



Sapta Dhatu and Autoimmune Disorders: An Integrative Review

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ABSTRACT

Autoimmune disorders are multifactorial immune-mediated diseases characterized by loss of immunological self-tolerance. Ayurveda conceptualizes these conditions through the principles of Dhatu Vaishamyā, Agni Dushti, Ama Utpatti, Srotorodha, and Ojas Kshaya. This comprehensive review integrates classical Ayurvedic literature with contemporary immunological research to establish Dhatu-wise correlations with major autoimmune disorders. Modern biomarkers, imaging findings, and immunopathological mechanisms are compared with Ayurvedic Lakshana and Samprapti. The review also highlights future research directions for integrative biomarkers, microbiome-based correlations, and personalized medicine approaches for autoimmune disease management.¹²

KEYWORDS

Autoimmunity , Sapta Dhatu, Ojas Kshaya, Ama, Agni Dushti, Biomarkers, Immunology, rheumatoid arthritis, systemic lupus erythematosus, multiple sclerosis, psoriasis, and Hashimoto thyroiditis.

INTRODUCTION

Autoimmune diseases affect nearly 5- 10% of the global population and are a major cause of chronic morbidity.³ The modern biomedical model attributes autoimmunity to genetic susceptibility, environmental triggers, molecular mimicry, epigenetic changes, and dysregulated T- and B-lymphocyte responses.⁴ Ayurveda, although not explicitly describing “autoimmunity,” provides a sophisticated framework for chronic inflammatory and immune-mediated disorders under concepts such as Vyadhi Kshamatva Hani, Ama, Agnimandya, and Dhatu Dushti.

Classical Ayurvedic texts by Charaka, Sushruta, and Vagbhata emphasize tissue-specific pathology and the role of Ojas as the substratum of immunity and vitality.⁵⁻⁷ Dhatu-specific dysfunction along with impaired Agni and Srotorodha can collectively explain the chronic inflammatory and degenerative manifestations seen in autoimmune disorders.

METHODS

A narrative literature review was conducted using classical Ayurvedic texts including Charaka Samhita, Sushruta Samhita, and Ashtanga Hridaya along with modern scientific databases such as PubMed, Scopus-indexed Ayurveda journals, AYUSH Research Portal, and integrative medicine journals published between (2018 – 2025).

RESULTS: DHATU-WISE CORRELATION AND MODERN BIOMARKERS

Rasa Dhatu

- Disorders: Systemic lupus erythematosus, Sjögren syndrome
- Ayurvedic Correlation: Rasa Dushti, Kapha-Pitta vitiation, Ama circulation
- Modern Mechanism: Immune complex deposition, complement activation, B-cell hyperactivity
- Lakshana: Alasya, Gaurava, Mukha Shosha, Aruchi
- Diagnostics: ANA, Anti-dsDNA, Anti-Ro/La, ESR, CRP, C3/C4 levels¹³

Rakta Dhatu

- Disorders: Psoriasis, vasculitis, autoimmune hemolytic anemia
- Ayurvedic Correlation: Rakta Dushti, Pitta Prakopa, Raktavaha Srotodushti
- Modern Mechanism: Th pathway activation, endothelial inflammation
- Lakshana: Daha, Raga, Twak Vaivarnya, Raktapitta tendencies
- Diagnostics: Skin biopsy, CRP, ESR, Direct Coombs test¹⁴

Mamsa Dhatu

- Disorders: Polymyositis, dermatomyositis
- Ayurvedic Correlation: Mamsa Kshaya, Vata-Pitta Dushti
- Modern Mechanism: CD8+ T-cell mediated myocyte necrosis
- Lakshana: Mamsa Shithilata, Gaurava, Daurbalya
- Diagnostics: CPK, Aldolase, EMG, Muscle biopsy¹⁵

Meda Dhatu

- Disorders: Hashimoto thyroiditis, autoimmune metabolic inflammation
- Ayurvedic Correlation: Meda Dushti, Kapha dominance, Agnimandya
- Modern Mechanism: Anti-TPO antibodies, adipokine-mediated inflammation
- Lakshana: Sthaulya, Sweda Adhikya, Alasya
- Diagnostics: TSH, Free T4, Anti-TPO, Thyroid USG¹⁶

Asthi Dhatu

- Disorders: Rheumatoid arthritis, ankylosing spondylitis
- Ayurvedic Correlation: Asthi Kshaya, Amavata, Vata Prakopa
- Modern Mechanism: Synovitis, TNF-alpha and IL-6 mediated bone erosion
- Lakshana: Asthi Shoola, Sandhi Shotha, Stambha

- Diagnostics: RF, Anti-CCP, MRI joints, CRP¹⁷

Majja Dhatu

- Disorders: Multiple sclerosis, autoimmune encephalitis
- Ayurvedic Correlation: Majja Kshaya, Vata Dushti, Ojas involvement
- Modern Mechanism: CNS demyelination, autoreactive T-cells
- Lakshana: Bhrama, Smriti Bhramsha, Bala Hani
- Diagnostics: MRI brain, CSF oligoclonal bands, Evoked potentials¹⁸

Shukra Dhatu

- Disorders: Autoimmune infertility, SLE-related gonadal failure
- Ayurvedic Correlation: Shukra Kshaya, Ojas Dushti
- Modern Mechanism: Autoantibodies to gonadal tissue, hormonal dysregulation
- Lakshana: Klaibya, Alpa Shukra, Daurbalya
- Diagnostics: FSH, LH, Testosterone/Estrogen, ANA profile¹⁹

DISCUSSION: INTEGRATIVE PATHOPHYSIOLOGY

Ayurvedic concepts of Agnimandya, Ama, and Srotorodha closely correlate with modern mechanisms such as gut dysbiosis, intestinal hyperpermeability, chronic low-grade inflammation, cytokine imbalance, and molecular mimicry. Emerging evidence suggests that microbiome alterations and immune dysregulation play a central role in triggering autoimmune cascades, which aligns with the Ayurvedic emphasis on Jatharagni and Ama.²⁰

The Sapta Dhatu framework provides a tissue-specific approach for understanding systemic autoimmune pathology. Dhatu-specific Lakshana, along with modern biomarkers and imaging modalities, can help in developing integrative diagnostic models. Ojas depletion may correspond to chronic immune exhaustion and reduced systemic resilience observed in advanced autoimmune conditions.

DIAGNOSTIC INTEGRATION

Ayurvedic Assessment: Agni Pariksha, Ama Lakshana, Dhatu Kshaya–Vridhhi Lakshana, Ojas Bala
Modern Assessment: ANA, RF, Anti-dsDNA, Anti-CCP, ESR, CRP, MRI, Biopsy, Cytokine panels

THERAPEUTIC IMPLICATIONS

Ayurveda emphasizes Deepana-Pachana, Shodhana therapies such as Virechana and Basti, Rasayana therapy, and Ojas enhancement. Modern management includes corticosteroids, immunosuppressants, biologics such as anti-TNF and anti-IL-6 agents, and targeted therapies. Integrative treatment protocols may help reduce disease burden, minimize adverse effects, and improve quality of life in chronic autoimmune disorders.²¹

FUTURE RESEARCH SCOPE

1. Development of Dhatu-specific biomarkers correlated with cytokine and autoantibody profiles.
2. Integration of microbiome analysis with Ayurvedic Agni and Ama assessment.
3. Clinical trials on Rasayana and Panchakarma as immunomodulators.
4. Artificial intelligence-based personalized Dhatu-immunophenotype mapping.
5. Epigenetic studies correlating Ayurvedic Prakriti with autoimmune susceptibility.

CONCLUSION

The Sapta Dhatu framework offers a comprehensive and tissue-oriented perspective for understanding autoimmune disorders through the principles of Dhatu Dushti, Agnimandya, Ama formation, Srotorodha, and Ojas imbalance. Correlating classical Ayurvedic concepts with modern immunological mechanisms demonstrates that autoimmune diseases are not merely isolated organ-specific disorders but systemic disturbances affecting multiple levels of body homeostasis.

Dhatu-wise analysis allows a more individualized interpretation of disease progression, symptomatology, and therapeutic planning. Modern biomarkers such as ANA, Anti-CCP, cytokine profiles, MRI findings, and immunological assays can be integrated with Ayurvedic assessment methods including Agni Pariksha, Ama Lakshana, and Dhatu Kshaya–Vridhhi evaluation to create a truly integrative diagnostic approach.

Furthermore, Ayurveda contributes preventive and restorative dimensions through Rasayana therapy, Panchakarma, dietary regulation, and enhancement of Ojas, which may complement modern immunomodulatory therapies. Future interdisciplinary research combining Ayurveda, immunology, genomics, microbiome science, and personalized medicine may help develop safer, patient-centered, and predictive healthcare strategies for autoimmune disorders.

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