



Review Article

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ROLE OF PANCHAMAHABHUTA AND THEIR INVOLVEMENT IN LUMBAR SPINE DISEASE: A CONCEPTUAL AND CLINICAL SYNTHESIS

***Dr. Akshay Kumar Jaiswal¹ and Shrimant G Chavan²**

¹Post Graduate Scholar, ²Professor

Department of Panchakarma, Himalayiya Ayurvedic Medical College & Hospital, Dehradun

*Corresponding Author's Email ID: akshayd23ayu@gmail.com

1. Abstract

The strategic necessity of elemental analysis in chronic spinal pathology arises from the ontological premise that lumbar degeneration is a systemic disruption of *Panchabhautik* equilibrium rather than a localized mechanical failure.¹ This synthesis evaluates the philosophical methodology of *Panchamahabhuta Siddhanta*—tracing the evolution of matter from *Avyakta* (unmanifest) through *Tanmatras* (subtle essences) to gross elements—as a robust framework for managing *Kati Graha* (Lumbar Spondylosis).¹ Lumbar Spondylosis (LS) represents a degenerative cascade affecting the intervertebral discs and zygapophyseal joints, ranking as a primary cause of global disability.² Through the analytical lens of classical Sanskrit Samhitas, including the *Gada Nigraha* and *Charaka Samhita*, this pathology is identified as a dual manifestation of *Dhatu Kshayatmaka* (degenerative) and *Marga Avarodhaka* (obstructive) processes.^{3,4} Clinical evidence synthesized from trials involving Eranda Muladi Yapana Basti and Dvipanchamooladi Taila Matra Basti

demonstrates a profound therapeutic efficacy in restoring elemental homeostasis.^{5,6} In the Fernando et al. (2013) study, Yapana Basti provided a 70.97% reduction in *Kati Shula* (lumbar pain) and a statistically significant 81.35% reduction in the frequency of analgesic consumption.⁵ Furthermore, Tripathy et al. (2016) demonstrated an 87.30% effectiveness rate using Dvipanchamooladi Taila, highlighting the potency of *Agryachikitsa* (prime

treatment) in pacifying vitiated Vata.⁶ These interventions achieve clinical success by counteracting the *Kharatva* (roughness) and *Shosha* (emaciation) of the spinal tissues through the systemic delivery of Jala (liquidity) and Prithvi (solidity) dominant lipids. By bridging primordial elemental philosophy with biochemical and radiological metrics, such as the Oswestry Disability Index (ODI) and Kellgren-Lawrence (K-L) scale, this article posits that spinal

health is predicated on the proportional stability of Akasha, Vayu, Agni, Jala, and Prithvi.^{7,8} This transition from universal properties to targeted therapeutic restoration offers a multi-layered understanding of metabolism often overlooked by modern reductionism.

Keywords: *Panchamahabhuta Siddhanta, Kati Graha, Lumbar Spondylosis, Dhatu Kshaya, Eranda Muladi Yapana Basti, Dvipanchamooladi Taila, Tridosha, Loka-Purusha Samya.*

2. Introduction: The Macrocosm-Microcosm Paradigm in Spinal Health The *Loka-Purusha Samya Siddhanta* posits an intricate isomorphism between the macrocosm (universe) and the microcosm (human body), asserting that the universal laws governing matter are reflected in physiological health and pathological decay.⁹ Within this paradigm, Low Back Pain (LBP) is not merely a musculoskeletal anomaly but a disruption of cosmic elemental proportions. Epidemiologically, LBP affects 60–85% of adults globally, and since 2005, it has consistently ranked as the leading cause of disability for individuals during their productive years.² Moving beyond a reductionist view of spinal anatomy—which often treats LBP as an "illness in search of a disease" due to poor correlation between imaging and symptoms—the *Panchabhautik* framework provides a qualitative diagnostic precursor to quantitative structural failure.¹¹ While modern imaging identifies the quantitative end-stage (e.g., osteophytes), Ayurveda identifies the qualitative depletion of *Dhatus* (tissues) that facilitates such degeneration. Lumbar Spondylosis (LS) presents specific "Red Flag" clinical indicators as defined in the research context:

- Progressive spinal stiffness (*Stambha*)
- Episodic mechanical back pain exceeding 3 months
- Localized tenderness (*Sparsha Asahyata*) and/or radicular numbness
- Radiological evidence of joint space narrowing and osteophytic lipping.⁸

By viewing these manifestations through an elemental lens, clinicians can address the underlying loss of unctuousness and space-facilitated vitiation that modern conservative management often fails to resolve.

3. Philosophical Foundation: The Evolution and Properties of the Five Elements

The distinction between *Bhuta* (microscopic, invisible structure) and *Mahabhuta* (macroscopic, perceptible form) is vital for clinical precision. According to *Sankhya* philosophy, the *Mahabhutas* evolve from *Avyakta* via *Ahankara* (ego), influenced by the *Trigunas*: *Sattva* (clarity), *Rajas* (activity), and *Tamas* (inertia).¹ A critical clinical principle is the hierarchical accumulation of properties, where each subsequent element inherits the sensory qualities of the preceding one.

Table 1: Panchamahabhuta: Qualities, Sensory Qualities, and Physiological Manifestations

Mahabhuta (Element)	Dominant Guna (Quality)	Sensory Association	Physiological Manifestation
Akasha (Space)	Apratighatata (Unobstructability)	Sound	Hollow cavities, pores, facilitates enlargement
Vayu (Air)	Chalatva (Mobility)	Sound + Touch	Respiration, circulation, nerve impulses
Agni (Fire)	Ushnatva (Heat)	Sound + Touch + Vision	Metabolism, digestion, body temperature
Jala (Water)	Dravatva (Liquidity)	Sound + Touch + Vision + Taste	Bodily fluids, cohesion, lubrication, moisture
Prithvi (Earth)	Kharatva (Roughness)	Sound + Touch + Vision + Taste + Smell	Bones, muscles, structural rigidity, mass

4. Physiological Manifestations: Tridosha and Sapta Dhatu Correlation The functional grouping of elements establishes the *Tridoshas* (*Vata*, *Pitta*, *Kapha*). An individual's *Prakriti* (constitution) is fixed at fertilization, determined by the Mahabhuta

dominance of the gametes.¹² Health represents the equilibrium of Vayu/Akasha (*Vata*), Agni (*Pitta*), and Jala/Prithvi (*Kapha*). The structural integrity of the lumbar spine is specifically maintained by the *Sapta Dhatus*, which possess distinct *Panchabhautik* signatures:

- **Rasa (Jala dominant):** In the spine, this represents the hydration of the Nucleus Pulposus, providing the fluid substrate for nutrient transport and shock absorption.
- **Mamsa (Prithvi dominant):** This element provides the paravertebral muscular strength and the compactness (*Samhanana*) required for spinal stability.
- **Asthi (Prithvi dominant):** Providing the rigid skeletal framework, *Asthi* corresponds to the vertebral bodies and facet joints. Its rigidity is a direct manifestation of *Kharatva* and grossness.

5. Conceptual Pathogenesis: Kati Graha and Lumbar Spondylosis (LS) *Kati Graha*, described in *Gada Nigraha*, is localized in the Kati (lumbar region) and characterized by *Shosha* (degeneration), *Stambha* (stiffness), and *Shula* (pain).³ The *Samprapti* (pathogenesis) follows two pathways: *Dhatu Kshayatmaka* (degenerative

depletion of Jala and Prithvi in the intervertebral discs) and *Marga Avarodhaka* (obstructive).

In the obstructive pathway, *Ama* (metabolic toxins) acts as the agent that blocks the *Srotas* (channels) of the lumbar region.⁴ This obstruction hinders the movement of Vayu, leading to the "grasping" nature of the pain. "Without the vitiation of Vata, *Shula* (pain) cannot be produced." — Sushruta / *Gada Nigraha*.^{3,10} As Jala (moisture) is lost, the *Kharatva* (roughness) of the joints increases. The aggravation of Vayu within the empty spaces (Akasha) created by *Dhatu Kshaya* results in the clinical presentation of LS.

6. Integrative Perspectives: Modern Scientific and Biochemical Correlations

Modern biochemistry provides molecular correlates to the *Panchamahabhuta* framework. The six major elements of the human body map to the primordial elements as follows: Prithvi correlates to Carbon (50%) and Calcium (4%); Jala to Nitrogen (8.5%); Agni to Phosphorus (2.5%); Vayu to Oxygen (20%); and Akasha to Hydrogen (10%).¹ The Ayurvedic progression

of *Kati Graha* maps precisely to the Kellgren-Lawrence (K-L) Grading Scale:

- **Grade 1 (Doubtful narrowing):** Represents early Vata vitiation and initial loss of Jala (dehydration).
- **Grades 2–3 (Definite osteophytes/narrowing):** Indicates progressive *Dhatu Kshaya* and the onset of *Stambha* (stiffness).
- **Grade 4 (Large osteophytes/severe sclerosis):** Mirrors advanced Prithvi malformation and total loss of Jala/Akasha properties, resulting in deformity and "bone-on-bone" contact.⁸

7. Therapeutic Management: Restoring Elemental Equilibrium via Basti In Ayurvedic therapeutics, *Basti* (medicated enema) is considered the *Agryachikitsa* (prime therapy) for musculoskeletal and neurological conditions because of its profound ability to modulate the *Panchamahabhuta* composition of the body at a systemic level.⁴ From an elemental perspective, *Kati Graha* and lumbar degeneration represent a localized dominance of *Vayu* (air) and *Akasha* (space) mahabhutas, which clinically manifest as *Rukshata* (dryness), *Kharatva* (roughness), and intervertebral *Dhatu Kshaya* (tissue depletion).¹ To counteract this, *Basti* introduces a synergistic matrix of *Jala* (water), *Prithvi* (earth), and *Agni* (fire) dominant substances directly into the *Pakvashaya* (colon), the principal seat of *Vata Dosh*. Due to the unique *Ashraya-Ashrayi Bhava* (inverse physiological relationship) between *Vata* and *Asthi Dhatu* (bone tissue), pacifying *Vata* in the colon directly nourishes and stabilizes the skeletal framework.¹³

Elemental Action of Eranda Muladi Yapana Basti

Eranda Muladi Yapana Basti exerts its therapeutic action not merely through pharmacological analgesia, but through targeted elemental replacement. The formulation integrates powerful *Vata-shamaka* herbs like *Eranda* (*Ricinus communis*) with rich biomaterials such as *Godugdha* (cow's milk), *Ghrita* (clarified butter), and *Madhu* (honey).⁵

- **Restoration of Jala and Prithvi:** The *Ksheera* (milk) and *Ghrita* base are heavily saturated with *Jala* and *Prithvi* mahabhutas. When absorbed, these elements directly mitigate the *Shosha* (desiccation) of the lumbar discs, replenishing the fluid cushion (nucleus pulposus) and restoring the *Snigdha* (unctuous) and *Slakshna* (smooth)

properties to the zygapophyseal joints.^{1,5}

- **Modulation via Agni:** The inclusion of *Eranda* provides an *Ushna* (hot) and *Teekshna* (penetrating) quality, driven by the *Agni* mahabhuta. This elemental fire clears *Srotorodha* (micro-channel obstructions), ensuring that the nourishing *Jala* and *Prithvi* elements penetrate deeply into the *Asthi* and *Mamsa* dhatus without causing metabolic sluggishness.⁵
- **Containment of Vayu and Akasha:** By physically filling the macro and micro-porosities (excess *Akasha*) created by bone degeneration with heavy, stable (*Guru, Sthira*) biomolecules, the hypermobility and erratic nature of *Vayu* are grounded. This elemental grounding directly translates to the rapid reduction of *Kati Shula* (lumbar pain) and *Stambha* (stiffness) observed in clinical trials.^{5,6}

Thus, *Yapana Basti* acts as an elemental modulator—systemically downregulating the catabolic *Vayu-Akasha* axis while upregulating the anabolic *Prithvi-Jala* axis, thereby providing a biologically plausible mechanism for the structural and symptomatic reversal of lumbar spondylosis.

8. Discussion: Clinical Rationale and Efficacy of Panchabhautik Interventions

The clinical rationale for prioritizing *Basti* over conventional conservative management lies in its mechanistic divergence: it addresses the ontological root of *Asthi Dhātu* depletion rather than merely suppressing nociceptive signaling. Conventional NSAID therapy typically offers transient analgesia coupled with well-documented gastrointestinal and renal morbidities.

Conversely, the clinical data synthesized from Fernando et al. (2013) demonstrates that *Eranda Muladi Yapana Basti* provides a highly significant ($P < 0.001$) 70.97% reduction in *Kati Shula* (lumbar pain) while simultaneously achieving an 81.35% decrease in concurrent analgesic consumption.⁵ This substantial reduction in analgesic dependency is paramount—it clinically validates that restoring *Bhutagni* (elemental metabolism) and reversing *Jala* and *Prithvi* depletion effectively neutralizes the biological triggers of spinal pain.

Furthermore, Tripathy et al. (2016) corroborated this systemic efficacy, recording an 87.30% clinical success rate with *Dvipanchamooladi Taila Matra Basti* in pacifying vitiated *Vata*.⁶ The translation of these elemental interventions into measurable improvements on globally validated functional metrics, such as the Oswestry Disability Index (ODI), provides

quantifiable proof of restored structural homeostasis.⁷ Ultimately, the *Yapana* (sustaining and nourishing) nature of these specific formulations makes them exceptionally viable for contemporary clinical populations who may exhibit generalized debility or low tolerance for aggressive purification therapies, thereby offering a robust, non-invasive, and regenerative alternative to long-term pharmacotherapy.⁵

9. Conclusion

The *Panchamahabhuta Siddhanta* offers a robust, predictive framework for managing the degenerative cascade of Lumbar Spondylosis. By identifying LS as a depletion of Prithvi and Jala elements catalyzed by the vitiation of Vayu, Ayurveda moves beyond symptomatic relief toward systemic restoration. The integration of *Bhutagni* and *Dhatvagni* concepts provides a depth of understanding regarding spinal metabolism that modern reductionism fails to capture, positioning *Basti* interventions as a definitive non-invasive strategy for musculoskeletal health.

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