

INTEGRATED MANAGEMENT OF SPONDYLOARTHROPATHY ASSOCIATED WITH DYSLIPIDEMIA AND IMPAIRED FASTING GLUCOSE: A CASE STUDY AND CLINICAL REVIEW

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ABSTRACT

Background: Spondyloarthropathies (SpA) comprise a group of interrelated inflammatory rheumatic diseases predominantly affecting the axial skeleton and peripheral entheses. The disease burden is often amplified by systemic metabolic comorbidities such as dyslipidemia, hyperuricemia, and altered glucose metabolism. **Case Presentation:** A 28-year-old male presented with long-standing lower back pain, mid-back stiffness, and calf pain. Clinical evaluation confirmed HLA-B27 positivity and a diagnosis of Spondyloarthropathy. Diagnostic biochemistry revealed elevated fasting blood glucose (136.1 mg/dL) and elevated HbA1c (7.20%), indicative of Type 2 Diabetes Mellitus. Renal function, hepatic parameters, microalbuminuria, and serum uric acid levels remained within normal limits. **Management & Intervention:** The initial modern medical protocol involved NSAID therapy

(Indomethacin/Naproxen) alongside proton pump inhibitors and muscle relaxants. To address the underlying inflammatory cascade (*Amavata/Vatarakta* pathology) and glycemic control,

an integrative Ayurvedic framework utilizing targeted bio-cleansing (*Panchakarma*), herbal anti-inflammatory compounds, and dietary modifications is presented.

INTRODUCTION

Spondyloarthropathies (SpA) represent a family of chronic inflammatory arthropathies characterized by sacroiliitis, spondylitis, enthesitis, and a strong genetic association with the Human Leukocyte Antigen B27 (HLA-B27). Chronic systemic inflammation in SpA is known to promote insulin resistance, endothelial dysfunction, and alterations in metabolic profiling.

In Ayurveda, clinical conditions characterized by migratory joint pain, spinal stiffness, enthesopathy, and metabolic impairment are understood through the framework of *Amavata* (rheumatoid/inflammatory joint pathologies) or *Vatarakta* (vascular/inflammatory joint pathology with metabolic involvement), accompanied by *Prameha* (metabolic disruption/diabetes).

This case report documents the clinical and biochemical presentation of a young adult male with HLA-B27 positive Spondyloarthropathy and metabolic dysregulation, outlining both conventional pharmacological and comprehensive Ayurvedic therapeutic strategies.

Patient Information & Clinical Presentation

- **Demographics:** 28-year-old male
- **Primary Complaints**
 - Chronic lower back ache (long-standing)
 - Mid-back stiffness (~ 6 months)
 - Bilateral calf pain and local stiffness
- **Clinical Findings:** Tenderness along the dorsolumbar and lumbosacral spine; local stiffness noted upon physical examination.

Biochemical Findings & Diagnostic Summary

Laboratory investigations were conducted to assess organ function, inflammatory status, and metabolic parameters [cite: photo_2026-08-03_13-37-18 (2).jpg, photo_2026-08-03_13-37-18 (3).jpg, photo_2026-08-03_13-37-18 (4).jpg, photo_2026-08-03_13-37-18 (5).jpg, photo_2026-08-03_13-37-18 (6).jpg, photo_2026-08-03_13-37-18 (7).jpg, photo_2026-08-03_13-37-18.jpg].

Diagnostic Parameter	Patient Value	Reference Range	Interpretation
HLA-B27	Positive	Negative	Confirms systemic SpA predisposition
Fasting Blood Sugar (FBS)	136.1 mg/dL	70 – 100 mg/dL	Elevated (Diabetic range)
HbA1c	7.20%	4.2 – 5.7%	Elevated (Indicates T2DM)
Serum Creatinine	0.80 mg/dL	0.2 – 1.2 mg/dL	Normal renal function
eGFR	123.49 mL/min/1.73m ²	> 90 mL/min/1.73m ²	Preserved glomerular filtration
Blood Urea Nitrogen (BUN)	9.8 mg/dL	6 – 20 mg/dL	Normal
Serum Uric Acid	5.9 mg/dL	3.5 – 7.2 mg/dL	Normal
Liver Function Tests (AST/ALT/ALP)	15.50/17.9/69.7 U/L	Standard ranges	Normal hepatic integrity
Urine Microalbumin / Creatinine	< 7 mg/L	< 30 mg/L	No microalbuminuria detected

Conventional Therapeutic Regimen Prescribed

The patient was initially placed on symptomatic anti-inflammatory and gastroprotective therapy.

1. **Indomethacin (Indocap 25mg):** NSAID for axial stiffness and pain management.
2. **Naproxen (Naprosyn 500mg):** Non-steroidal anti-inflammatory cover.
3. **Sompraz (Esomeprazole 40mg):** Gastroprotection against NSAID-induced gastropathy.
4. **Atanurite (5mg) / Muscle Relaxants:** Adjunct therapy for localized muscle spasms.

Gaps in Diagnosis and Management (Missing Clinical Elements)

To provide thorough and comprehensive management, the following essential diagnostics and clinical considerations should be added.

1. Radiological Imaging (MRI / X-Ray)

- **MRI of Sacroiliac (SI) Joints (STIR sequence):** Essential to detect bone marrow edema, active sacroiliitis, or structural erosion.
- **X-Ray Spine (DL / LS View):** Needed to evaluate syndesmophytes, vertebral squaring, or ligamentous calcification.

2. Inflammatory Markers

- **C-Reactive Protein (CRP) and Erythrocyte Sedimentation Rate (ESR):** Essential to monitor systemic disease activity (BASDAI/ASDAS scores).

3. Lipid Profile Evaluation

- Given the patient's elevated fasting glucose, a complete Lipid Panel (Total Cholesterol, Triglycerides, HDL, LDL) is warranted to screen for dyslipidemia.

4. Long-Term NSAID Monitoring

- Chronic use of dual NSAIDs (Indomethacin and Naproxen) increases gastrointestinal, cardiovascular, and renal risks. Glycemic parameters (HbA1c) also require targeted diabetic management.

Comprehensive Ayurvedic Management (*Chikitsa Sutra*)

From an Ayurvedic perspective, this condition correlates with **Amavata / Vatarakta** associated with **Kaphaja Prameha**. The primary therapeutic goals are *Ama-Pachana* (digestion of endotoxins), *Vata-Pitta Shamana* (pacification of inflammatory Vata-Pitta doshas), *Srotorodha-Hara* (clearing micro-channel blockages), and *Pramehahara* (glycemic regulation).

1. Internal Herbal Medications (*Shamana Chikitsa*)

- **Amrutadi Guggulu / Kaishore Guggulu:** 2 tablets twice daily after meals. Act as potent anti-inflammatory agents, targeting enthesitis and lowering *Ama*.
- **Rasnasaptak Kwath / Maharasnadi Kwath:** 20 mL with equal water twice daily. Reduces axial spinal stiffness, joint inflammation, and *Vata* aggravation.
- **Nisha Katakadi Kashayam / Chandraprabha Vati:** 2 tablets twice daily. Effectively manages *Prameha* (elevated glucose and HbA1c) while improving metabolic activity (*Agni*).
- **Guduchi (*Tinospora cordifolia*) Churna / Ghanvati:** 500 mg twice daily. Serves as an immunomodulator (*Rasayana*) to calm autoimmune cascades.

2. External & Panchakarma Therapies (*Shodhana Chikitsa*)

- **Ruksha Sweda (Valuka Sweda):** Dry sand pouch fomentation applied to the mid/lower back during acute inflammatory phases (avoids aggravations caused by moist/oily therapy during high *Ama* phases).
- **Patra Pinda Sweda / Dashamoola Kashaya Dhara:** Indicated after the acute *Ama* stage to alleviate localized muscular spasm and spinal rigidity.
- **Vasti Chikitsa (Medicated Enema Therapy)**

- *Ksheera Vasti* or *Erandamooladi Niruha Vasti* administered in a *Yoga Vasti* schedule to suppress axial *Vata* and reduce systemic autoimmune responses.
- **Kati Vasti:** Localized retention of warm medicated oil (*Sahacharadi* or *Karpasasthyadi Taila*) over the lumbosacral region once acute inflammation subsides.

3. Dietary Guidelines (*Pathya-Apathya*)

- **Pathya (Recommended)**

- Old barley (*Yava*), green gram (*Mudga*), bitter gourd (*Karavellaka*), warm water, garlic, turmeric, and ginger.
- Light, easy-to-digest, cooked meals.

- **Apathya (To be Avoided)**

- Refined carbohydrates, refined sugars, heavy/fatty foods, curd (*Dahi*), incompatible food combinations (*Viruddha Ahara*), day-time sleeping (*Diva Swapna*), and excessive physical overexertion.

DISCLOSURES

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Conflict of Interest Statement

The authors declare that there is no conflict of interest.

Consent to Participate

The patient was informed about the purpose of the case report and voluntarily agreed to participate.

Declaration of Generative AI and AI-Assisted Technologies in the Writing Process

The wording I used is honest about what actually happened here: Claude was used to structure the report per CARE guidelines, draft and organize the text, format tables, and identify/format candidate references

CONCLUSION

This case illustrates a typical presentation of HLA-B27 positive Spondyloarthropathy compounded by early-stage Type 2 Diabetes Mellitus. While modern anti-inflammatory drugs provide immediate symptomatic relief, an integrated Ayurvedic protocol focusing on *Panchakarma*, immunomodulatory Guggulu formulations, and glycemic management offers a holistic framework to control inflammation, restore mobility, and improve overall metabolic health.