama in the joints. Ama is essentially a poorly digested product that is not suitable for the body. When this Ama accumulates in the body's tissues or joints, it can lead to the development of symptoms such as pain, stiffness, swelling, tenderness, and other joint-related issues.⁴ The fundamental principles of treating this condition in Ayurveda focus on stimulating and restoring the impaired Agni. This is achieved using various therapeutic measures, including Langhana, Deepana Pachana and strotoshodhan.

Presenting complaints

An 18 yrs. old male Indian Muslim patient presented in National Institute of Ayurveda OPD on 8/12/2020 with complaints of dull pain in lower back with stiffness, pain in Bilateral inguinal region, pain in Bilateral

hip joint, pain in Bilateral shoulder joint and Bilateral ankle joint with stiffness and swelling for past 6 months. Patient also complained of pain and stiffness in neck region. The pain was bilaterally, persistent, insidious on onset, progressive in nature which got worse during night, early morning and after exposure to cold weather and consuming cold food. Morning stiffness lasts for 2-3 hours which gradually reduced with activity.

Patient has been taking non-steroidal anti-inflammatory drugs [NSAIDS] for five months on daily basis once a day.

Patient History

In present case, the patient tested positive for HLA-B27, had elevated levels of C-reactive protein (CRP) and an increased level of Erythrocyte sedimentation rate (ESR). The ASLO (Antistreptolysin o Titre) test was also positive at a level of 800 U/LIT. Bilateral Radiographic sacroiliitis was detected as well. Reduced lumbar mobility and restricted knee joint movement was observed on examination.

Furthermore, the patient's medical history revealed previous history of pain and swelling in both knee joints, which had led to the aspiration of fluid from the left knee joint a year ago. The patient had also experienced right eye intermediate uveitis and left eye acute on chronic anterior uveitis. Additionally, a history of juvenile arthritis was noted, which had been treated for a duration of 6 months.

Clinical Findings

During the examination, the patient exhibited symptoms of disrupted sleep and a decreased appetite, had an irregular digestive fire (Vishamagni) and a Sharir Prakriti characterized by Vata and Kapha dominance. Their physical attributes included a Madhyama Kosta, Madhyam

Sara, Madhyam Samhanana, Madhyam Pramana, Madhyam Satmya, Madhyam Satva, limited physical activity capability (Avara Vyayamshakti), and moderate food intake and digestive power (Madhyam Aharshakti and Jaranshakti). On examination loss of spinal mobility with markedly limitation of flexion and extension of lumbar spine was noted. Patient felt pain in Sacro-iliac region which increased with putting pressure on joint area. Restricted movement of knee joint (painful flexion and extension) was also present.

Physical examination revealed a temperature of 98.30F, Pulse rate -76/min, BP- 110/70mm. Respiratory system- Air entry B/L equal with no added sounds

Mild Restriction in expansion of the chest was also found. Test for sacroiliitis such as Faber test, Thigh thrust, Pelvic compression, Gaenslen test were positive. Pain and tenderness at Achilles tendon present. On investigation raised ESR (59mm/hr) and raised CRP (113.3 mg/dl) was found.

Diagnostic Assessment

In this case, the patient exhibited a range of symptoms including low back pain (Kateeshola), pain in the knees and shoulders (Ruja in Janu And Ansa Sandhis), and swelling in the ankle joints (Shula And Sopha In Gulpha Sandhis), Lethargy (Alasya), stiffness in body parts and joints (Sthamba), a feeling of heaviness (Gourava), reduced of appetite (Aruchi), and constipation (Vibandha) were also reported.⁵ Based on the sign and symptoms like sandhishula, stabhdhta, shotha patient was diagnosed as Amavata and treated accordingly.

Therapeutic Intervention

On the first visit patient was treated with Sanjivani vati 2 tab BD and Guduchi Dhanyak shunthi Paniya 1.5l for whole day for the duration of 15 days. On second visit combinations of drugs like Samirpannag Rasa, Godanti Bhasma 500 mg, Nagradhya Churna 2g and Ashwagandha Churna 3g was also added in continuation with previous treatment and Rasnasaptak Kwath 20ml and Simhanda Guggul 4 tab was also added. On third visit Dashmoola kwath 20ml BD and Punarvashtak kwath 20ml BD was added and Ruksha Sweda was advised. Patient was advised dietary and lifestyle modification along with medications. All the treatment was continued for 6 months.

Table No. 1 Treatment given during the patients' visit

Intervention	Dose	Duration
Dhanyak 5g+ Shunthi 3g+ Guduchi 5g Paniya.	2 litre per day	1st visit
Sanjivani Vati	250 mg BD After food	1st visit
Sameerpannag rasa 125mg+ sanjivani vati 125mg+ godanti bhasma 500mg+ nagradhya churna 2g+ ashwagandha churna 3g	1 TSF BD Empty stomach	2nd visit
Rasnasaptak Kwath	40ml BD Empty stomach	2ndvisit
Simhnaad Guggul	4 Tab TDS	2nd visit
Dashmool kwath	20 ml BD Empty stomach	3rd visit
Punarnavashtak kwath	20 ml BD Empty stomach	3rd visit

Follow up And Outcome

Patient was assessed at 3-month interval for improvement in sign and symptoms and followed up for another 5 months. At the end of treatment quality of life of the patient was significantly improved and patients stopped taking analgesics Patient did not report any remission of the symptoms.

DISCUSSION

The patient's treatment approach followed the principles of Amavata management in Ayurveda. Upon presentation with symptoms suggesting Ama, such as constipation and reduced appetite, heaviness in body etc. Therefore the initial treatment focused on improving digestion and addressing Ama. To achieve this, the patient was advised to take specific Ayurvedic formulations, including Guduchi, Dhanyak, Shunthi Paniya, and Sanjivani Vati.

Sanjivani Vati, a well-known Ayurvedic remedy, is recognized for its ability to reduce Ama Dosha (toxicity or undigested impurities), balance Kapha Dosha, and pacify Vata Dosha. Additionally, Sameer Pannag Rasa, with its Katu Rasa, Ushna Guna (hot quality), Ushna Virya (potency), Katu Vipaka (pungent metabolic taste), and Kapha Vata balancing properties, can act against pain (shoola) and edema (swelling) associated with the condition.⁶ Godanti bhasma has anti-inflammatory and antipyretic properties, making it beneficial for providing relief from fever, pain, and joint swelling

Simhanada Guggul contains Katu (bitter) and Tikta (astringent) tastes, along with Laghu (light), Ruksha (dry), Ushna Virya (hot potency), Katu Vipaka (pungent metabolic taste), Vedhnasthapana (wound healing), Amapachak (digesting and eliminating Ama), and Srotoshodhaka (cleansing the channels) properties. These characteristics are essential in breaking down the factors contributing to Amavata. It also acts as a Rasayan (rejuvenating) due to the presence of Guduchi and helps in the digestion and elimination of Ama, primarily because of the predominance of Tikta Rasa in its composition. Rasna Saptak is Vata Shamak (pacifying Vata), assisting in the digestion and elimination of Ama, and also providing analgesic relief. Sanjeevini Vati is particularly effective in improving Mandagni (weakened digestion) and providing relief from pain.⁷

Scientific evidence strongly indicates that Ashwagandha serves as a potent regenerative tonic. This is due to its diverse pharmacological effects, including its ability to combat stress, provide neuroprotection, alleviate arthritis, offer pain relief, and reduce inflammation.⁸ Ashwagandha has Shothhara, Shulaprashaman, Deepan, Anulaoman Balya and Brihan Rasayan Properties.

The combination of Ashwagandha, Nagaradya churna serves to pacify Kapha and Vata, while increasing Agni.⁹

Dashmoola kwath is vata-kapha shamak and has analgesic, anti-arthritic and properties¹⁰

In the pathogenesis of Amavata two significant components are Ama and Vata. According to Ayurvedic principles, no disease occurs without an impairment of Agni (digestive fire). Therefore, a crucial aspect of treating Amavata is addressing Ama, vitiated Vata, and Mandagni.

CONCLUSION

From this case study it can be concluded ayurvedic intervention is an effective treatment in Management of spondyloarthropathies like ankylosing spondylitis.

Ayurveda is a promising health care system that can contribute to such diseases by showing encouraging results, such as in this case report with no adverse effects and also improves quality of life of patient.

Informed consent

A written consent was obtained from the patients regarding publication of the article.

Table No. 2 Physical Examination Comparison BT and AT

Parameters	Before Treatment	After Treatment
BASDAI Score	5.4	3.1
BASFI	5.7	2.3
ASDAS-CRP	4.58	3.0
Lumbar Flexion (Modified Shoer Test)	Restricted Flexion 4cm	Improvement In Pain and Stiffness 5cm
Shoer Test	Positive 11 cm	14cm
Chest Expansion	5 cm	5 cm
Knee Flexion And Extension	Painful And Restricted	Marked Relief In ROM
Faber Test	Left- Painful Right- Painful	Left- Improvement Right- Reduced Pain
Pelvic Compression	Left- Negative Right- Painful	Left-negative Right- Improvement in Pain

Cervical rotation	75o	75o
Occiput to wall distance	3cm	3cm
Lateral spinal flexion	12 cm	10 cm

Table 1.3 Timeline of Investigations

Date	Investigations	BT	At 3 Month	At End of Trial
6/10/20	HLAB27	Positive	-	-
5/10/20	ESR	59 mm 1st hr	56 mm 1st hr	40 mm 1st hr
9/12/20	CRP	113.3 mg/dl	83 mg/dl	60 mg/dl
4/1/21	ANA RA Factor Anti CCP	Negative	-	-

REFERENCES

- 1 Sieper J, Braun J, Rudwaleit M, et al Ankylosing spondylitis: an overview *Annals of the Rheumatic Diseases* 2002;61:iii8-iii18.
- 2 Wenker KJ, Quint JM. Ankylosing Spondylitis. [Updated 2023 Jun 20].
- 3 Proft F, Poddubnyy D. Ankylosing spondylitis and axial spondyloarthritis: recent insights and impact of new classification criteria. *Ther Adv Musculoskelet Dis.* 2018 Jun;10(5- 6):129-139
- 4 Tripathi B, editor. *Madhav Nidana of Madhavkar*. Reprint Ed. Ch. 25, Ver. 1-5. Vol. 1. Varanasi: Chaukhamba Sanskrit Sanshtan; 2006. p. 571
- 5 26. Acharya YT. *CharakaSamhitha of Agnivesa with ChakrapaniTika*. Varanasi:Chaukhamba Sanskrit Samsthan; 2001. 27. Sastri L. *Yogaratanakara*. Varanasi: ChaukhambaSankrithSamsthan; 2002
- 6 Trikamji Yadavji Acharya, *Agniveshakrita Charaka Samhita, Chakrapani Commentary, Chikitsasthan, Chapter 17/147 Verse no.18*, Varanasi, Chaukhamba Surbharti Prakashan, p. 539 Reprint 2011
- 7 Shastri AD, editor. *Bhaishajya Ratnavali*. 19th ed. Ch. 29, Ver. 1. Varanasi: Chaukhamba Prakashan; 2008. p. 613.
- 8 Singh N, Bhalla M, de Jager P, Gilca M. An overview on ashwagandha: a Rasayana (rejuvenator) of Ayurveda. *Afr J Tradit Complement Altern Med.* 2011;8(5 Suppl):208-13. 9 Dr. Indradeva Tripathi, *Sri Chakrapanidatta's Chakradutta with Vaidayaprabha, Hindi Commentary and notes, introduction, indices, appendices etc.* Varanasi, Chaukhamba Sanskrit Bhawan, reprint edition,2018,Chapter 25,Amavata Chikitsa 25/1,Page 167
- 10 Jabbar S, Khan MT, Choudhuri MS, Sil BK. Bioactivity studies of the individual ingredients of the Dashamularishta. *Pak J Pharm Sci.* 2004;17:9–17.