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Case Study

REVITALIZING MOBILITY: THE HEALING POWER OF *PANCHAKARMA* IN ANKYLOSING SPONDYLITIS

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ABSTRACT

Ankylosing spondylitis (AS) is a chronic inflammatory arthritis primarily affecting the axial skeleton, commonly associated with the HLA-B27 antigen. This case report details the management of a 36-year-old male with a six-year history of low back and hip pain, diagnosed with bilateral sacroiliitis and positive HLA-B27. Conventional management with NSAIDs provided temporary relief, but symptoms persisted. The patient's presentation correlated with *Amavata*. Ayurvedic management focused on balancing *Vata* and *Kapha doshas* along with *Ama nirharana*, employing therapies such as *Sarvanga Mrudu Abhyanga*, *Churna Pinda Sweda, churna basti* and *Kshara Basti*. Post-treatment assessments indicated significant reductions in pain and stiffness, along with improved mobility. This case underscores the potential of Ayurvedic approaches in effectively managing ankylosing spondylitis, highlighting a holistic strategy that addresses both symptoms and underlying imbalances associated with *Amavata*.

INTRODUCTION

Ankylosing spondylitis is a seronegative inflammatory arthritis, primarily impacting the axial skeleton. It often emerges in early adulthood and is more prevalent in men, with a notable correlation to HLA-B27 antigen. The relationship between high levels of immunoglobulin A, inflammation markers, the body's immune system, and the HLA-B27 gene is complex and involves multiple factors interacting with each other. Globally prevalence of ankylosing spondylitis ranges between 0.1% and 0.4%.[1] The average age of onset is 25 years and onset after age of 40 years is very rare. AS develops insidiously with chronic low back pain associated with early morning stiffness, which is the presenting feature in 85% of cases. It is due to sacroiliitis and inflammation of the several entheseal sites where the spinal ligaments attach with the vertebral bodies. There is usually associated night pain and sleep disturbance.

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Since the sacroiliac joint is poorly represented on the surface, its inflammation is felt as deep sacral pain, pain across the lumbar spine or alternating buttock pain, In the initial years the pain and restriction are limited to low back but as the disease progresses it ascends upwards with involvement of dorsal and cervical spine. With involvement of dorsal spine the patient complains of chest pain and tightness of chest. All this inflammation result in restriction of spinal movement, with difficulty in bending forward, looking over the shoulders, which is worse in the morning and somewhat relieved with physical activity.

Enthesis is an important manifestation with pain and tenderness of tendo achilles plantar fascial insertion sites in the calcaneum bone, ligamentum patellae attachment at tibial spinous process and costochondral junction, tenderness over spinous process insertion, anterior and posterior superior iliac spine and iliac crest.

The most important investigation is anterior posterior plain x ray of the pelvis to include both hip joints and lateral view of lumbar, dorsal and cervical spine. Bilateral sacroiliitis is the hall mark of ankylosing spondylitis, unfortunately the radiographic abnormalities takes year to develop. Changes in lower third of joint include blurring of the joint margin,

widening and narrowing, sclerosis on the ideal aspect of joint and finally fusion. In advanced cases when the entire spine is involved the appearance is that of 'bamboo spine'. ESR and CRP are usually elevated but may be normal in 30% of patient active with active AS.

Ankylosing spondylitis has to be differentiated from low back pain due to mechanical causes which is far more prevalent. The presence of early morning stiffness, a raised ESR or CRP favours ankylosing spondylitis. It must be emphasised that presence of HLA B27 is not diagnostic of AS. A variable percentage of normal population may have HLA B27 without developing disease ever.

In contemporary science, management of ankylosing spondylitis (AS) involves a combination of medications, physical therapy, lifestyle modifications, and sometimes surgery. Non-steroidal anti-inflammatory drugs (NSAIDs) are usually the first choice for reducing pain and inflammation. If these are insufficient, disease-modifying anti-rheumatic drugs (DMARDs) or biologics like TNF inhibitors may be prescribed. Physical therapy and regular exercise are crucial for maintaining flexibility and good posture.[1]

Based on its signs and symptoms in present case, this condition is considered under the broad spectrum of *Amavata.*

Case Report

Chief complaint: The patient presents with complaints of pain in the low back and bilateral hip region, associated with stiffness, which has persisted for the past 6 years.

History of Present Illness

A 36-year-old male patient, previously asymptomatic, began experiencing pain and stiffness in the right hip region six years ago. This discomfort gradually progressed to involve the left hip as well. After consulting a nearby hospital, he was diagnosed with sacroiliitis of the hip joint and prescribed NSAIDs along with vitamin supplements. While the medications helped alleviate his symptoms, they would return upon cessation. Over time, he developed stiffness in back, radiating pain to the right lower limb, occasionally affecting the left, accompanied by episodes of numbness. At the time of admission, his symptoms had worsened, with increased pain intensity during the night and exacerbation with any jerky movements. Due to the severity of his complaints, he was admitted to our hospital for further evaluation and management.

History of past illness

Patient states history suggestive of achilles tendinitis

Family history

- No H/O consanguinous parentage.
- Patient has elder female sibling, who is diabetic.
- Patient's mother is suffering from rheumatoid arthritis.

Table 1: Personal History of patient

Name	XYZ
Age	36 Years
Marital status	Married
Occupation	Lecturer
Ahara	Vegetarian
Rasa	*Katu rasa pradhana sarva rasa*
Agni	*Samagni*
Kosta	*Madhyama*
Nidra	Disturbed
Emotional status	Stress (occupational)
Vyasana	None

Table 2: General examination

Height	5.9
Weight	77
BMI	23.8
Pallor	Absent
Icterus	Absent
Clubbing	Absent
Lymphadenopathy	Absent
Cyanosis	Absent

Table 3: *Asthasthana pareeksha*

Nadi	*Vatapittaja*
Mala	*Abaddha*
Mutra	*Prakruta*
Jihwa	*Alipta*
Shabda	*Prakruta*
Sparsha	*Anushna sheeta*
Drik	*Prakruta*
Akruti	*Vikruta*

Table 4: *Dashavidha pareeksha*

Prakriti	*Vatakapha*
Vikriti	*Kaphavata*
Sara	*Madhyama*
Samhanana	*Madhyama*
Satmya	*Katupradhana sarvarasa*
Satva	*Madhyama*
Aharashakti	*Abhyavarana – Madhyama* *Jarana– Madhyama*
Vyayamashakti	*Avara*
Vaya	*Madhyama*
Pramana	*Madhyama*

Table 5: *Samprapti ghataka*

Dosha	*Vata Kapha*
Dushya	*Rasa, Mamsa, Asthi, Sandhi*
Srotas	*Rasa, Rakta, Asthi*
Srotodusti	*Sanga, Vimargagamana*
Udbhava sthana	*Pakwashaya*
Sanchara sthana	*Sarvashareera*
Vyaktha sthana	*Prista* and *Kati sandhi*
Rogamarga	*Madhyama*
Sadhyasadhyata	*Yapya*
Swabhava	*Chirakari*

Systemic Examination

Respiratory system: Normal vesicular breath sounds heard

Gastro intestinal system: No abnormalities detected

Cardiovascular system: S_1 S_2 heard, no added sounds

Central nervous system: Higher mental function intact

Musculoskeletal System

Inspection

- Gait: Antalgic gait
- Attitude- Upper limbs- Normal

Lower limbs- Normal

- Heel walk- Could not be elicited due to pain
- Toe walk - Could not be elicited due to pain

Spine examination

- Curvature- Loss of lumbar lordosis, mild scoliosis at lumbar area
- Deformity- Present
- Scar mark- Absent
- Range of movement of lumbar spine

Flexion	Severely restricted
Extension	Severely restricted
Lateral flexion	Severely restricted

Hip joint examination

Range of movement: Restricted

Palpation

Spine

- Tenderness- Absent
- Temperature- Not raised
- Doorbell sign- Negative
- Paraspinal muscle spasm- Present in lumbar region

Special tests

- SLR- Couldn't be elicited.
- Heel walk - Could not be elicited due to pain
- Toe walk - Could not be elicited due to pain
- Pelvic compression test – Couldn't be elicited due to pain
- Feber's test- Couldn't be elicited due to pain
- Gaenslen's test- Couldn't be elicited due to pain
- Schobers test- Positive (0cm)
- 10 Second step test: 4 steps in 10 seconds

Table 6: *Nidana panchaka*

Nidana	*Utpadaka nidana: Beeja dosha* *Viprakrushta nidana: Vishamashana, Vatakara vihara* *Manasika: Chinta*
Purvaroopa	*Shula* in right *Trika sandhi*
Roopa	*Angamarda, Gatra stabdata, gourava*
Upashaya-Anupashaya	Nothing specific

Investigations

X-Ray B/L hip with pelvis- sacroilitis of right hip joint

HLA B 27 (method- flow cytometry)- positive

MRI Lumbo Sacral Spine - Mild disc bulge at L_{3-4} and $L_{4-5,}$ loss of lumbar lordosis

RA factor- Negative

Anti-nuclear antibodies- Negative

Table 7: Treatment protocol adopted

	Treatment	**Duration**	**Observation**
1	*Sarvanga mrudu abhyanga* with *Kottamchukkadi taila* followed by *Churna pinda sweda*	6 days	Slight reduction in stiffness
2	*Sarvanga seka- Dashamoola kwatha + Gomutra*	3 days	No changes observed
3	*Sarvanga mrudu abhyanga* followed by *Churna pinda sweda* which was steamed with *Dhanyamla*	17 days	Pain reduced by 50% and stiffness reduced by 45%
4	*Churna basti*	3 days	Reduction of pain by 55%
5	*Erandamooladi Kashaya basti* *Erandamooladi Kshara basti*	3days 3 days	Pain reduced by 70% and stiffness reduced by 65%

	Anuvasana basti with *Sahacharadi taila* 60ml		6 days	
	Erandamooladi Kashaya basti *Madhu*-60ml *Saindavalavana*-12gms *Guggulutiktakaghrita*-80ml *Shatapuspha churna*-12gms *Erandamooladi kashaya*-300ml ***Erandamooladi Kshara basti*** *Madhu*-60ml *Saindavalavana*-12gms *Guggulutiktakaghrita*-80ml *Shatapuspha churna*-12gms *Erandamooladi kashaya*-200ml *Gomutra arka*- 50 ml diluted in 100 ml water	***Anuvasana basti*** with *Guggulutiktaka ghrita*- 60ml *Shatapuspha churna*-6gms *Saindava lavana*-6gms	***Churna basti*** *Vaishwanara churna- 25g* *Rasna churna-25g* *Shatapuspa-20g* *Saindhava- 10g* *Kottamchukkadi taila- 30ml* *Nimbu swarasa-50ml* *Ushna jala- 250ml* Total- 510 ml	

Assessment of symptoms

Symptoms	Before treatment	After treatment
Pain	Severe pain, VAS score =10	Significant relief in pain VAS score = 4
Stiffness	Severe	Mild
Gait	Antalgic	Normalised gait pattern with reduced pain and improved mobility
Schober's test	Positive	Negative
10 seconds step test	4 steps in 10 seconds	20 steps in 10 seconds

DISCUSSION

Ayurveda, the ancient Indian system of medicine, offers a comprehensive approach to managing conditions such as ankylosing spondylitis. Ankylosing spondylitis is a chronic inflammatory autoimmune disease primarily affecting the spine and sacroiliac joints, leading to pain and stiffness. In Ayurveda, autoimmune disorders are often correlated with diseases dominated by *Ama. Acharya Vagbhata* states that all *Vyadhis* develop due to *Mandagni*[2]. *Mandagni*, resulting from improper digestion of *Annarasa*, leads to the formation of *Ama*, which then becomes associated with the *Tridosha* and circulates throughout the body.

The involvement of *Ama* in autoimmune disorders like ankylosing spondylitis can be justified, as these diseases often begin with deranged gut microbiota. In the present case, the signs and symptoms exhibited by the patient are similar to those of *Amavata*, and thus the treatment follows accordingly.

Amavata chikitsa includes therapies such as *Langhana, Ruksha swedana*, *Deepana* with *Tikta-katu dravya, Snehapana, Virechana,* and *Kshara basti*[3]. In this case, initially *Churna pinda sweda* was done in this patient as *Lakshanika chikitsa* to relieve stiffness and later *Samprapthi vighatana chikitsa* was given with *Churna basti* for *Ama pachana* followed by *Erandamooladi Kshara basti* for correction of vitiated *Vata* and *Kapha dosha*.

Sarvanga Abhyanga

In the present case, where symptoms predominantly indicate *Vata* and *Kapha dosha*, *Abhyanga* with *Kottamchukkadi taila* is adopted. *Kottamchukkadi taila* is specifically indicated for *Vatavyadhi* and has *Stambha vinashana* as its primary *Phalashruti*. Its main ingredients include *Kusta, Shunti, Vacha*, *Shigru, Sarshapa, Lashuna,* and *Chincha rasa*, which possess significant anti-inflammatory, analgesic, antioxidant, and immunomodulatory properties. These ingredients work synergistically as *Amapachaka, Strotoshodaka, Shoolahara,* and *Stambhahara.*

Churna pinda sweda

Churna pinda sweda is one among *Ruksha Sankara sweda*[4]. Here *Kottamchukkadi churna, Rasna churna, Vaishwanara churna, Saindhava* were the drugs used. These drugs have *Amapachaka, shoolahara* and *Stambhahara* properties. *Dhanyamla*[5] used here for steaming posses *Vata-kaphahara* and *Teekshna guna* and have analgesic and anti-inflammatory properties by which it is effective in inflammatory conditions. It significantly increase the extensibility of collagen tissues, decrease joint stiffness, reduce pain, relieve muscle spasm, reduce inflammation and heaviness in the body by increasing vasodilatation, metabolic rate and inducing sweat.

Churna basti

Churna basti[6] is a type of *Niruha basti* mainly indicated in *Amaja shoola*. Its ingredients include *Vaishwanara churna* which is directly indicated in *Amavata* and *Rasna churna* which is having *Ama pachaka, Kapha vatahara* and *Shothahara* property.

Erandamooladi kshara basti

Erandamooladi kshara basti is explained in *Charaka siddisthana*[7]. It contains ingredients like *Erandamoola, Palasha, Laghu Panchamoola, Rasna, Ashwagandha, Atibala, Guduchi, Punarnava, Aragwada, Devadaru, Madanaphala* as *Kwata dravya* which have anti-inflammatory and analgesic properties. When administered with *Gomutra*, it attains *Deepana* and *Lekhana gunas* and thus is indicated in *Kaphavruta Maruta nigraha*[7]. It is also effective in *Trika prista shoola*[7]. *Anuvasana basti* was given with *Guggulutiktaka ghrita*. It is effective in *Dhatukshaya* and acts by reaching the *Asthi* and *Majja dhatus*[8]. Due to these properties it does *Samprapti vighatana* in ankylosing spondylitis.

CONCLUSION

Ankylosing spondylitis is one of the autoimmune disorders which is here correlated to *Amavata* based on symptoms exhibited in patient. *Chikitsa* was planned based on involvement of *Doshas*, *Avastha* of *Vyadhi*, *Roga bala* and *Rogi bala*. The predominant *Doshas* identified were *Kapha* and *Vata*, both of which play crucial roles in the manifestation of symptoms in this patient. The predominant *Doshas* identified were *Kapha* and *Vata*, both of which play crucial roles in the manifestation of symptoms in this patient. The Ayurvedic management focused on restoring *Dosha* balance and eliminating *Ama*, with the aim of reducing inflammation and promoting joint mobility. Post-treatment, the patient experienced significant improvements in their condition, including a marked enhancement in gait, indicating improved mobility and function, as well as a substantial reduction in pain and stiffness. These outcomes not only alleviated the physical symptoms but also positively contributed to the patient's overall quality of life, highlighting the efficacy of the Ayurvedic approach in managing complex autoimmune disorders like ankylosing spondylitis. This case underscores the importance of a holistic treatment plan that addresses both physical symptoms and underlying imbalances, leading to comprehensive health benefits.

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