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Case Report

An Ayurvedic Approach in the Management of Tubercolous Sacroiliitis – A Case Report

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Abstract

Sacroiliitis is an inflammation of the sacroiliac (SI) joints, often causing axial lower back pain that can radiate down the legs. Tuberculous Sacroiliitis is a rare form of osteoarticular tuberculosis affecting the SI joint, presenting with prolonged, inflammatory pain in the lower back, hips, or buttocks. Diagnosing and treating SI joint pain is challenging due to its complex anatomy and weight-bearing function. This case report details the Ayurvedic management of a 15-year-old female with tuberculous sacroiliitis, presenting with severe low back pain radiating to her left leg, stiffness, and immobility. In Ayurveda, her condition was identified as Gambhir Vatarakta, an advanced inflammatory joint disorder. Treatment involved Panchakarma therapies: Jalaukavacharan (leech therapy), Valuka Pottali Sweda (sand bolus fomentation), Patra Pinda Sweda (medicinal leaf fomentation), Ruksh Nadi Sweda (dry vapor fomentation), and Yoga Basti (medicated enemas). These were complemented by Shaman Chikitsa (palliative treatments). Patient progress was tracked using clinical assessments like the Visual Analog Scale (VAS), Straight Leg Raise (SLR) Test, Flexion, Abduction, and External Rotation (FABER) Test, Gaenslen's, and pelvic compression tests, alongside radiological and pathological evaluations. This integrated Ayurvedic approach led to significant pain relief, improved mobility, and reduced stiffness, with no adverse effects. The case highlights Ayurveda's potential in managing tubercular sacroiliitis and other inflammatory joint conditions.

Keywords: *Gambhir Vatarakta, Raktamokshana, Swedana*, Tuberculous Sacroiliitis, *Yoga Basti.*

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Introduction

Tuberculous sacroiliitis is a rare but significant manifestation of skeletal tuberculosis, affecting the sacroiliac (SI) joints. SI joint is involved in 5-10% of all cases of TB(1) and upto 9.7% in cases of skeletal TB(2) Its diagnosis and management pose considerable challenges due to the joint's deep anatomical location and the non-specific nature of initial symptoms, which often mimic other inflammatory or mechanical disorders of the lower back (3). Diagnosing SI joint pain can be challenging due to its similarities with other back pain sources. The SI joint consists of unique fibrocartilage and hyaline cartilage, contributing to its stability and limited movement. Sacroiliiatis can lead to pain in the lower back or buttocks, which may radiate down one or both legs, often exacerbated by prolonged standing or activities like stair climbing. Additionally, SI joint pain is more prevalent in patients who have undergone lumbosacral fusion surgery (32–37%) and is common among younger individuals with sports injuries, as well as pregnant and older patients due to joint degeneration. Women, in particular, may experience increased susceptibility to SIJD due to greater flexibility in their SI joints. In the context of Ayurveda medicine, conditions like ankylosing spondylitis and sacroiliitis may have parallels with terms such as *Amavata* or *Gambhira Vatarakta*. Tuberculous sacroiliitis is a rare but significant manifestation of skeletal tuberculosis, affecting the sacroiliac (SI) joints. SI joint is involved in 5-10% of all cases of TB(1) and upto 9.7% in cases of skeletal TB(2) Its diagnosis and management pose considerable challenges due to the joint's deep anatomical location and the non-specific nature of initial symptoms, which often mimic other inflammatory or mechanical disorders of the lower back (3). Diagnosing SI joint pain can be challenging due to its similarities with other back pain sources. The SI joint consists of unique fibrocartilage and hyaline cartilage, contributing to its stability and limited movement. Sacroiliiatis can lead to pain in the lower back or buttocks, which may radiate down one or both legs, often exacerbated by prolonged standing

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or activities like stair climbing. Additionally, SI joint pain is more prevalent in patients who have undergone lumbosacral fusion surgery (32–37%) and is common among younger individuals with sports injuries, as well as pregnant and older patients due to joint degeneration. Women, in particular, may experience increased susceptibility to SIJD due to greater flexibility in their SI joints. In the context of Ayurveda medicine, conditions like ankylosing spondylitis and sacroiliitis may have parallels with terms such as *Amavata* or *Gambhira Vatarakta*.

While considering the correlation between both conditions in terms of Pathophysiology and *Samprapti*, both are described as chronic and progressive conditions. Tuberculous sacroiliitis, if undiagnosed, leads to gradual joint destruction. *Gambhira Vatarakta*, by definition, is the deeper, more advanced stage of *Vatarakta*. Tuberculous sacroiliitis directly involves the joint with chronic inflammation, leading to cartilage and bone erosion, and eventually ankylosis. This is a direct physical destruction. *Gambhira Vatarakta* involves the joints (*Sandhi*) as a primary site, leading to pain, swelling, and eventually deformity. The "destruction" in Ayurvedic terms arises from the profound vitiation of *Vata* and *Rakta*, leading to impaired nourishment and function of the *Asthi* and *Majja Dhatus*. The *Marga Avarodha* can be conceptually linked to the impedance of normal physiological processes that would otherwise maintain joint integrity. In Tuberculous sacroiliitis, the infection is deeply seated within the sacroiliac joint, often presenting with "cold" abscesses and a delayed diagnosis, indicating a more insidious, deep-seated pathology rather than an acute superficial one. *Gambhira Vatarakta* by its name ("*Gambhira*" meaning deep), it signifies the involvement of deeper tissues (*Mamsa*, *Asthi, Majja*), moving beyond superficial skin and muscle involvement (*Uttana Vatarakta*). This deep involvement makes it more difficult to treat and leads to more severe symptoms. Tuberculous sacroiliitis is characterized by chronic granulomatous inflammation, a specific type of inflammatory response to the mycobacterium. *Gambhira Vatarakta* is not defined by a specific type of inflammation in modern terms, the symptoms of pain, swelling, burning sensation, and discoloration clearly point to a significant inflammatory process driven by vitiated *Pitta* and *Rakta*. The presence of granulomas and caseous necrosis can physically obstruct normal tissue architecture and function within the joint. Also, the chronic inflammatory exudates can lead to fluid accumulation and pressure. In *Gambhira Vatarakta* the concept of *Marga Avarodha* (obstruction of channels) by vitiated *Vata* and *Rakta* is central. This obstruction impedes the flow of *Vayu* (responsible for movement) and *Rakta* (responsible for nourishment and life), leading to pain, swelling, and degenerative changes. This can be seen as a conceptual parallel to the physical obstruction caused by inflammatory infiltrates and necrotic debris in Tuberculous sacroiliitis.While comparing in terms of core symptoms, both conditions are characterized by significant joint pain, both can cause swelling around the affected joints, stiffness/difficulty in movement. Restricted joint mobility is a common feature. Discoloration is not always prominent in Tuberculous sacroiliitis, skin changes can occur, especially if an abscess is present while in *Gambhir Vatarakta* it is often presents with discoloration of the skin over the affected joints, described as blackish-brown or coppery. Both conditions can cause tenderness upon palpation of the affected area.

A case study presented effective treatment based on Ayurveda principles for a patient with Tuberculous sacroiliitis. While conventional treatment involves long-term anti-tubercular therapy, these cases frequently require multidisciplinary approaches, especially when dealing with complications like joint destruction and chronic pain. Overall, understanding both the anatomical and pathophysiological aspects of the SI joint, alongside potential alternative therapeutic approaches, is vital for comprehensive patient care and management.

Patient information

A 15-year-old female belongs to Solapur visited our hospital with complaints of severe low back pain radiating to the lower limbs, especially on the left side, along with significant stiffness in the low back more during night. with varying intensity which aggravates by walking, climbing stairs and movements associated with constricted feeling at the hip joint, mild fever and loss of appetite, *Anannabhilasha* (lack of desire towards food), disturbed sleep since 20 days, who previously consulted orthopedic surgeon for the same and they diagnosed the case as Tuberculous sacroiliitis and treated accordingly with medicines like Ibugesic plus (NSAID) and Predmet (a corticosteroid), AKT-4 (anti-tuberculosis treatment), Paracetamol (antipyretic), Flexon MR (NSAID with muscle relaxants), Ocid (antacid), and Becozine-H (multivitamin supplement) and ankle traction. Patient discontinued all these medicines after 20 days as she was having various complaints like vomiting, headache, giddiness, abdominal pain and they visited us on 25/12/2022

Significant physical examination and important clinical findings

The patient presented with a pulse rate of 86 beats per minutes (regular, full volume), blood pressure of 110/80 mmHg, body temperature of 99°F, respiratory rate of 20 breaths per minute, and a weight of 41.2 kg.

The patient was conscious and oriented, with clear respiratory sounds and normal S1S2 heart sounds on cardiovascular examination. The *Ashtavidha Pariksha* (Eight –fold examination) revealed a *Vata-Kaphaja* pulse, regular bowel movements (once daily, semi-solid), normal urinary frequency (5-6 times/day), a *Sama* tongue, normal voice quality, dry skin (*Ruksha*), normal vision (*Prakrita*), and a standing posture, as the patient was unable to sit or lie on the bed due to discomfort.

Clinical test before and after

Clinical tests	Before treatment	After treatment
Straight Leg Raise Test (SLRT)	Unable to perform due to severe tenderness	Negative
Flexion Abduction and External Rotation (FABER)	Positive	Negative
GAENSLENS	Positive	Negative
Pelvic compression test	Positive	Negative

Laboratory investigation
26/12/2022 -**ASO Titre quantitative**: 72.2
27/12/2022 **-HLA B27**: Negative
02/01/2023- Skin Tuberculin test: Positive

Table 1: Lab investigations

DATE	WBC /mm³	CRP	ESR
5/12/2022	**10300**	47.6	64
12/12/2022	**12700**	8.93	10
26/12/2022	**7500**	Not done	20
16/01/23	**6200**	1.78	19

Table 2: Comparative table summarizing the MRI findings across the three dates

Date	Findings	Joint Effusion	Bone Marrow Edema	Additional Findings
06/12/2022	No abnormal bone marrow edema on STIR No obvious fractures Mild left sacroiliac joint effusion (max ~7 mm)	Mild left sacroiliac joint effusion	None noted	Joint capsule distension deep to left piriformis
13/12/2022	Increased juxta-articular bone marrow edema Mild left sacroiliac joint effusion remains unchanged	Mild left sacroiliac joint effusion	Increased compared to previous MRI	Significant reduction of synovial bulge Subcutaneous edema at lumbosacral junction Edema of right obturator externus muscle Focal intramuscular collection near lesser trochanter
18/01/2023	Signal abnormality of right obturator externus muscle and intramuscular collection regressed Increased bone marrow edema at left sacroiliac joint	Reduced joint effusion	Decreasing involvement of left sacroiliac joint	Mild edema of adjacent left piriformis muscle Right sacroiliac joint uninvolved

This table outlines the key findings and changes observed over the three MRI examinations, highlighting the regression of the condition and any significant changes noted.

Diagnosis – *Gambhir Vatarakta* / Tuberculous sacroiliitis

Follow up and outcomes

Table 3: A structured summary of clinical findings timeline

Date	Symptoms	Examination Findings
25/12/2022 to 01/01/2023	Patient brought by her relatives to casualty department on 25/12/2022 with complaints of *Toda & Chhindawat vedana*- Severe low back ache radiating to left lower limb *Stabdhata* - Low back stiffness & Constricted feeling at left hip joint - Unable to walk - Tingling/numbness in left lower limb *Daha* - Burning sensation over low back, hip and left lower limb - Mild fever on the first day (99^0F) - *Anannabhilasha* (lack of desire towards food) (25/12/2022 to 29/12/2022)	Severe tenderness (grade 3) over left sacroiliac joint with reddish discoloration Patient was unable to perform SLR(4) test because of severe Pain. FABER Test(5) Positive GAENSLENS Test (6)Positive Pelvic compression Test Positive
02/01/2023 to 10/01/2023	- Reduced severity of low back ache - Constricted feeling at left hip joint totally reduced - Decreased stiffness - Able to walk short distances - Reduced tingling/numbness in left lower limb - Reduced burning sensation over low back, hip and left lower limb - *Anannabhilasha* (lack of desire towards food) reduced.	Tenderness & reddish discoloration over left sacroiliac joint reduced SLRT Positive at 50^0 FABER Test Positive GAENSLENS Test Positive Pelvic compression Test Positive
10/01/2023 to 18/01/2023	- Further reduction in low back ache severity - Complete reduction of stiffness - Normal walking ability - Absence of tingling/numbness & burning in left lower limb. Patient was discharged on 18/01/2023	No tenderness and discoloration over left sacroiliac joint SLRT Negative FABER Test Negative GAENSLENS Test Negative Pelvic compression Test Negative

Therapeutic interventions and Timeline

Table 4: A structured summary of treatment timeline (medicines)

Date	Medicines given
25/12/2022 to 10/01/2023	*Amapachak Churna* 1gm BD with *Koshna jala* (*Ativisha, Musta, Shunthi, Haritaki* each 500mg in divided 2 dosage) after meals. (25/12/2022 to 06/01/2023) *Panchtikta Churna* 1gm BD with *Koshna jala* (*Patola, Nimba, Vasa, Guduchi, Kirattikta* each 400mg in 2 divided dosage) after meals *Gandharva Haritaki* 1.5 gm HS with *Koshna jala* (25/12/2022 to 28/12/2022) (restarted from 06/01/2023) *Kokilakshadi kashay* 15ml BD with *Koshna jala* after meals *Kaishor Guggulu* 500mg BD with *Koshna jala* after meals *Raktapachak Vati* 250mg BD with *Koshna jala* after meals
11/01/2023 to 18/01/2023	*Panchtikta Churna* 1gm BD with *Koshna jala* after meals *Gandharva Haritaki* 1.5 gm HS with *Koshna jala* *Kokilakshadi kashay* 15ml BD with *Koshna jala* after meals *Kaishor Guggulu* 500mg BD with *Koshna jala* after meals *Sanshamani Vati* 250mg BD with *Koshna jala* after meals *Raktapachak Vati* 250mg BD with *Koshna jala* after meals

Timeline of clinical events and interventions

Table 5: Timeline

05/12/2022	Patient was diagnosed as Tuberculous sacroiliitis by orthopedic surgeon and started Anti Tuberculosis Treatment (AKT 4-Isoniazid 300mg, Rifampicin 450mg, Ethambutol 800mg and Pyrazinamide 750mg) and other medicines with ankle traction. MRI on 06/12/2022 done. Details are in table 1 CRP – 47.6, ESR – 64, WBC TC – 10300
12-13/12/2022	CRP - 8.93, ESR – 10, WBC TC – 12700 MRI on 13/12/2022 done. Details are in table 1
25/12/2022	Patient discontinued all these AKT4 and other medicine as she was having various complaints like vomiting, headache, giddiness, abdominal pain and they visited us and admitted in our hospital. Before treatment assessment was done with SLR, FABER, GAENSLEN and Pelvic compression tests Assessment of clinical findings was done as per table 3 Medicines started as per table 4
25-26/12/2022	Considering the *saamavastha Ruksh sweda* started as follows *Valuka Pottali Sweda* locally from kati to ubhay pada once a day in the morning *Ruksha Nadisweda* with the decoction of *Dashmoola* (*Bilva, Shonyak, Patala, Kashmari, Agnimanth, Shaliparni, Prushniparni, Kantakari, Brahati* and *Gokshura*)locally from *kati* to *ubhay pada* once a day in the evening CRP – not done, ESR – 20, WBC TC – 7500 Considering *Rakta dhatu dushti Raktamokshan* was planned *Jalaukavacharana* done at left sacroiliac joint on 26/12/2022 2 leeches applied, 40ml blood taken out.
27/12/2022	HLA B27 : Negative
27/12/2022 to 10/01/2023	Considering severe pain, tenderness and stiffness *Ruksha sweda* was stopped and *Patrapinda Sweda* (PPS) was started as follows. 02/01/2023 Skin Tuberculin test: Positive *Sthanika Abhyang* (from *kati* to *ubhay pada*) with *Brihat saindhavadi Taila* followed by *Patrapinda Sweda* (PPS) once in a day
11/01/2023 to 18/01/2023	Considering the *niraamavastha* and to give strength to muscles and joints PPS was stopped and *Brihan sweda* was started as follows. *Sthanika Abhyang* (from kati to ubhay pada) with *Ksheerbala taila* followed by *Shashtika Shali Pindasweda*
29/12/2022 to 05/01/2023	Considering the predominance of *Vata*, *Yoga Basti* (7)Pattern was started as follows *Anuvasan Basti* with *Sahachar Tail* 60ml (05) *Erandamooladi Niruha Basti* 420ml (03)
04/01/2023	Considering *Rakta dhatu dushti Raktamokshan* was planned once again as follows *Jalaukavacharana* done at left sacroiliac joint on 04/01/2023 3 leeches applied, 80ml blood taken out.

18/01/2023	MRI on 18/01/2023 done. Details are in table 1 CRP – 1.78, ESR – 19, WBC TC – 6200 Patient discharged from hospital After treatment assessment was done with SLR, FABER, GAENSLEN and Pelvic compression tests
27/01/2023, 12/02/2023 & 28/02/2023	Patient visited outpatient department of our hospital for follow up. She was stable with no previous complaints and continued treatment. There was no relapse in the signs and symptoms of *Gambhir Vatarakta*. She was advised to stop the treatment completely on 28/02/2023.

Intervention adherence and tolerability

Patient Compliance and Assessment Summary

The patient strictly adhered to the prescribed treatment schedule and followed the comprehensive treatment plan throughout the duration of her stay. She tolerated all procedures and medications well.

Clinical Assessment: The patient remained hemodynamically stable. Strength was noted to be moderate. Routine assessments were conducted, including: pulse monitoring, blood pressure checks, cardiorespiratory examination and evaluation of daily activities during hospitalization. Overall, the patient's consistent compliance and stability contributed positively to her treatment outcomes.

Adverse and unanticipated events: No any adverse and unanticipated event was observed during this treatment plan

Discussion

The patient exhibited severe symptoms consistent with *Gambhir Vatarakta* (8,9,10), a condition characterized by low backache radiating to the left lower extremity (*todawat and chhindwat vedana*), stiffness (*stabdhata*), tenderness over the sacroiliac joint, and a constricted feeling in the left hip. These symptoms, along with heaviness, burning sensations (*Daha*) over the affected joint, poor appetite, and *Anannabhilasha*, align with the Ayurveda diagnosis of *Vatarakta* involving *Vata, Rakta, Asthi, Majja*, and *Ama doshas*. The Ayurvedic treatment focused on *Rukshana*, (11,12) a method aimed at eliminating excess moisture and toxins from the body. To achieve this, therapies such as *Valukapottali Sweda* and *Ruksha Nadi Sweda* were administered for the first two days. Further various other procedures along with *Shaman Chikitsa* (Palliative treatment) were advised according to the condition of the disease. These treatments helped reduce inflammation and improve circulation, supporting the patient's overall recovery. The patient tolerated all procedures well, and no adverse or unanticipated events were observed during the treatment plan. Clinical assessments, including routine monitoring of pulse, blood pressure, and daily activities, revealed that the patient remained hemodynamically stable throughout. Imaging evidence, particularly MRI scans, provided strong support for the effectiveness of the therapy, showing a reduction in joint effusion post-treatment.

Discussion of the relevant medical literature with references

Ayurvedic Management of *Gambhir Vatarakta* (13,14): Considering the condition of the disease at different stages following procedures along with *Shaman Chikitsa* (Palliative treatment) were advised.

Valukapottali Sweda (15,16) **:** This therapy utilizes heated poultices filled with dry sand *(valuka)*. It is particularly beneficial for conditions characterized by inflammation and stiffness. *Ruksha Guna* (Dry Quality): Helps to absorb excess moisture and reduces swelling. *Ushna Veerya* (Heating Potency): The heat generated helps to alleviate pain and stiffness by promoting circulation to the affected area. *Shothahara:* This action reduces inflammation and swelling which is crucial in managing conditions like tuberculous sacroiliitis.

Ruksha Nadi Sweda (17,18)***:***This is a steam therapy using herbal decoctions of *Dashmoola* [*Bilva (Aegle marmelos), Shonyak (Oroxylum indicum), Patala (Stereospermum suaveolens), Gambhari (Gmelina arborea), Agnimanth (Premna mucronata), Shaliparni (Desmodium gangeticum), Prushniparni (Uraria picta), Kantakari (Solanum xanthocarpum), Brahati (Solanum indicum)* and *Gokshura (Tribulus terrestris)* administered through a tube (*nadi*) directed towards the affected area. Encourages sweating (*swedajanana*), which aids in detoxification. The therapeutic steam helps to open up channels in the body, enhancing the movement of *Vata* and improving blood flow to the affected region.

Patrapinda Sweda **(PPS)** (19,20,21,22): Following the initial treatments*, Patrapinda Sweda* was planned as an advanced therapeutic intervention. This method uses medicinal leaves to promote sweating and healing through various pharmacological properties. Medicinal Leaves Used: *Nirgundi (Vitex negundo), Arka (Calotropis gigantea), Eranda (Ricinus communis), Chincha (Tamarindus indica), Dhattura (Datura stramonium)* These plants were chosen for their specific qualities like *Tikshna Guna (*Sharp and penetrating qualities) that help in breaking down stagnant doshas, *Ushna Veerya (*Heating potency) that enhances circulation and promotes sweating and *Katu Vipaka* (Pungent post-digestive effect), further aiding in the reduction of *Ama* and inflammation. PPS have properties of *Shothahara* (Anti-inflammatory), *Vedanasthapana* (Analgesic Effect), *Swedajanana* (Induction of Perspiration), Increased Circulation. The elevated temperature during the *swedana* process leads to vasodilation, enhancing blood flow in the affected areas. This improved circulation has several benefits like pain and inflammation reduction. Enhanced blood flow aids in flushing out inflammatory mediators, leading to decreased pain and swelling. Transdermal Drug Delivery: The heat increases skin temperature and permeability, which can enhance the absorption of any additional topical medications applied during the treatment.(23)

Yoga Basti **(**7,22**) :** *Yoga Basti* Pattern was started as *Anuvasan Basti* with *Sahachar Tail* 60ml (05) and *Erandamooladi Niruha Basti* 420ml (03) It is the treatment of choice for disorders due to vitiated *Vata dosha*. *Erandamooladi Niruha Basti* is, especially indicated in pain in urinary bladder, thigh, shank, leg, sacrum and lower back region which was present in this case. *Anuvasana basti* with *Sahachar taila* was planned for alleviation of *Vata*.

Dashmoola Taila (24)**:** Used for preparing *Patra Pinda Sweda* (PPS), with properties that help reduce *Kapha* and *Vata* and alleviate swelling (*Shothaghna*).

Brihat Saindhavadi Taila (25) : Applied for local massage (*Sthanik Abhyanga*) before PPS. It contains *Eranda Taila* (Caster Oil) as a main base oil, known for its strong *Vata* pacifying and

purgative properties. Other ingredients are 1. *Saindhava Lavana* (Rock Salt) known for its anti-inflammatory and pain relieving properties, balancing *Vata* and *Kapha* 2. *Shreyasi (Scindapsus officinalis)* offers anti-inflammatory and analgesic benefits 3. *Rasna (Pluchea lanceolata)* highly effective for musculoskeletal pain including sciatica and back pain 4. *Shatpushpa(Anethum sowa)* carminative and pain relieving properties 5. *Yavani (Trachyspermum ammi)* alleviates joint pain and inflammation 6. *Sarjika Kshara* (Sodium carbonate) helps soothe swelling and pain 7. *Marich (Piper nigrum)* possesses anti-inflammatory and digestive properties 8. *Kushta (Saussurea lappa)* has anti-inflammatory and antimicrobial properties 9. *Shunthi(Zingiber officinale)* reduces pain and inflammation 10.*Sauvarchala Lavana* (Sochal salt) helps to reduce joint stiffness and improve flexibility 11. *Vida Lavana* (Black salt) aids in digestion and assimilation *Vacha(Acorus calamus)* has pain relieving properties 12. Madhuka (*Glycyrrhiza glabra*) soothes inflammation 13. *Jiraka (Cuminum cyminum)* improves digestion and helps in detoxification 14. *Pushkara (Inula racemosa)* beneficial for pain and inflammation 15&16. *Pippali (Piper longum)* & *Gaja Pippali (Scindapsus officnalis)* both are having analgesic and anti-inflammatory properties.

Shashtika Shali Pinda Sweda (26,27**) :** A form of *Swedana* (sudation therapy) using rice bolus massage. *Shashtika Shali* (a special type of rice) is known for its *Snigdha* (unctuous), *Balavardhana* (strength-promoting), and *Dehadardhyakrita* (body-strengthening) properties. *Bala* and Godugdha (cow's milk) are both *Snigdha* (nourishing), *Balya* (strength-promoting), *Rasayana* (rejuvenating), and *Vatahara* (alleviating *Vata* dosha). The *Pottali* (bolus) made of *Shashtika Shali*, dipped in *Balamoola Kwatha* (decoction of Bala) with Godugdha, provides warmth that: Enhances blood circulation. Decreases muscle stiffness and increases tendon extensibility. Reduces spasticity and facilitates joint movement. Relieves pain and prevents the progression of disabilities and contractures. *Bala* helps prevent muscular emaciation, providing nourishment to muscles, bones, and peripheral nerves. This helps reduce symptoms due to muscle atrophy, inflammation, and peripheral neuropathy.

Jalaukavacharan (28) **(Leech Therapy)** In Ayurveda, *Jalaukavacharan,* or leech therapy, is recognized for its effectiveness in reducing pain and swelling especially when there is *Raktadhatu dushti(*vitiation of *Rakta* due to *Dosha)* The therapeutic benefits of leech therapy can be attributed to the complex bioactive compounds found in leech saliva, which exhibit several actions in managing joint inflammation, particularly in conditions such as gouty arthritis and osteoarthritis. Benefits include significant reduction in pain levels, decrease in edema associated with inflammation and enhanced range of motion following treatment. The diverse actions of leech secretions such as anticoagulant, fibrolytic, and immunomodulatory effects contribute to its effectiveness in promoting healing and reducing inflammation.

Image 1: Jalaukavacharan

Kaishor Guggulu (29): Kaishor Guggulu is a formulation known for its beneficial effects in Ayurveda, particularly in managing conditions associated with *Rakta dushti*, *ama* and joint inflammation.

One of its constituents, *Guduchi* (*Tinospora cordifolia*) has an immunomodulatory effect by its active compounds (30) while Laboratory studies shows that *Guduchi* plant used for treatment of cold, diabetes, rheumatoid arthritis, fever and showed significant anticancer activity.(31)

Other constituent *Shunthi* (*Zinziber officinale*) also found to recover humoral immune response in immunosuppressed mice. (32) *Zinziber officinale* extracts and bioactive compounds have the immunomodulatory activities.(33,34)

Therapeutic Benefits includes digestion which supports the complete digestion of food and assists in the pachana (digestion) of *ama*, clearance of *Stroto Avarodha* which helps in clearing obstructions in the channels (*Strotas*), inflammation relief with the action of ingredients like *Guggulu, Guduchi, Shunthi*, and *Trivrutta* specifically target inflammation in affected joints, *Tridosha Shamak* means balances all three *doshas* and *Rakta Shodhak* which acts as a blood purifier, promoting overall health.

Kokilakshadi Kashay (35,36,37) **:** *Kokilakshadi Kashay* is an Ayurvedic formulation composed of 1. *Kokilaksha(Hygrophila auriculata/Asteracantha longifolia)* having anti-inflammatory, analgesic, diuretic and rejuvenating properties 2. *Guduchi (Tinospora cordifolia)* known for its immunomodulatory, anti-inflammatory and detoxifying actions. It helps eliminating toxins *(Ama)* from body and supports overall body health.

Raktapachak Vati (38,39) **:** *Raktapachak Vati* is an Ayurvedic formulation designed to purify and balance the blood (*Rakta Dhatu*) while addressing conditions related to inflammation and toxicity. It contains 1.*Patola (Trichosanthes dioica)* which is highly valued for blood purifying properties, often described as *Pitta* pacifying and detoxifying. 2. *Sariva (Hemidesmus indicus)* renowned blood purifier and coolant, excellent for burning sensations and fever. It also has diuretic and anti-inflammatory properties 3. *Musta (Cyperus rotundus)* potent digestive and carminative which helps in eliminating toxins(*Ama*) and supporting healthy metabolism. It also acts as blood purifier and anti-inflammatory 4. *Patha (Cissampelos pareira)* balances *Pitta* and *Kapha dosha* and acts as anti-inflammatory, antimicrobial and detoxifier.5. *Katuki (Picrorhiza kurroa)* is a liver stimulant, detoxifier, purgative and helps in blood purification (*Rakta Prasadan*)

The anticancer activity of the chemical Colocynthin is measured u sing the docking score (P1) which could be employed for future re search by altering or reprivatizing to build a precise anticancer medication.(40)

The leaves extract of *Trichosanthes dioica* found to have activity of highest inhibition against Mycobacterium smegmatis.(41)

A 50% ethanolic extract of Picrorhiza kurroa Royle ex Benth. (Scrophulariaceae) leaves (PKLE) was found to stimulate the cell-mediated and humoral components of the immune system as well as phagocytosis in experimental animals.(42)

The leaf extracts of *Picrorhiza kurroa* possessed good antibacterial activity.(43)

Panchatikta Choorna (44): *Panchatikta Choorna* is an Ayurvedic herbal formulation composed of five key ingredients, known for their potent detoxifying and anti-inflammatory properties.

Therapeutic Actions are *Rakta Dhatu prasadan* which promotes purification and detoxification of blood, minimizes *Vatarakta* Pathology by alleviating symptoms and underlying pathology associated with *Vatarakta* (gout) by addressing heat and toxicity.

Study has shown the immunostimulatory activity of the plant A. vasica by potentiating humoral as well as cellular immunity.(45)

Samshamani Vati (46): *Samshamani Vati* is an Ayurveda formulation primarily composed of *Guduchi* (*Tinospora cordifolia*), known for its restorative and balancing properties. Acts as a rejuvenator, promoting overall health and vitality, *Tridoshashamak*, minimizes the vitiation of *Rakta Dhatu* (blood), helping to purify and enhance its quality and enhances the body's immune response and aids in detoxification.

The results of the inhibitory effect of *T. cordifolia* ethanolic and dichloromethane extracts (TCET and TCDC) against sensitive and resistant *M. tuberculosis* revealed a considerable significant antimycobacterial activity. (47)

Gandharva Haritaki (48): Gandharva Haritaki is an Ayurveda formulation that includes Eranda Taila (castor oil) among its key ingredients, known for its beneficial effects on digestion and *Vata* balance. It is mild purgative which acts as a gentle laxative, promoting regular bowel movements and alleviating constipation and *Vatanulomana* by helping in the normalization of *Vata dosha*, addressing issues related to its aggravation.

Conclusion

This case demonstrates the effectiveness of a detailed clinical approach, integrating Ayurvedic principles, in managing complex conditions like Tuberculous sacroiliitis, understood here as *Gambhir Vatarakta*.

The patient, who had previously discontinued modern Anti-Tubercular Treatment (ATT) due to severe side effects (vomiting, headache, giddiness, abdominal pain), showed significant improvement with Ayurvedic intervention. By addressing the vitiation of *Vata Dosha, Rakta, Asthi,* and *Majja Dhatus*, along with the presence of *Ama*, a targeted Ayurvedic protocol was developed.

The sustained positive response and absence of symptom recurrence highlight Ayurveda's potential as a viable therapeutic modality for Tuberculous sacroiliitis. This case underscores the need for continued research into integrating Ayurvedic principles for managing spondyloarthropathies, potentially offering alternative treatment approaches and enhancing overall therapeutic efficacy.

Patient Perspective

I experienced severe low back pain radiating to my lower limbs, accompanied by significant stiffness, tenderness in the sacroiliac joint, and a constricted feeling in my hip joint. For 20 days, I struggled with these symptoms, which made walking nearly impossible due to the pain and stiffness. Despite receiving allopathic treatment, I found minimal relief. On 25/12/2022, I admitted myself to the IPD of SSNJ Hospital for Ayurvedic treatment. The treatment plan was thoroughly explained by the doctors, and as the treatment progressed, I began to experience gradual relief from my symptoms. To monitor the effectiveness of the treatment, pathological investigations and an MRI were conducted, revealing significant improvements. I continue to follow the treatment regimen regularly, and I am optimistic about my recovery.

Informed Consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient has given her consent for her images and other clinical information to be reported in the journal. The patient understand that her name and initials will not be published and due efforts will be made to conceal her identity, but anonymity cannot be guaranteed. Patient had given informed consent before start of the treatment.

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