

Concept of Autoimmune Diseases in Ayurveda: An Integrative Review of Classical Principles and Modern Immunopathology

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Abstract: Autoimmune diseases are a group of chronic disorders characterized by dysregulation of immune tolerance, resulting in an immune response against self-antigens. Rheumatoid arthritis, psoriasis, systemic lupus erythematosus, multiple sclerosis and type 1 diabetes mellitus represent autoimmune disorders affecting different tissues and organ systems. The term autoimmunity and its modern immunological mechanisms are not clearly described in the classical Ayurvedic texts. Several Ayurvedic concepts provide a framework for interpreting chronic inflammatory and systemic disorders. These include Agni, Ama, Dosha, Dushya, Srotas, Ojas, Bala and Vyadhikshamatva. The present review article attempts to conceptually correlate selected autoimmune diseases with Ayurvedic diseases, namely Amavata with rheumatoid arthritis, Ekakushta with psoriasis, Rakta Dushti with systemic lupus erythematosus, Vata Vyadhi with multiple sclerosis and Madhumeha/Prameha with type 1 diabetes mellitus. Modern immunopathology is compared with Ayurvedic concepts of impaired Agni, Ama formation, Dosha-Dushya sammurchhana, Srotodushti, tissue involvement and altered resistance. An integrative understanding may provide a useful framework for future research into inflammatory, immune-mediated and chronic systemic diseases.

Keywords: Autoimmunity, Ayurveda, Agni, Ama, Ojas, Vyadhikshamatva, Amavata, Ekakushta, Rakta Dushti, Vata Vyadhi, Madhumeha

I. INTRODUCTION

Autoimmune diseases arise when mechanisms responsible for maintaining self-tolerance become dysregulated, resulting in immune recognition and attack against the body's own tissues. Depending on the target tissue and immune mechanisms involved, autoimmune diseases are organ-specific or systemic. Rheumatoid arthritis primarily affects synovial joints, psoriasis predominantly involves the skin, systemic lupus erythematosus may affect multiple organs, multiple sclerosis predominantly affects the central nervous system and type 1 diabetes mellitus results from immune-mediated destruction of pancreatic β -cells.

Modern immunology explains autoimmunity through mechanisms such as loss of self-tolerance, abnormal activation of T and B lymphocytes, autoantibody production, immune-complex formation, cytokine dysregulation and chronic inflammation. For example, rheumatoid arthritis is associated with rheumatoid factor and anti-citrullinated protein antibodies, while SLE is characterized by a broad spectrum of autoantibodies, including antinuclear and anti-dsDNA antibodies. In type 1 diabetes, immune responses destroy insulin-producing pancreatic β -cells.

Ayurveda does not classify diseases according to modern immunological categories. Instead, disease development is explained through the interaction of *Dosha*, *Dushya*, *Agni*, *Ama*, *Srotas*, *Ojas* and *Bala*. Disturbance of *Agni* may lead to improper transformation of nutrients and formation of *Ama*; later, *Dosha-Dushya sammurchhana* and *Srotodushti*



may produce localized or systemic disease. *Ojas* and *Vyadhikshamatva* are important concepts in understanding resistance to disease and maintenance of physiological stability.

Importantly, Ayurveda should not be interpreted as having described "autoimmunity" in the modern immunological sense. Rather, selected classical diseases may show pathophysiological similarities with modern immune-mediated disorders. Recent Ayurvedic literature has similarly emphasized that autoimmune diseases are not directly classified in classical texts and that correlations should be approached through *Dosha*, *Agni*, *Ama*, *Srotas* and *Ojas* rather than through direct diagnostic equivalence.

Therefore, this review attempts to establish a conceptual bridge between modern immunopathology and Ayurvedic principles using five representative disease correlations.

II. MATERIALS AND METHODOLOGY

The present work is a review based on classical Ayurvedic literature and modern literature.

2.1 Ayurvedic literature

Relevant concepts were reviewed from:

Charaka Samhita

Sushruta Samhita

Ashtanga Hridaya

Madhava Nidana

Selected commentaries and contemporary Ayurvedic literature.

The review focused on the concepts of:

Agni

Ama

Dosha and *Dushya*

Srotas and *Srotodushiti*

Rakta Dushti

Ojas

Bala and *Vyadhikshamatva*

Amavata

Ekakushta/Kushta

Vata Vyadhi

Prameha/Madhumeha.

2.2 Modern literature

Modern literature on autoimmune pathogenesis was reviewed using databases and published scientific reviews regarding rheumatoid arthritis, psoriasis, SLE, multiple sclerosis and type 1 diabetes mellitus.

2.3 Method of correlation

The diseases were compared according to:

Major clinical presentation

Tissue or organ involvement

Pathogenic mechanisms

Inflammatory characteristics

Chronicity and recurrence

Ayurvedic *Dosha-Dushya* involvement

Srotas involvement



Conceptual similarities and differences.

The correlations were interpreted conceptually rather than as direct disease comparison.

III. REVIEW OF LITERATURE

3.1 Concept of Autoimmunity in Modern Medicine

The immune system normally Differentiates self from non-self through mechanisms of central and peripheral tolerance. Autoimmune disease develops when these regulatory mechanisms fail. Genetic vulnerability, environmental factors, infections, hormonal influences, altered immune regulation and tissue-specific factors may contribute to the development of autoimmunity.

The resulting immune response may involve:

- autoreactive T cells
- autoreactive B cells
- autoantibodies
- immune complexes
- complement activation
- cytokine dysregulation
- chronic inflammatory responses,
- tissue destruction.

3.2 Ayurvedic Classical Relevance to Autoimmune Disorders

Agni

Agni represents the processes responsible for digestion and transformation. Impaired *Agni* may result in improper metabolic processing and formation of *Ama*.

Ama

Ama can be understood as an incompletely processed or metabolic dysfunctional product associated with impaired *Agni*. In disorders such as *Amavata*, *Ama* is specifically described as an important pathogenic factor associated with *Vata* and localization in the joints.

Dosha-Dushya Interaction

Disease develops when *Prakopit Doshas* interact with *Dushya*. The clinical presentation depends on:

Dosha + Dushya + Srotas + Agni + Sthana

This provides a useful framework for understanding why different autoimmune diseases manifest in different tissues.

Srotodushti

Srotas dusthi may contribute to obstruction, abnormal flow or tissue dysfunction. *Srotodushti* can be considered a conceptual model for altered tissue environment and disturbed physiological communication.

Ojas and Vyadhikshamatva

Ojas is associated with maintenance of strength and resistance, while *Vyadhikshamatva* describes the capacity to resist disease. Alteration in these factors may correspond to disturbances in defence and immune regulation, although they should not be equated directly with the modern immune system.

IV. CONCEPTUAL CORRELATION OF SELECTED AUTOIMMUNE DISEASES

Modern autoimmune disease	Ayurvedic conceptual correlate	Main Ayurvedic concepts
Rheumatoid arthritis	<i>Amavata</i>	<i>Ama, Vata, Agnimandya, Srotorodha</i>
Psoriasis	<i>Ekakushta/Kushta</i>	<i>Dosha Dushti, Rakta involvement, Srotodushti</i>
SLE	<i>Rakta Dushti</i> with <i>Dosha/Srotas</i> involvement	<i>Rakta, Pitta, Vata, Srotodushti</i>



Multiple sclerosis	<i>Vata Vyadhi</i>	<i>Vata Prakopa, Majja involvement, Srotodushti</i>
Type 1 diabetes mellitus	<i>Madhumeha/Prameha</i> as a conceptual framework	<i>Dosha-Dushya, Ojas, Dhatu Kshaya, Vata</i>

V. RHEUMATOID ARTHRITIS AND *AMAVATA*

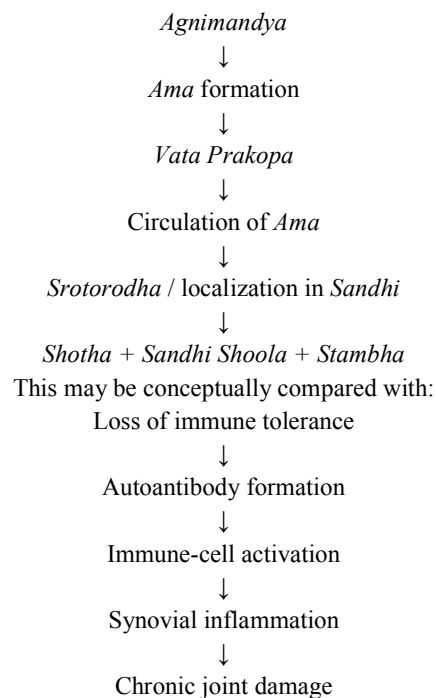
Modern perspective

Rheumatoid arthritis is a chronic systemic autoimmune disease predominantly affecting synovial joints. Its immunopathogenesis involves both innate and adaptive immunity. Rheumatoid factor and anti-citrullinated protein antibodies are important autoantibodies and immune activation within the synovium results in persistent inflammation, synovial proliferation and progressive joint damage.

Ayurvedic perspective

In Amavata, *Agnimandya* leads to improper digestion and metabolism, resulting in the formation of *Ama*. *Ama* circulates through the body along with aggravated *Vata* and localizes in the joints (*Sandhi*), where it causes *Srotorodha* and local *Dosha-Dushya* disturbance. This leads to *Shotha*, *Sandhishoola* and *Stambha*, producing the characteristic joint manifestations of Amavata.

Conceptual correlation



The correlation is particularly useful because both models describe a chronic inflammatory process with localization in joints, although the underlying biological mechanisms are different.



VI. PSORIASIS AND *EKAKUSHTA*

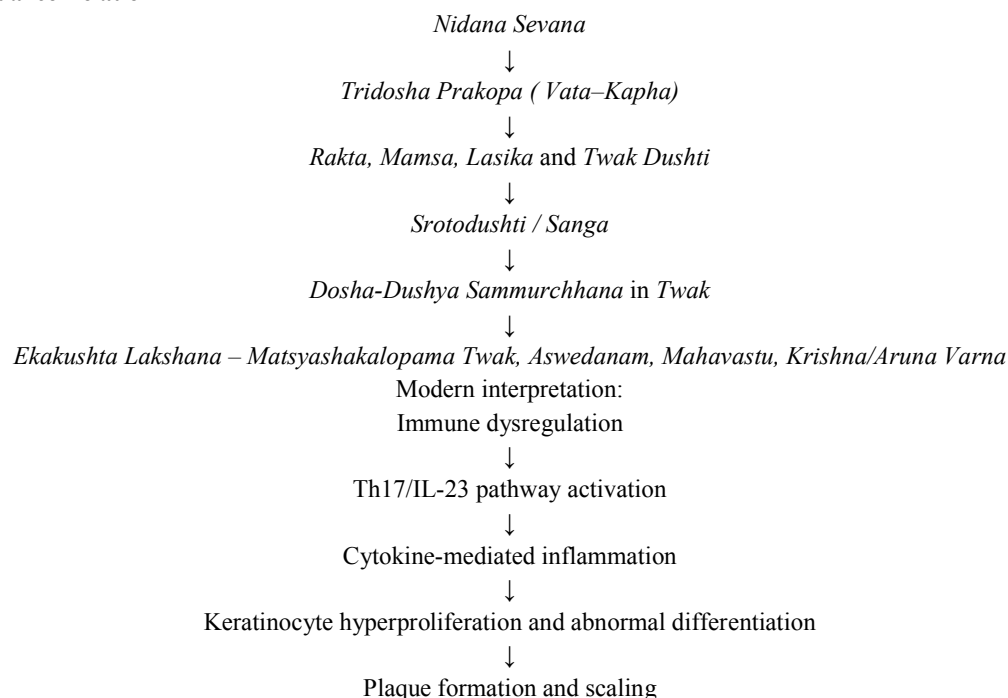
Modern perspective

Psoriasis is a chronic inflammatory skin disease caused by abnormal activity of the immune system. It involves activation of different immune pathways, especially the IL-23/Th17 pathway. This leads to inflammation of the skin and excessive growth and abnormal development of skin cells (keratinocytes).

Ayurvedic perspective

In *Ekakushta*, causative factors lead to *Tridosha Prakopa*, particularly *Vata* and *Kapha*, followed by involvement of *Rakta*, *Mamsa*, *Lasika* and *Twak*. The vitiated *Doshas* interact with these *Dushyas* and produce *Srotodushti* and *Dosha-Dushya Sammurchhana* in the skin. This results in characteristic features such as fish-scale-like scaling (*Matsyashakalopama*), reduced sweating (*Aswedanam*), extensive skin involvement (*Mahavastu*), and abnormal skin colour, producing the clinical picture of *Ekakushta*.

Conceptual correlation



Thus, the Ayurvedic concept provides a systemic *Dosha-Dushya* framework, whereas modern medicine provides a more specific cellular and molecular explanation.

VII. SYSTEMIC LUPUS ERYTHEMATOSUS AND *RAKTA DUSHTI*

Modern perspective

SLE is a systemic autoimmune disease characterized by loss of immune tolerance, production of multiple autoantibodies and immune-complex-mediated tissue injury. Anti-dsDNA and anti-Sm antibodies are particularly important and immune complexes may contribute to injury involving the kidneys, skin and nervous system. Dysregulation of B cells, T cells, cytokines and type-I interferon pathways contributes to disease spread.

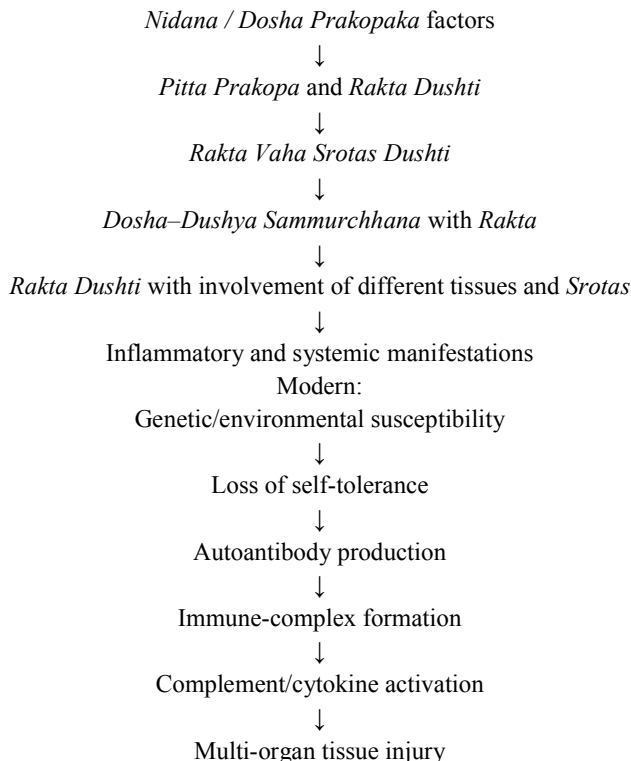
Ayurvedic perspective

There is no direct classical diagnosis equivalent to SLE. However, because SLE can involve the skin, blood, joints, kidneys, nervous system and other tissues, *Rakta Dushti* with *Dosha* and *Srotas* involvement can be used as a conceptual interpretative framework.



Rakta is an important *Dhatu* responsible for sustaining life and classical Ayurvedic literature describes various pathological states of *Rakta* and diseases associated with its vitiation.

Conceptual correlation



Therefore, *Rakta Dushti* should be presented as a conceptual correlate, not as the Ayurvedic equivalent of SLE.

VIII. MULTIPLE SCLEROSIS AND *VATA VYADHI*

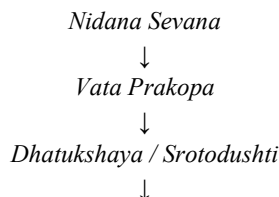
Modern perspective

Multiple sclerosis is a chronic inflammatory and neurodegenerative disorder of the central nervous system characterized by demyelination and neurological dysfunction. Immune-mediated mechanisms involving T cells, B cells and innate immune pathways contribute to disease development, although its pathogenesis is more complex than a simple single-cell autoimmune model.

Ayurvedic perspective

Vata Prakopa, followed by *Dhatukshaya* and *Srotodushti*. The aggravated *Vata* may affect the *Majja* and neurological functions, resulting in disturbances of movement, sensation, coordination and other neurological activities. Thus, *Vata Vyadhi* provides a broad Ayurvedic framework for understanding the neurological manifestations of MS, but it should not be considered a direct classical equivalent of multiple sclerosis.

The conceptual pathway may be represented as:





Here, *Vata Vyadhi* represents a broad Ayurvedic framework for neurological dysfunction rather than a specific diagnosis of multiple sclerosis.

IX. TYPE 1 DIABETES MELLITUS AND *MADHUMEHA*

Modern perspective

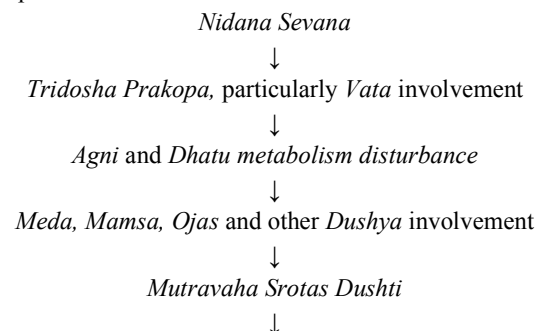
Type 1 diabetes mellitus is an immune-mediated disease characterized by selective destruction of insulin-producing pancreatic β -cells. Autoreactive T cells and other immune mechanisms contribute to β -cell injury, resulting in severe insulin deficiency.

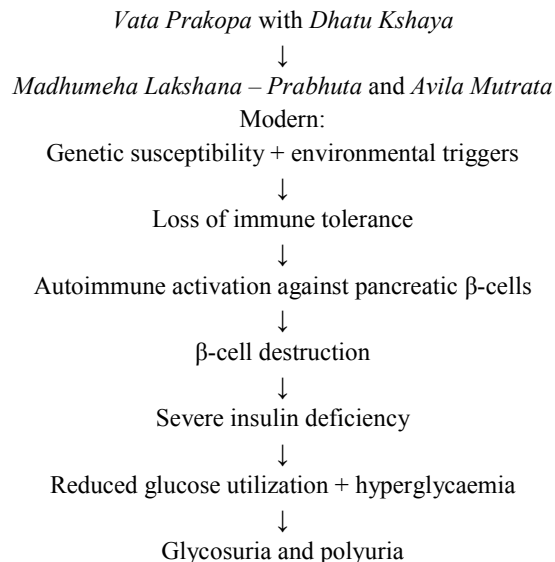
Ayurvedic perspective

Madhumeha is described within the broader framework of *Prameha*. Ayurveda underlines abnormalities of *Mutra*, *Dosha-Dushya Sannurchhana* and particularly in advanced or *Vata Dosha Pradhan* disease, *Dhatu* involvement and depletion.

However, *Madhumeha* should not simply be equated with type 1 diabetes mellitus. Modern T1DM has a specific autoimmune mechanism that is not explicitly described in classical Ayurveda.

A conceptual model can be developed:





X. COMPARATIVE INTEGRATIVE FRAMEWORK

The five disease correlations can be summarized as follows:

Disease	Modern pathological focus	Ayurvedic conceptual focus	Major point of correlation
Rheumatoid arthritis	Autoantibodies, synovial inflammation, immune-cell activation	<i>Ama + Vata + Agnimandya + Srotorodha</i>	Chronic inflammatory joint disease
Psoriasis	Immune dysregulation, Th17/IL-23 axis, keratinocyte hyperproliferation	<i>Kushta/Ekakushta, Dosha-Dushya and Rakta/Twak involvement</i>	Chronic inflammatory skin disease
SLE	Autoantibodies, immune complexes, complement and systemic inflammation	<i>Rakta Dushti + Dosha + Srotas involvement</i>	Systemic inflammatory manifestations
MS	CNS inflammation, demyelination, T/B-cell and innate immune involvement	<i>Vata Vyadhi + neurological tissue involvement</i>	Chronic neurological dysfunction
T1DM	Autoimmune β-cell destruction and insulin deficiency	<i>Madhumeha/Prameha framework with Dosha-Dushya and Dhatu involvement</i>	Chronic metabolic disease with immune-mediated component

XI. DISCUSSION

The comparison suggests that modern immunopathology and Ayurveda approach chronic systemic disease from fundamentally different conceptual frameworks. Modern medicine identifies specific cellular and molecular mechanisms, whereas Ayurveda primarily describes disease through *Dosha*, *Dushya*, *Agni*, *Ama*, *Srotas* and *Ojas*.



In modern medicine, autoimmune disease involves failure of immune tolerance. In Ayurveda, disease occurs when normal equilibrium of *Dosha*, *Agni*, *Dhatu* and *Srotas* is disturbed. These should not be considered identical, but they can be placed in parallel for integrative understanding.

11.1 *Agni* and metabolic-immune interaction

The Ayurvedic concept of *Agni* provides a metabolic regulation. *Dusht Agni* is important in the formation of *Ama*. *Amavata* provides the clearest example, where *Agnimandya* and *Ama* are central to the disease process.

Modern research recognizes interactions between metabolism, the gut environment, innate immunity and adaptive immunity

11.2 *Ama* and chronic inflammation

In *Amavata*, *Agnimandya* leads to improper digestion and metabolism, resulting in the formation of *Ama*. *Ama* circulates through the body along with aggravated *Vata* and localizes in the joints (*Sandhi*), where it causes *Srotorodha* and local *Dosha-Dushya* disturbance. This leads to *Shotha*, *Sandhishoola* and *Stambha*, producing the characteristic joint manifestations of *Amavata*.

Modern autoimmune disease similarly involves persistent inflammatory signaling and abnormal interaction between immune cells and tissues. However, the molecular pathways involved differ between diseases.

11.3 *Srotodushti* and *Dhatu* specific disease

The Ayurvedic concept of *Srotas* offers an important explanation for why disease manifestations occur in particular *Dhatus*. Depending upon the involved *Dushya* and *Srotas*, the clinical phenotype differs.

This can be conceptually compared with modern disease-specific immune targeting:

Synovium → RA

Skin → psoriasis

Multiple organs → SLE

CNS myelin/oligodendroglial structures → MS

Pancreatic β -cells → T1DM

Thus, *Srotas* and *Dushya* can provide a systems-level framework, while modern immunology provides molecular-level explanations.

11.4 *Ojas* and *Vyadhikshamatva*

Ojas and *Vyadhikshamatva* are important Ayurvedic terms which are important for resistance and physiological stability. Autoimmune disease shows an interesting pathological state where immune system is not weak but immune responses become inappropriately directed or dysregulated.

Therefore, it would be inaccurate to equate *Ojas* directly with immunity or autoimmune disease directly with *Ojas Kshaya*. Instead, *Ojas* and *Vyadhikshamatva* may be considered broader concepts of physiological resilience and host resistance.

11.5 Disease-specific correlations

The review indicates that a single Ayurvedic concept cannot explain all autoimmune diseases.

For example:

Amavata provides a stronger conceptual model for RA because *Ama* and *Vata* involvement are central to its description.

Ekakushta/Kushta provides a phenotypic framework for chronic inflammatory skin disorders such as psoriasis.

Rakta Dushti may help interpret some inflammatory and multisystem manifestations of SLE but cannot explain its autoantibody biology.

Vata Vyadhi provides a broad framework for neurological dysfunction in MS but is not specific to MS.

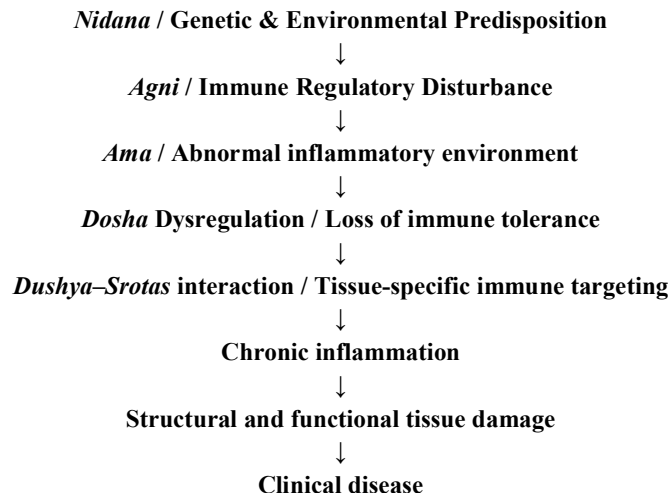
Madhumeha provides a framework for the clinical phenotype of diabetes, but its Ayurvedic description cannot be considered a direct description of autoimmune β -cell destruction in T1DM.

This disease-specific approach is more scientifically defensible than proposing a single "Ayurvedic theory of autoimmunity."



XII. INTEGRATIVE APPROACH MODEL

The findings can be represented as:



This should be understood as a conceptual bridge, not as a claim that *Ama* is equivalent to autoantibodies or that *Doshas* are equivalent to immune cells.

XIII. LIMITATIONS

Ayurveda does not explicitly describe the modern concept of autoimmunity.

The selected Ayurvedic diseases are not exact equivalents of their modern counterparts.

Clinical similarity does not establish identical pathogenesis.

Concepts such as *Ama*, *Ojas* and *Srotodushiti* cannot currently be mapped one-to-one onto specific immune molecules.

Some correlations, particularly *SLE-Rakta Dushti*, *MS-Vata Vyadhi* and *T1DM-Madhumeha*, require further clinical and experimental investigation.

Future research should combine classical textual analysis with immunological, biochemical and clinical biomarkers.

XIV. CONCLUSION

Autoimmune diseases are complex conditions in which the immune system loses its ability to properly recognize the body's own tissues. This can lead to long-term inflammation and tissue damage. Ayurveda does not describe autoimmunity as a separate disease category. However, concepts such as *Agni*, *Ama*, *Dosha*, *Dushya*, *Srotas*, *Rakta*, *Ojas*, and *Vyadhikshamatva* can help us understand chronic inflammatory and immune-related diseases from an Ayurvedic perspective.

Among the diseases discussed, *Amavata* (rheumatoid arthritis) shows a useful conceptual relationship because both involve joint inflammation, and Ayurveda gives importance to *Ama* and *Vata* in *Amavata*. *Ekakushta/Kushta* (psoriasis) can be correlated based on chronic skin involvement and similar clinical features. *Rakta Dushti* (SLE) may help explain some systemic and inflammatory features of SLE, but *Rakta Dushti* should not be considered the same as the modern autoimmune process. *Vata Vyadhi*—multiple sclerosis provides a broad Ayurvedic framework for understanding neurological symptoms, while *Madhumeha*—type 1 diabetes mellitus provides a conceptual framework for understanding diabetes; however, it cannot be considered a direct classical description of autoimmune destruction of pancreatic beta cells.

Therefore, the purpose of combining Ayurveda and modern medicine is not to prove that both systems describe the same disease in exactly the same way. Instead, they provide different but complementary ways of understanding disease. Modern medicine explains the cellular and molecular mechanisms of autoimmunity, while Ayurveda provides



a broader understanding based on *Dosha-Dushya* interaction, *Agni*, *Srotas*, *Dhatu* involvement and individual susceptibility. Further clinical and scientific research is needed to establish whether these Ayurvedic concepts can be supported by measurable biological findings.

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