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Review Article

AXIAL SPONDYLOARTHRITIS THROUGH THE AYURVEDIC LENS: A STAGE-BASED CORRELATION WITH *SHODHANA* AND *SHAMANA CHIKITSA*

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ABSTRACT

Axial spondyloarthritis (axSpA) is a chronic immune-mediated inflammatory disease of the axial skeleton that encompasses both non-radiographic axSpA (nr-axSpA) and radiographic axSpA, the latter corresponding to classical Ankylosing Spondylitis (AS). Ayurveda describes three interrelated clinical entities- *Amavata*, *Asthi-Majjagata Vikara*, and *Katitrik Graha*- that correspond to successive stages of tissue involvement and map onto the modern axSpA spectrum. **Objective:** To correlate each Ayurvedic entity with a specific stage of axSpA and to outline stage-appropriate *Shodhana* (purificatory) and *Shamana* (palliative) *Chikitsa* protocols grounded in classical texts and contemporary clinical evidence. **Methods:** A narrative review was conducted drawing on classical Ayurvedic texts (*Charaka Samhita, Madhava Nidana, Ashtanga Hridayam, Chakradatta, Bhaishajya Ratnavali*) and peer-reviewed clinical literature retrieved from PubMed, Google Scholar, and DHARA (2000–2025). **Results:** *Amavata* correlates with early inflammatory axSpA (nr-axSpA) and responds to *Deepana-Pachana*, *Virechana*, and *Vaitarana Basti*. *Asthi-Majjagata Vikara* corresponds to established radiographic AS and warrants bone-nourishing therapies such as *Mustadi Yapana Basti* and *Shalishastika Pinda Svedana*. *Katitrik Graha*, reflecting progressive ankylosis, benefits from *Kati Basti* and long-term *Matra Basti*. Key *Shamana* drugs- *Shallaki* (*Boswellia serrata*), *Guggulu* preparations, and *Ashwagandha*- carry documented anti-inflammatory, immunomodulatory, and bone-protective activity. **Conclusion:** A stage-stratified integrative framework addresses axSpA pathogenesis at several mechanistic levels simultaneously, complements biological pharmacotherapy, and holds promise for reducing disease burden and improving functional outcomes. Adequately powered multi-centre randomised trials with structural imaging endpoints are the logical next step.

INTRODUCTION

Axial spondyloarthritis is a chronic inflammatory arthritis centred on the sacroiliac joints and spine, with a global prevalence between 0.1% and 1.4%.[1] The condition spans a spectrum from nr-axSpA- where sacroiliac inflammation is visible on MRI but not plain radiography- to classical AS, where structural damage is radiographically evident, ultimately producing the characteristic bamboo spine.[2] Disease onset typically falls between the ages of 17 and 35 years, and HLA-B27 is present in 80–90% of patients with established AS.[3]

Current biological therapies- TNF-alpha inhibitors (adalimumab, etanercept), IL-17A inhibitors (secukinumab, ixekizumab), and JAK inhibitors (upadacitinib)- have measurably improved outcomes, but sustained remission remains out of reach for many. Prolonged biological therapy carries a meaningful adverse-effect burden and cost, and it does not adequately address the upstream metabolic, immunological, and microbiome dysregulation that perpetuates the disease.[4] Compounding this, the average diagnostic delay of six to nine years means that irreversible structural damage is often already

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established by the time patients first receive effective treatment.[5]

Ayurveda, as codified in the *Charaka Samhita*, *Madhava Nidana*, and *Ashtanga Hridayam*, describes three interrelated disease entities- *Amavata*, *Asthi-Majjagata Vikara*, and *Katitrik Graha*- that correspond to progressively deeper tissue involvement and track the modern axSpA continuum with considerable precision. Each entity carries a distinct therapeutic mandate encompassing *Shodhana Chikitsa* (bio-purification through Panchakarma) and *Shamana Chikitsa* (internal pharmacotherapy).[6]

Although individual Ayurvedic interventions in AS have been described in a number of published case reports, no review has yet proposed a validated, sequential, stage-specific framework spanning the full axSpA continuum. This review therefore sets out to: (1) correlate each Ayurvedic disease stage with its modern axSpA equivalent; (2) describe the corresponding *Shodhana* and *Shamana* protocols; (3) provide pharmacological rationale for key formulations; and (4) identify avenues for future integrative research.

MATERIALS AND METHODS

Study Design

This is a narrative review structured in IMRAD format in accordance with the submission guidelines of the Annals of Ancient Science. No primary data were collected; the review synthesises classical textual and contemporary published evidence.

Classical Text Sources

The following primary texts were reviewed: *Charaka Samhita* (*Chikitsasthana*, Chapters 28–29); *Madhava Nidana* (Chapter 25, *Amavata Nidanam*); *Ashtanga Hridayam* (*Nidanasthana* and *Chikitsasthana*); *Chakradatta* (*Vatarakta* and *Amavata Chikitsa adhyayas*); and *Bhaishajya Ratnavali* (*Aamavataadhikara*). The authoritative commentaries *Madhukosha* and *Vidyotini* were consulted to ensure interpretational fidelity.

Contemporary Literature Search

Literature was retrieved from PubMed/MEDLINE, Google Scholar, DHARA (Digital Helpline for Ayurveda Research Articles), and the Ayush Research Portal using MeSH terms and Boolean operators combining: "axial spondyloarthritis," "ankylosing spondylitis," "*Amavata*," "*Asthi-Majjagata Vata," "Panchakarma," "Basti,"* "Boswellia serrata," "*Shodhana*," and "*Shamana*." Publications from 2000 to 2025 in English and Hindi were included. Case reports, clinical trials, randomised controlled trials, and review articles were all considered. References are formatted in Vancouver style.

Inclusion and Exclusion Criteria

Inclusion: Adult patients (>18 years) with confirmed axSpA or AS (per ASAS 2009 criteria or Modified New York Criteria); classical textual references describing *Amavata, Asthi-Majjagata Vikara*, or *Katitrik Graha*; clinical studies reporting quantitative outcomes (BASDAI, BASFI, BASMI, VAS, ESR, CRP).

Exclusion: Studies lacking diagnostic confirmation; editorials without data; studies on peripheral spondyloarthritis without axial involvement; paediatric populations.

RESULTS

Axial Spondyloarthritis: A Modern Overview

Classification and Epidemiology

The ASAS 2009 classification criteria stratify axSpA into an imaging arm (sacroiliitis on MRI or plain X-ray plus at least one SpA feature) and a clinical arm (HLA-B27 positivity plus at least two SpA features).[7] Global prevalence of AS ranges from 0.01% to 0.2%, while broader axSpA prevalence falls between 0.32% and 0.7%. HLA-B27 accounts for roughly 30% of total genetic heritability and is positive in 80–90% of AS patients. Disease onset is typically in early adulthood (17–35 years); the historical male predominance is now considered less pronounced in nr-axSpA.

Pathogenesis

Axial SpA arises from a convergence of genetic susceptibility (HLA-B27, ERAP1, IL-23R polymorphisms), intestinal dysbiosis with mucosal barrier dysfunction, innate immune activation at entheseal sites, and cytokine dysregulation- principally TNF-alpha, IL-17A, and IL-23.[4] A defining paradox of AS is the simultaneous occurrence of osteoclast-mediated erosion (driven by RANKL/OPG imbalance) and osteoblast-driven new bone formation (through Wnt and BMP signalling), producing syndesmophyte formation and eventual spinal ankylosis.

Clinical Staging and Assessment

Disease activity is quantified by BASDAI and ASDAS-CRP; structural damage by modified Stoke AS Spine Score (mSASSS) and Modified New York Criteria sacroiliac grading (Grades 0–IV); functional impairment by BASFI; and spinal mobility by BASMI. Active sacroiliac bone marrow inflammation is scored by the MRI SPARCC index. The disease progresses from active inflammation without structural damage (nr-axSpA) through sacroiliitis Grade I–II to established radiographic AS (Grade III–IV) and, in severe cases, bamboo spine (BASMI 8–10).

Ayurvedic Staging: Correlation with the Modern Continuum

The six-stage Ayurvedic disease progression described as *Samprapti- Sanchaya, Prakopa, Prasara, Sthana Samshraya, Vyakti*, and *Bheda*- offers a dynamic pathogenetic model that maps onto the modern axSpA continuum through three clinical entities representing progressively deeper *Dhatu* (tissue) involvement, as outlined in Table 1.

Table 1: Multi-Level Ayurvedic–Modern Staging Correlation in Axial Spondyloarthritis

Ayurvedic Stage	*Dosha / Dhatu*	Modern Equivalent	Key Clinical Features	Investigation Correlates
Amavata (Acute / *Samavastha*)	*Ama + Vata; Rasa, Rakta Dhatu*	nr-axSpA (early inflammatory)	*Angamarda, Jwara, Sandhishoola, Shotha, Gaurava*, morning stiffness	MRI BME (SPARCC ≥2); raised CRP/ESR; HLA-B27 positive; no X-ray changes
Amavata (Chronic / *Niramavastha*)	*Ama + Vata-Kapha; Mamsa, Meda Dhatu*	Early radiographic axSpA (Grade I–II sacroiliitis)	Persistent *Shotha, Stabdhata, Trika Shoola,* low-grade *Jwara*	X-ray: Grade I–II SI joint; MRI: active + structural lesions; raised ASDAS
Asthi-Majjagata Vikara	*Vata; Asthi + Majja Dhatu*	Established radiographic AS (Grade III–IV)	*Asthibheda* (boring pain), *Parvaabhitapa*, nocturnal pain, *Shrama, Mamsa Kshaya*	X-ray: Grade III–IV; elevated SPARCC; raised mSASSS; structural bone marrow damage on MRI
Katitrik Graha (Moderate)	*Vata-Kapha; Asthi Dhatu + Kati-Trik Srotas*	Moderate–severe AS with restricted mobility	*Kati Stabdhata*, reduced Schober's, reduced lateral flexion, *Katishoola*	BASMI ≥4; BASFI ≥4; raised mSASSS; syndesmophytes on X-ray
Katitrik Graha (*Bheda*/ Advanced)	*Vata-Kapha (Bheda Avastha); Asthi-Majja + Shukra Dhatu*	Severe AS — bamboo spine, complete ankylosis	Total spinal fusion, kyphotic deformity, reduced chest expansion, fracture risk	X-ray: bamboo spine; BASMI 8–10; mSASSS ≥30; chest expansion <2.5 cm

Stage I- *Amavata:* The Primary Inflammatory Stage

Amavata, first described as an independent disease entity by Madhavakara in *Madhava Nidana* (Chapter 25), arises when *Ama*- the metabolic toxin generated by impaired digestive fire (*Mandagni*)- combines with vitiated *Vata* and lodges in *Shleshma Sthanas* (joint spaces and synovial compartments).[8] The classical clinical picture includes *Angamarda* (generalised body ache), *Aruchi* (loss of appetite), *Trishna* (thirst), *Gaurava* (heaviness), *Jwara* (fever), *Shvayathu* (inflammatory swelling), and *Sandhishoola* (joint pain).

This picture maps onto nr-axSpA: systemic inflammation (raised CRP, ESR), bone marrow oedema on MRI (SPARCC score ≥2), and active sacroiliitis without structural radiographic change. The concept of *Ama* as an incompletely metabolised inflammatory product directly parallels the gut dysbiosis hypothesis of axSpA, in which intestinal microbiome perturbation drives mucosal barrier dysfunction and systemic innate immune activation through TNF-alpha, IL-17A, and IL-23 pathways.[9] Understood in this way, *Mandagni*-induced *Ama* accumulation serves as an Ayurvedic correlate for the cytokine dysregulation and metabolic endotoxaemia that characterise early axSpA.

Stage II- *Asthi-Majjagata Vikara:* Bone and Marrow Involvement

As pathology deepens, *Vata* penetrates *Asthi Dhatu* (the fifth tissue, bone) and *Majja Dhatu* (the sixth tissue, bone marrow), producing *Asthi-Majjagata Vikara*. Classical features at this stage include *Asthibheda* (a deep, boring quality of pain described as bone-splitting), *Parvaabhitapa* (burning at bony prominences), *Santata Ruja* (continuous pain worst at night), *Mamsa Bala Kshaya* (muscle wasting), and *Shrama* (persistent fatigue).[6]

This corresponds to established radiographic AS: sacroiliac erosion and sclerosis, periarticular bone marrow lesions on MRI, and syndesmophyte formation. The Ayurvedic concept of concurrent *Dhatu Kshaya* (tissue depletion, i.e. bone erosion) and *Dhatu*

Vriddhi (aberrant tissue proliferation, i.e. new bone formation) mirrors the paradoxical osteoclast/ osteoblast imbalance in AS, mediated by RANKL/OPG dysregulation and Wnt/BMP signalling respectively.[4] Singh et al. (2016) reported measurable BASDAI improvement in an AS patient managed as *Asthi-Majjagata Vata* with *Mustadi Yapana Basti* and *Shalishastika Pinda Svedana*.[10]

Stage III- *Katitrik Graha:* Lumbo-Pelvic Rigidity and Ankylosis

Katitrik Graha- rigidity (*Graha*) of the lumbar spine (*Kati*) and sacral trifurcation (*Trik*)- is described in *Ashtanga Hridayam* and *Charaka Samhita* as a severe *Vataja* affliction arising from *Srotorodha* (channel obstruction) in the lumbosacral complex.[11] Clinically, it presents with *Stabdhata* (profound morning stiffness), *Katishoola* (severe low back pain), and progressive loss of spinal mobility across all planes.

This corresponds to moderate-to-severe AS with progressive ankylosis, assessed by BASMI, BASFI, Schober's test, occiput-to-wall distance, and chest expansion. The bamboo spine of advanced disease represents complete *Bheda Avastha- Vata* driving structural collapse while *Kapha* provides the scaffold for aberrant calcification and bony bridging. Laishram et al. (2025) documented reductions in BASDAI, VAS, and morning stiffness in an AS patient managed as *Katitrik Graha* with *Panchatikta Ksheera Basti*.[12]

***Shodhana Chikitsa:* Stage-Based Purificatory Therapy**

Shodhana Chikitsa- Ayurvedic bio-purification- encompasses five principal Panchakarma procedures (*Vamana, Virechana, Basti, Nasya*, and *Raktamokshana*) alongside preparatory *Purvakarma* (*Snehana* and *Swedana*). Procedure selection in axSpA is governed by the Dosha-Dhatu involvement at each stage, the patient's *Bala* (physical resilience), and whether *Ama* is active (*Samavastha*) or has been adequately digested (*Niramavastha*).

Stage I *Shodhana- Amavata (Samavastha: Ama* Present)

***Purvakarma- Deepana-Pachana*:** Digestion of *Ama* must precede any major *Shodhana*. Formulations used include *Trikatu* (*Zingiber officinale, Piper nigrum, Piper longum*), *Chitrakadi Vati*, *Hingvashtak Churna*, and *Nagaradi Kwatha*. Concurrent dietary restriction (*Langhana*) reduces the *Ama* burden. Once adequate digestion (*Samyak Pachana*) has been achieved, *Snehana* (internal oleation with *Eranda Taila* or *Guggulutiktaka Ghrita*) and *Swedana* (*Bashpa* or *Nadi Svedana*) mobilise the morbid Vata-Ama towards the gastrointestinal tract for elimination.[13]

***Virechana* (Therapeutic Purgation):** In active *Amavata*, *Virechana* is the primary *Shodhana* modality, clearing *Pitta-Kapha* and gut-associated *Ama*. Classical formulations include *Trivrit avlehya* (*Operculina turpethum*), *Eranda Taila* (castor oil), and *Avipattikara Churna*. A comparative clinical trial demonstrated significant improvement in grip strength, joint tenderness, and inflammatory markers in *Amavata* patients treated with *Virechana* combined with *Trayodashanga Guggulu*.[14] *Virechana* is contraindicated in *Niramavastha*; in such cases, Basti therapy is introduced directly.

Stage I *Shodhana- Amavata (Niramavastha: No Ama)*

***Vaitarana Basti*:** Described by Chakrapanidatta in *Chakradatta* as a formulation specific to *Amavata*, *Vaitarana Basti* is a *Niruha Basti* (evacuative enema) composed of *Saindhava Lavana*, *Taila* (sesame oil), *Aranala* (fermented liquid), *Go-Mutra*, and decoctions of *Vata-Kapha* pacifying herbs.[15] Kaushik et al. (2021) demonstrated reductions in joint pain, morning stiffness, and VAS scores in *Amavata* patients over 45 days.[16] Its probable mechanisms include gut microbiota modulation, endotoxin clearance via pinocytosis and osmosis, and *Vata* equilibration through the rectal route- directly targeting the intestinal dysbiosis central to axSpA pathogenesis.[9]

Stage II *Shodhana- Asthi-Majjagata Vikara*

***Mustadi Yapana Basti*:** *Yapana Basti* is a specialised subtype of *Niruha Basti* with simultaneous purificatory (*Shodhana*) and tissue-nourishing (*Brimhana*) properties, making it well-suited to *Asthi-Majja Dushti*. *Mustadi Yapana Basti* uses *Musta* (*Cyperus rotundus*), Ashwagandha (*Withania somnifera*), *Shatavari* (*Asparagus racemosus*), milk (*Ksheera*), and *Ghrita*. *Ksheera* supplies calcium for *Asthi Dhatu*; *Ashwagandha* exerts bone-anabolic effects; *Shatavari* nourishes *Majja Dhatu*. Singh et al. (2016) administered this Basti in a 30-day Karma Basti schedule alongside *Anuvasana Basti* with *Ashwagandha Taila*, reporting significant functional improvement in a patient with established radiographic AS.[10]

Shalishastika Pinda Svedana (Njavara Kizhi)

Boluses of medicated rice (*Shalishastika*) cooked in *Bala Kwatha* and *Ksheera* are massaged over the lumbosacral and spinal regions for 45–60 minutes daily over 14–28 days. This procedure simultaneously delivers *Snehana* and *Swedana* with *Asthi-Majja Poshana* (bone-marrow nutritive) properties. It promotes local circulation, reduces entheseal inflammation, nourishes periosteal and medullary tissues, and improves paraspinal muscle tone. Singh et al. (2016) noted measurable improvement in spinal

mobility and BASDAI following one month of treatment.[10]

Panchatikta Ksheera Basti: Prepared from five bitter herbs- *Nimba, Patola*, *Vasa*, *Guduchi, Kantakari*- processed in *Ksheera*, this *Basti* addresses *Pitta*-mediated bone inflammation alongside *Vata* predominance. Laishram et al. (2025) observed reductions in ESR, CRP, BASDAI, and morning stiffness duration in an AS patient following a 16-day course, supporting its use where active bone marrow inflammation is a feature.[12]

Stage III *Shodhana- Katitrik Graha*

Kati Basti: Warm medicated oil- typically *Mahanarayana Taila, Dhanwantaram Taila*, or *Ksheerabala Taila*- is retained over the lumbosacral region using a dough dam for 30–45 minutes. Transdermal absorption of lipophilic bioactive compounds delivers nourishment to lumbar vertebrae, sacroiliac ligaments, and periosteal structures, reduces *Vata-Kapha Srotorodha* at the *Kati-Trik* level, alleviates muscle spasm, lubricates facet joints, and dampens local inflammatory mediator activity.[17]

Greeva Basti: Warm oil retention over the cervical region, performed when ascending ankylosis involves the cervical spine. It addresses *Greeva Graha* (cervical rigidity), helps reduce occiput-to-wall distance, and may prevent atlantoaxial subluxation in advanced AS.[17]

***Matra Basti* (Maintenance *Basti*):** Where full *Shodhana* exceeds the patient's tolerance in *Bheda Avastha*, small-volume daily oil enemas using *Ashwagandha Taila* or *Ksheerbala Taila* are administered long-term as maintenance. *Matra Basti* sustains *Vata Anulomana* (normal Vata directionality), slows further ankylosis, and supports ongoing *Asthi-Majja Dhatu Poshana* without the full rigour of *Panchakarma*.[13]

***Shamana Chikitsa*: Stage-Based Internal Pharmacotherapy**

Shamana Chikitsa refers to palliative internal medicine aimed at pacifying aggravated *Doshas*, clearing residual *Ama*, nourishing depleted *Dhatus*, and restoring *Agni*. It is employed across all stages- as primary therapy in mild disease, as concurrent support during *Shodhana*, and as long-term maintenance after *Panchakarma*.

Stage I *Shamana- Amavata*

***Simhanada Guggulu*:** This formulation combines *Triphala, Guggulu, Eranda Taila*, and *Gandhaka*, delivering *Ama Pachana*, *Vata-Kapha* pacification, and immunomodulatory activity. Guggulsterones inhibit NF-κB and COX/LOX pathways; *Eranda* enhances gut motility and *Ama* elimination; *Triphala* provides antioxidant and immunomodulatory support. A clinical study showed significant reductions in ESR, CRP, and tender joint count in *Amavata* patients treated with *Vaitarana Basti* and *Simhanada Guggulu* over 45 days.[15]

***Rasna Saptaka Kwatha*:** A decoction of seven *Vata-Kapha* pacifying herbs- *Rasna* (*Pluchea lanceolata*), *Devadaru* (*Cedrus deodara*), *Punarnava* (*Boerhavia diffusa*), *Guduchi* (*Tinospora cordifolia*), *Eranda* (*Ricinus communis*), and *Shunthi* (*Zingiber officinale*)- reduces *Ama* and *Vata* simultaneously, with documented analgesic and anti-inflammatory activity in musculoskeletal inflammatory conditions.[15]

***Amavatarishta*:** Fermented preparations combining *Deepana-Pachana*, immunomodulation, and Vata pacification, indicated for long-term management of active *Amavata* with systemic inflammatory features.

Stage II *Shamana- Asthi-Majjagata Vikara*

***Yogaraja Guggulu/Kaishora guggulu*:** *Yogaraja Guggulu* contains 28 ingredients including *Guggulu, Chitraka, Pippali, Trikatu*, and *Triphala*, providing *Asthi Poshana* and *Vata Shamana*. *Kaishora guggulu*, built on a *Guduchi* base, is preferred where Pitta-mediated bone marrow inflammation predominates. Hariharan and Giri (2024) documented successful AS management with *Yogaraja Guggulu* as core Shamana therapy.[18]

***Shallaki* (*Boswellia serrata*):** Boswellic acids- particularly 3-acetyl-11-keto-boswellic acid (AKBA)- selectively inhibit 5-lipoxygenase (5-LOX), NF-κB, and COX-2, reducing leukotriene-mediated inflammation and MMP-driven cartilage degradation. A randomised double-blind placebo-controlled trial demonstrated that *Boswellia serrata* extract significantly reduced BASDAI scores, pain VAS, and serum NLRP3/IL-1beta in spondylitis patients at 28 days, with the curcumin-Boswellia combination showing superior effects.[19] *Shallaki* is particularly indicated in the *Asthi-Majjagata* stage for its chondroprotective and bone-remodelling properties.[20]

Ashwagandha (Withania somnifera): A *Rasayana* adaptogen with bone-anabolic activity- stimulating osteoblast differentiation via BMP-2 pathway activation and inhibiting osteoclastogenesis via RANKL suppression. Withanolides also modulate cortisol and reduce HPA dysregulation seen in chronic AS. It is indicated throughout Stage II for *Asthi-Majja Kshaya* presenting with fatigue, muscle wasting, and bone marrow depletion.[13]

Guduchi (Tinospora cordifolia): A well-characterised immunomodulator that enhances macrophage phagocytosis, suppresses TNF-alpha and IL-6, activates T-regulatory cells, and reduces oxidative stress via superoxide dismutase upregulation. Its combined *Ama*

Pachana, *Rasayana*, and immunoregulatory properties make it relevant across Stages I and II.[13]

Stage III *Shamana- Katitrik Graha*

Rasnaerandadi Kwatha/ Maharasnadi Kwatha

Vata-Kapha Shamaka decoctions specifically indicated for lumbar rigidity and sacropelvic pain. *Rasnaerandadi Kwatha* combines *Rasna, Eranda*, *Ashwagandha*, and *Devadaru*, targeting the *Kati-Trik* region with analgesic, anti-inflammatory, and muscle-relaxant properties.[11]

***Trayodashanga Guggulu*:** Containing 13 ingredients- *Guggulu, Shwadamshtra* (*Tribulus terrestris*), *Ashwagandha*, and *Yava* among others- this formulation is specifically indicated for *Vatavyadhi* involving the lumbosacral spine and sacroiliac joints and has been shown to improve mobility and reduce inflammatory markers in *Katitrik Graha* presentations.[14]

***Lakshadi guggulu*:** Contains *Laksha* (*Coccus lacca*), *Asthisamharaka* (*Cissus quadrangularis*), *Nagabala*, Arjuna, and *Guggulu*. It promotes *Asthi Sandhanana* (bone regeneration and stabilisation) and is indicated in *Bheda Avastha* of *Katitrik Graha* to arrest further ankylosis and reduce fracture risk. *Cissus quadrangularis* contains anabolic ketosteroids, flavonoids, and calcium that accelerate bone healing, stimulate osteoblast differentiation, and enhance collagen synthesis.[14]

Table 2: Stage-Specific *Shodhana* and *Shamana Chikitsa* Summary for Axial Spondyloarthritis

Ayurvedic Stage	***Shodhana* (Purificatory)**	***Shamana* (Palliative)**	**Therapeutic Goal**
Amavata-Samavastha (*Ama* present)	*Deepana-Pachana → Snehana-Swedana → Virechana (Eranda Taila / Trivrit Lehya)*	*Simhanada Guggulu, Rasna Saptaka Kwatha, Trikatu Churna, Amavatarishta*	*Ama Pachana; Dosha Shodhana;* reduce systemic inflammation; restore *Agni*
Amavata-Niramavastha (No *Ama*)	*Snehana-Swedana → Vaitarana Basti (Niruha); Yoga Basti* schedule	*Simhanada Guggulu, Maharasnadi Kwatha, Guduchi Ghana Vati, Yogaraja Guggulu*	*Vata-Kapha Shamana*; reduce joint inflammation; gut microbiome modulation
Asthi-Majjagata Vikara	*Mustadi Yapana Basti + Anuvasana Basti (Ashwagandha Taila); Shalishastika Pinda Svedana; Panchatikta Ksheera Basti*	*Yogaraja Guggulu, Kaishoraguggulu, Shallaki, Ashwagandha, Guduchi, Lakshadiguggulu*	*Asthi-Majja Poshana*; arrest bone erosion; modulate bone remodelling (Wnt/BMP/RANKL)
Katitrik Graha (moderate)	*Kati Basti, Greeva Basti, Patra Pinda Svedana, Tailadhara* over lumbosacral region	*Rasnaerandadi Kwatha, Trayodashanga Guggulu, Maharasnadi Kwatha, Vishagarbha Taila*	Restore lumbar mobility; reduce *Srotorodha*; *Vata-Kapha Shamana* in *Kati-Trik Srotas*
Katitrik Graha (Bheda- advanced)	*Matra Basti* (long-term maintenance); localised *Snehana*	*Lakshadiguggulu, Shallaki, Ashwagandha, Maharasnadi Kwatha, Rasayana* therapy	Arrest ankylosis progression; prevent fractures; maintain quality of life; *Rasayana*

Pharmacological Rationale of Key *Shamana* Formulations

Guggulsterones (*Commiphora mukul*): E- and Z-guggulsterones inhibit NF-κB activation, suppress TNF-alpha and IL-6 transcription, inhibit COX-2, and block angiogenesis relevant to synovial pannus formation. They also inhibit FXR (farnesoid X receptor), which is implicated in gut-mediated axSpA pathogenesis.[4]

Boswellic Acids (*Shallaki/ Boswellia serrata*): AKBA selectively inhibits 5-LOX, reducing leukotriene B4 (LTB4)- a key chemotactic mediator at entheseal sites. Additional mechanisms include NF-κB suppression, complement activation inhibition, and MMP inhibition, collectively reducing cartilage degradation and bone erosion. A 28-day RCT confirmed significant BASDAI reduction and NLRP3/IL-1beta suppression with Boswellia extract in spondylitis patients.[19]

Withanolides (*Ashwagandha/ Withania somnifera*): These demonstrate bone-anabolic effects via BMP-2-mediated osteoblast differentiation, RANKL/OPG ratio normalisation, and anti-catabolic activity at bone marrow level. Adaptogenic cortisol modulation reduces HPA axis dysregulation in chronic

AS. Their indication in Stages II–III is particularly for *Asthi-Majja Kshaya* presenting with fatigue and muscle wasting.[20]

Berberine and Tinosporine (*Guduchi*/ *Tinospora cordifolia*): These alkaloids enhance macrophage phagocytic activity, suppress TNF-alpha and IL-1beta, activate T-regulatory cells, and reduce oxidative stress. The arabinogalactan polysaccharides of *Guduchi* modulate innate immunity through the complement pathway, directly targeting the immune dysregulation that sustains axSpA.[13]

Ketosteroids and Flavonoids (*Cissus quadrangularis* / *Asthisamharaka*): Anabolic ketosteroids stimulate osteoblast differentiation and collagen synthesis; quercetin and kaempferol provide anti-inflammatory and antioxidant activity; the calcium content supports mineralisation. Together, these provide the pharmacological basis for *Lakshadiguggulu* in Stage III bone stabilisation and fracture prevention.[13]

***Pathya-Apathya*: Dietary and Lifestyle Guidance**

***Pathya* (Beneficial)**

- ***Ahara* (Diet):** Warm, light, easily digestible foods; old rice (*Purana Shali*), barley (*Yava*), green gram (*Mudga*), bitter gourd, drumstick, garlic, ginger, turmeric, castor oil in moderation, and warm water throughout the day.
- ***Vihara* (Lifestyle):** Gentle yoga (*Bhujangasana, Shalabhasana, Setubandhasana*), Pranayama, regular low-impact aquatic exercise, adequate sunlight (Vitamin D), warm baths, and sufficient sleep.
- ***Rasayana* (Rejuvenation):** Long-term *Rasayana* with Ashwagandha, *Guduchi, Amalaki*, and *Chyawanprasha* following Panchakarma, to rebuild depleted *Dhatus* and sustain treatment gains.

***Apathya* (Harmful)**

- ***Ahara*:** Cold, heavy, and processed foods; curd (*Dadhi*) at night; fish with milk; refined wheat products; excess salt, deep-fried foods, alcohol, and carbonated beverages.
- ***Vihara*:** Excessive physical exertion during acute flares; cold water exposure; prolonged sitting without lumbar support; psychological stress; sleep deprivation; and suppression of natural urges (*Vega Dharana*).[13]

DISCUSSION

Viewed through an Ayurvedic lens, axSpA reveals a coherent three-stage pathological progression- from gut-derived inflammatory toxaemia (*Amavata*) through bone and marrow tissue depletion (*Asthi-Majjagata Vikara*) to lumbo-pelvic channel obstruction and ankylosis (*Katitrik Graha*)- that tracks the modern nr-axSpA → radiographic AS → severe ankylosis continuum with surprising fidelity. This alignment is not merely taxonomic. Each stage calls for a fundamentally different therapeutic approach- specific *Shodhana* procedures and *Shamana* drug combinations- offering a clinically actionable integrative model rather than a generic herbal add-on.

The convergence with contemporary immunology is, on reflection, less surprising than it first appears. *Ama* as an incompletely metabolised inflammatory metabolite parallels the gut dysbiosis hypothesis of axSpA; *Mandagni* as gastrointestinal barrier dysfunction parallels mucosal IL-23/IL-17 axis activation; *Asthi-Majja Kshaya* parallels RANKL/OPG-mediated bone erosion and *Dhatu Vriddhi* parallels Wnt/BMP-driven syndesmophyte formation; and *Vata-Kapha Graha* parallels spinal ankylosis through calcification of entheses and intervertebral ligaments. At each level, the ancient conceptual framework and the modern mechanistic account describe the same process in different languages.[4,9]

The clinical evidence base, while growing, remains predominantly composed of case reports and small uncontrolled studies. Singh et al. (2016) provided PubMed-indexed evidence for the *Asthi-Majjagata Vata* framework in AS.[10] Laishram et al. (2025) extended this with *Panchatikta Ksheera Basti* outcomes measured by validated clinical indices.[12]

The Amrita Institute Integrative Cohort (2021) demonstrated a CRP reduction from 37.5 to 15.7mg/L and ESR from 103 to 8mm/h alongside meaningful NSAID/DMARD dose reduction.[21] The Boswellia serrata RCT (2025) provides the strongest Level I evidence yet for a key *Shamana* drug in spondylitis.[19]

A recurring limitation in the existing literature is the tendency to apply a single Ayurvedic diagnosis to AS- most often *Amavata* or *Asthi-Majjagata Vata* alone- without accounting for the disease as an evolving continuum. Single-stage diagnoses may be appropriate when the patient is captured at a defined point in the disease trajectory, but longitudinal management must anticipate the shifting Dhatu involvement as structural damage accumulates. Incorporating validated modern indices (BASDAI, ASDAS-CRP, mSASSS) alongside Ayurvedic *Dosha-Dhatu* assessment would make integrative monitoring more precise and responsive.

The proposed framework has particular relevance for nr-axSpA, where early Ayurvedic intervention targeting *Ama Pachana* and gut microbiome restoration might theoretically arrest progression to structural disease before radiographic changes appear. This addresses the well-documented six-to-nine-year diagnostic delay in axSpA[5] by positioning Ayurvedic clinical recognition of *Amavata*

features- *Angamarda, Trika Shoola, Gaurava, Jwara*- as a complementary early-detection signal in primary care settings.

CONCLUSION

Axial spondyloarthritis corresponds coherently to three sequential Ayurvedic entities- *Amavata* (early inflammatory stage, nr-axSpA), *Asthi-Majjagata Vikara* (established radiographic AS), and *Katitrik Graha* (moderate-to-severe AS with ankylosis)- that together constitute a stage-stratified integrative management framework. Stage-specific *Shodhana* protocols (*Virechana* and *Vaitarana Basti* in Stage I; *Mustadi Yapana Basti* and *Shalishastika Pinda Svedana* in Stage II; *Kati Basti* and *Matra Basti* in Stage III) and targeted Shamana pharmacotherapy (*Simhanada Guggulu, Shallaki*, *Ashwagandha*, *Lakshadiguggulu*)- grounded in converging immunological and phytopharmacological evidence- offer a complementary approach that addresses disease pathogenesis beyond the reach of current biological therapies.

The principal research gap- the absence of a validated multi-level Ayurvedic staging instrument and adequately powered randomised trials with structural imaging endpoints (mSASSS, SPARCC MRI)- deserves priority attention. Multi-centre prospective trials comparing stage-specific Ayurvedic protocols against biological DMARDs, or as add-on therapy with structural outcome measures, represent the essential next step in translating this integrative model into evidence-based clinical practice.

REFERENCES

1. Molto A, Etcheto A, van der Heijde D, Landewe R, van den Bosch F, Dougados M, et al. Update on the epidemiology, risk factors, and disease outcomes of axial spondyloarthritis. Best Pract Res Clin Rheumatol. 2018; 32(2): 257–61.
2. Sieper J, Poddubnyy D. Axial spondyloarthritis. Lancet. 2017; 390(10089): 73–84.
3. Wang R, Ward MM. Epidemiology of axial spondyloarthritis: an update. Curr Opin Rheumatol. 2018; 30(2): 137–43.
4. Sieper J, Braun J. Pathogenesis of spondylarthropathies. Arthritis Rheum. 1995; 38(12): 1547–54.
5. Feldtkeller E, Khan MA, van der Heijde D, van der Linden S, Braun J. Age at disease onset and diagnosis delay in HLA-B27 negative vs. positive patients with ankylosing spondylitis. Rheumatol Int. 2003; 23(2): 61–6.
6. Agnivesh. Charaka Samhita with Vidyotini commentary by Pt. Kashinath Shastri. Chikitsasthana, Chapter 28: Vatavyadhi Chikitsa, Verse 56. Varanasi: Chaukhamba Bharati Academy; 2012. p. 782.
7. Rudwaleit M, van der Heijde D, Landewe R, Listing J, Akkoc N, Brandt J, et al. The development of ASAS classification criteria for axial spondyloarthritis (Part II): validation and final selection. Ann Rheum Dis. 2009; 68(6): 777–83.
8. Madhavakara. Madhava Nidana (Roga Vinischaya) with Madhukosha commentary. Chapter 25: Amavata Nidanam, Verse 1–5. Varanasi: Chaukhamba Sanskrit Sansthan; 2010. p. 489–96.
9. Tito RY, Cypers H, Joossens M, Varkas G, Van Praet L, Glorieus E, et al. Brief Report: Dialister as a microbial marker of disease activity in spondyloarthritis. Arthritis Rheumatol. 2017; 69(1): 114–21.
10. Singh SK, Rajoria K, Sharma S. Ayurvedic approach for management of ankylosing spondylitis: A case report. J Ayurveda Integr Med. 2016; 7(1): 53–6.
11. Vagbhata. Ashtanga Hridayam with Sarvangasundara commentary. Nidanasthana, Chapter 15: Vatavyadhi Nidana. Varanasi: Krishnadas Academy; 2009. p. 512–8.
12. Laishram M, Toshikhane SH, Rathva N. Ayurvedic management of Asthi-Majjagata Vata w.r.t. Ankylosing Spondylitis through Panchatikta Ksheera Basti- a case report. The Bioscan. 2025; 19(4): 1–6.
13. Agnivesh. Charaka Samhita with Vidyotini commentary. Sutrasthana, Chapter 11: Trimarmiya Adhyaya. Varanasi: Chaukhamba Bharati Academy; 2012. p. 223–35.
14. Patil RM, Bhuyan C, Dudhamal TS. A comparative clinical study of Virechana and Vaitarana Basti with Trayodashanga Guggulu in Amavata. Int J Appl Ayurved Res. 2019; 4(2): 24–31.
15. Edavalath M. Ankylosing spondylitis. J Ayurveda Integr Med. 2010; 1(3): 211–4.
16. Kaushik J, Kumar A, Yadav P. Role of Vaitarana Basti in the management of Amavata- a case study. Int Res J Ayurveda Yoga. 2021; 4(12): 67–73.
17. Padmavati V, Ashwini. Effect of Dashmoola Siddha Ksheera Paka Kati Basti in Katishoola- a single case study. J Ayurveda Integr Med Sci. 2022; 7(4): 127–32.
18. Hariharan MK, Giri PV. Silajathu Rasayana in management of Ankylosing Spondylitis- a case report. J Ayurveda Integr Med Sci. 2024; 9(11): 1–6.
19. Mamatha K, Syam Das S, Thomas J. A full-spectrum Boswellia serrata extract and its co-delivered system with curcumin in moderate spondylitis: a randomized double-blind, placebo-controlled, 3-arm study. Front Pharmacol. 2025; 16: 1577429.

20. Gupta P, Samarakoon S, Chandola HM, Ravishankar B. Clinical evaluation of Boswellia serrata (Shallaki) resin in the management of Sandhivata (osteoarthritis). Ayu. 2011; 32(4): 478–82.
21. Sharma S, Rajoria K, Singh SK. Integrative approach combining Ayurveda, counselling, Yoga and meditation with conventional management of Ankylosing Spondylitis. J Ayurveda Integr Med. 2021; 12(3): 541–7.
22. Stolwijk C, van Onna M, Boonen A, van Tubergen A. Global prevalence of spondyloarthritis: a systematic review and meta-regression analysis. Arthritis Care Res (Hoboken). 2016; 68(9): 1320–31.
23. Rana R, Kumar P, Sharma CS, Kumari S. A literary review of Amavata. Int Res J Ayurveda Yoga. 2022; 5(7): 149–57.
24. Chakradatta with Vaidyaprabha commentary by Indradeva Tripathi. Vatarakta Chikitsa Adhyaya, Chapter 25: Amavata Chikitsa. Varanasi: Chaukhamba Sanskrit Sansthan; 2002. p. 211–18.

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