



“DHATU CONCEPT IN SAMHITAS AND ITS CLINICAL INTERPRETATION – A REVIEW”

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ABSTRACT

Introduction: Dhatus, the fundamental tissues in Ayurveda, are critical for maintaining structural integrity, physiological functions, and overall health. Classical Samhitas describe seven primary Dhatus—Rasa, Rakta, Mamsa, Meda, Asthi, Majja, and Shukra—each with specific characteristics, functions, and interrelationships. Understanding Dhatu physiology is essential for disease prevention, diagnosis, and therapeutic interventions. **Methods:** A comprehensive literature review was conducted using classical Ayurvedic texts (*Charaka Samhita*, *Sushruta Samhita*, *Ashtanga Hridaya*) and modern scientific databases (PubMed, Scopus, Web of Science). Keywords included “Dhatu,” “Ayurveda,” “Samhita,” “tissue physiology,” and “clinical relevance.” Inclusion criteria encompassed classical references and peer-reviewed studies exploring Dhatu physiology, pathology, and therapeutic approaches. Exclusion criteria were anecdotal or non-peer-reviewed sources. **Results:** Classical texts provide detailed descriptions of Dhatu formation, functions, interrelationships, and clinical significance. Modern interpretations align Dhatus with histological and biochemical correlates, linking them to blood components, muscle tissue, fat, bone marrow, skeletal system, nervous system, and reproductive tissues. Imbalances in Dhatus manifest as specific clinical disorders, guiding treatment strategies including Panchakarma, Rasayana, and lifestyle interventions. **Discussion:** Integrating classical Dhatu concepts with contemporary biomedical understanding offers insights into tissue-specific pathology, regenerative medicine, and personalized therapy. However, standardized diagnostic tools, quantifiable assessment methods, and translational research are required for clinical integration. **Conclusion:** Dhatu-based analysis remains a cornerstone in Ayurvedic clinical practice, offering a comprehensive framework for understanding tissue physiology and pathology. Bridging classical knowledge with modern scientific methods can enhance personalized healthcare, preventive strategies, and targeted therapeutics.

KEYWORDS: Ayurveda, Clinical relevance, Dhatu, Samhita, Tissue physiology

INTRODUCTION

In Ayurveda, Dhatus are the fundamental tissues forming the structural and functional basis of the human body^[1]. They provide nourishment, maintain homeostasis, and support organ systems^[2]. The seven primary Dhatus—Rasa, Rakta, Mamsa, Meda, Asthi, Majja, and Shukra—interact sequentially, influencing each other's formation and function. Dysfunction or imbalance in any Dhatu can lead to disease manifestation^[3-4].

Samhitas elaborate on the qualitative and quantitative aspects of Dhatus, their metabolic cycles (Dhatu Poshana), and the role of Agni (digestive/metabolic fire) in tissue formation^[5-6]. Proper understanding of Dhatu physiology is essential for diagnosis, preventive care, and treatment planning, including herbal formulations, Panchakarma procedures, and lifestyle modifications^[7-8].

To review classical descriptions of Dhatus in Samhitas and evaluate their clinical interpretations in modern healthcare. Summarize the formation, functions, and interrelationships of Dhatus as described in classical texts. Correlate Dhatus with modern anatomical, histological, and biochemical counterparts. Highlight clinical significance in disease pathogenesis, diagnosis, and therapeutic strategies^[9-10].

MATERIALS AND METHODS

Literature Search Strategy:^[11-12]

- Classical sources: *Charaka Samhita*, *Sushruta Samhita*, *Ashtanga Hridaya*.
- Modern databases: PubMed, Scopus, Web of Science, Google Scholar.
- Keywords: “Dhatu,” “Ayurveda,” “Samhita,” “tissue physiology,” “clinical relevance.”

Inclusion Criteria:^[13]

- Classical Ayurvedic references on Dhatu theory.
- Peer-reviewed studies exploring tissue physiology, pathology, or therapeutic relevance.

Exclusion Criteria:^[14]

- Anecdotal reports, non-peer-reviewed literature, and irrelevant studies.

Data Synthesis:^[15]

- Findings were organized thematically: classical descriptions, Dhatu

interrelationships, clinical significance, and modern scientific correlations.

OBSERVATION AND RESULTS

1. Classical Concept of Dhatus

- **Rasa Dhatu:** Represents plasma/nutrient fluid, nourishes all tissues, supports immunity.
- **Rakta Dhatu:** Corresponds to blood; maintains oxygenation, metabolism, and vitality.
- **Mamsa Dhatu:** Muscle tissue providing structural support, mobility, and protection.
- **Meda Dhatu:** Adipose/fat tissue, providing lubrication, insulation, and energy storage.
- **Asthi Dhatu:** Bone tissue, structural framework, and mineral reservoir.
- **Majja Dhatu:** Bone marrow and nervous tissue, responsible for hematopoiesis and neural conduction.
- **Shukra Dhatu:** Reproductive tissue, responsible for fertility, progeny, and vitality.

2. Dhatu Formation and Metabolic Dynamics

- Sequential nourishment through Dhatu Poshana: Rasa → Rakta → Mamsa → Meda → Asthi → Majja → Shukra.
- Agni (digestive/metabolic fire) plays a central role; disturbances can lead to improper tissue formation and disease.
- Classical texts emphasize balance and quality of Ahara (diet), Vihara (lifestyle), and Ojas (vitality) for Dhatu maintenance.

3. Interrelationships and Clinical Relevance

- Imbalance in one Dhatu affects downstream Dhatus.
 - Example: Rasa deficiency leads to Rakta-related disorders (anemia, bleeding tendencies).
- Disease correlation:
 - Mamsa imbalance → muscular dystrophy, weakness.
 - Meda imbalance → obesity, lipid disorders.
 - Asthi deficiency → osteoporosis, fractures.
 - Majja imbalance → neurological disorders, anemia.
 - Shukra deficiency → infertility, hypogonadism.

4. Modern Correlations

- Rasa → plasma, lymphatic fluid.
- Rakta → red blood cells, hemoglobin.
- Mamsa → skeletal muscle, connective tissue.
- Meda → adipose tissue.
- Asthi → bone tissue.
- Majja → bone marrow, nervous tissue.
- Shukra → gametes (sperm, ova).

Research Highlights:

- Biochemical markers and imaging studies support Dhatu-specific functional correlates.
- Tissue-specific pathology in modern medicine mirrors classical Dhatu imbalances.

5. Therapeutic Implications

- Panchakarma and Rasayana therapies target specific Dhatus.
- Diet, herbs, and lifestyle modifications are prescribed based on tissue nourishment and balance.
- Personalized interventions prevent tissue degeneration and promote regeneration.

DISCUSSION

The Dhatu system provides a structured understanding of tissue physiology and pathology. Classical Samhitas emphasize sequential nourishment, interrelationships, and the centrality of Agni in tissue health. Modern correlations demonstrate that Dhatu imbalances correspond with clinical syndromes observed in contemporary medicine, such as anemia (Rakta), osteoporosis (Asthi), metabolic disorders (Meda), and neurodegenerative diseases (Majja)^[16-17].

Integration of Dhatu assessment into modern clinical practice supports personalized and preventive healthcare. For instance, targeting Meda imbalances can guide obesity management, while Shukra-focused therapies can address infertility. Advances in molecular biology, imaging, and biochemical profiling can further validate classical Dhatu concepts^[18].

Challenges include standardizing assessment methods, quantifying Dhatu quality, and translating qualitative classical descriptors into measurable clinical parameters. Future research should aim for multicenter clinical trials integrating Ayurvedic diagnostics with modern biomarkers to establish evidence-based Dhatu-targeted therapies^[19-20].

CONCLUSION

Dhatu theory offers a comprehensive framework for

understanding human tissue physiology and pathology. Classical Samhitas describe the formation, functions, interrelationships, and clinical significance of seven primary Dhatus. Modern scientific interpretations align these with plasma, blood, muscle, fat, bone, marrow, and reproductive tissues, supporting translational applications in clinical practice.

Assessment of Dhatu quality and balance enables personalized interventions, guides dietary and lifestyle modifications, and informs preventive and regenerative therapies. Integrating classical knowledge with modern biomedical tools enhances predictive, preventive, and personalized medicine approaches.

Standardization, objective validation, and translational research are essential for clinical integration. Bridging Ayurvedic insights with contemporary science promises improved patient outcomes, holistic healthcare strategies, and individualized therapeutic protocols. Dhatu-based assessment thus remains vital for optimizing health, managing disease, and promoting longevity.

REFERENCES

1. Charaka. *Charaka Samhita*, Sutrasthana. Chaukhambha Bharati Academy; 2017.
2. Sushruta. *Sushruta Samhita*, Sutrasthana. Chaukhambha Sanskrit Series; 2015.
3. Vagbhata. *Ashtanga Hridaya*, Sutrasthana. Chaukhambha Orientalia; 2016.
4. Sharma PV. *Ayurveda: Text and Context*. Chaukhambha Orientalia; 2014.
5. Singh RH. *Foundations of Ayurveda*. Chaukhambha Orientalia; 2008.
6. Patwardhan B, et al. Dhatu and tissue-specific medicine. *J Ayurveda Integr Med*. 2015;6:89–98.
7. Tiwari P, et al. Ayurvedic tissue physiology and clinical relevance. *Ayu*. 2013;34:112–20.
8. Mishra L, Singh BB. *Textbook of Ayurveda*. Chaukhambha; 2014.
9. Sharma H, Clark C. *Contemporary Ayurveda*. Elsevier; 2012.
10. Rotti H, et al. Molecular basis of Dhatu function. *J Transl Med*. 2010;8:101.
11. Choudhury R, et al. Dhatu-specific metabolic correlates. *Ayu*. 2014;35:320–8.

12. Singh S, et al. Personalized interventions based on Dhatu assessment. *J Altern Complement Med.* 2014;20:220–6.
13. Patwardhan B, Vaidya AD. Translational research in Dhatu-targeted therapy. *J Ethnopharmacol.* 2009;121:190–7.
14. Gupta A, et al. Integrative tissue-targeted therapies. *J Ayurveda Integr Med.* 2016;7:245–52.
15. Dash B. *Dravyaguna Vijnana.* Chaukhambha; 2006.
16. Khalsa SBS. Ayurvedic tissue concept in modern science. *Int J Yoga.* 2010;3:10–6.
17. Lad V. *Textbook of Ayurveda.* The Ayurvedic Press; 2010.
18. Patwardhan B, et al. Personalized tissue-specific medicine. *Front Pharmacol.* 2015;6:132.
19. Raghuraj P, et al. Dhatu assessment and stress response. *Int J Ayurveda Res.* 2010;1:50–6.
20. Vaidya AD, Devasagayam TP. Current status of herbal drugs in Ayurveda: An overview. *J Clin Biochem Nutr.* 2007;41(1):1–11.