Autoimmune Diseases in Ayurveda: A Narrative Review with Classical and Modern Perspectives

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Abstract

Autoimmune diseases are characterized by immune dysregulation, whereby the immune system mistakenly attacks the body's own tissues, leading to chronic inflammation and tissue damage. Ayurveda, the ancient Indian system of medicine, offers a unique perspective on these disorders through its concepts of *Agni* (digestive/metabolic fire), *Ama* (toxic byproducts), imbalance of *Doṣas* (biological energies), *Srotorodha* (channel obstruction), and *Ojas* (vital essence or immune strength). Though the term "autoimmune" is not explicitly used in classical texts, conditions with similar manifestations are described, such as *Amavāta* (rheumatoid arthritis), *Kuṣṭha* (psoriasis), *Grahaṇī* (inflammatory bowel disease), *Vātarakta* (lupus), *Vāta-vyādhi* (multiple sclerosis), and *Galagaṇḍa* (thyroiditis). This review integrates classical Ayurvedic interpretations with contemporary biomedical perspectives and highlights therapeutic strategies including *Deepana-pācana* (digestive enhancement), *Sodhana* (biopurification), *Rasāyana* (rejuvenation), diet and lifestyle regulation, and yoga. Emerging evidence supports immunomodulatory roles of Ayurvedic herbs such as Tinospora cordifolia, Withania somnifera, and Boswellia serrata, along with yoga-based practices. This manuscript aims to provide a comprehensive understanding for clinicians and researchers interested in integrative approaches to autoimmune diseases.

Keywords: Autoimmune Diseases; *Ayurveda*; *Āma*; *Agni*; *Ojas*; *Doṣa Imbalance*; *Srotorodha*; *Pañcakarma*; *Rasāyana* Therapy; Immunomodulation; Tinospora Cordifolia; Withania Somnifera; Ayu-Hm Premium Yoga; *Prāṇāyāma*; Integrative Medicine; Classical Ayurvedic Correlates

Abbreviations

CRP: C-Reactive Protein; RA: Rheumatoid Arthritis; SLE: Systemic Lupus Erythematosus; IBD: Inflammatory Bowel Disease; MS: Multiple Sclerosis.

Introduction

Autoimmune diseases represent a significant and increasing global health burden, encompassing conditions

such as rheumatoid arthritis, systemic lupus erythematosus, psoriasis, inflammatory bowel disease, Hashimoto's thyroiditis, and multiple sclerosis. These diseases arise from a breakdown in immunological tolerance, resulting in the immune system attacking self-antigens and causing chronic inflammation and tissue destruction. Modern immunology characterizes them as disorders of dysregulated adaptive immunity involving T and B cell dysfunction [1].



Ayurveda, composed over millennia in India, approaches disease fundamentally as an imbalance in the three *doṣas Vāta, Pitta*, and *Kapha*, which govern physiological functions. Central to Ayurveda's pathophysiology is the concept of *Agni*, the digestive and metabolic fire, whose impairment leads to the formation of *Ama*, toxic metabolic waste that accumulates and obstructs bodily channels (*Srotas*), causing disease. Ojas, described as the subtle essence of all bodily tissues, represents vital energy and immunity; its depletion correlates with weakened defence mechanisms.

Though classical texts do not explicitly enumerate "autoimmune diseases," many clinical entities described correspond closely to modern autoimmune disorders through symptomatology, course, and system involvement. This narrative review explores these correlations, elucidates Ayurvedic mechanisms underlying autoimmunity, details classical and contemporary therapeutic approaches, and discusses recent scientific studies supporting integrative management.

Ayurvedic Foundations of Autoimmunity

The bedrock of health in Ayurveda is the balanced function of Agni. The $Charaka\ Samhita\ asserts$, " $Rog\bar{a}h\ sarve\ api\ mandagnau$," meaning all diseases arise from impaired Agni. When Agni is weak or deranged, digestion is incomplete, resulting in the formation of Ama, a sticky, toxic substance composed of partially digested material and metabolic waste. $\bar{A}ma$ accumulates in the gastrointestinal tract and circulates systemically, leading to obstruction of Srotas, the micro-channels responsible for nutrition and immunity.

This obstruction disrupts *Doṣa* balance and tissue homeostasis (*Dhatu Dhatuvritti*), precipitating systemic inflammation and immune dysregulation characteristic of autoimmune pathology. Ingesting *Viruddhāhāra*, or incompatible foods, exacerbates *Doshic* imbalance and *Ama* formation, paralleling the modern concept of environmental triggers in autoimmunity.

Ojas, considered the essence of vitality and immunity ("*Ojo hi nāma balam*"), is responsible for maintaining physical and mental strength. Its depletion leads to immunodeficiency, recurrent infections, chronic fatigue, and collapse of systemic resilience, analogous to immunocompromised states seen in autoimmune crises. Maintaining or restoring *Ojas* is therefore a critical therapeutic goal [2].

Classical Correlations with Autoimmune Diseases

Ayurveda does not classify diseases by immune etiology but rather by *Doshic* predominance and clinical features.

Using this framework, several classical entities align with modern autoimmune diseases:

- Āmavāta: Characterized by joint pain, swelling, stiffness, and systemic symptoms, it closely corresponds to Rheumatoid Arthritis (RA). Pathogenesis involves aggravated Vāta and accumulation of Ama in joints, causing inflammation and chronic pain.
- Vātarakta and Raktapitta: These conditions manifest with joint involvement, skin rashes, and blood impurities reminiscent of systemic lupus erythematosus (SLE) and vasculitis.
- **Kuṣṭha:** A spectrum of skin diseases including *Ekakuṣṭha* and *Kitibha*, which resemble psoriasis and other autoimmune dermatological disorders, with scaling, inflammation, and chronicity.
- *Grahaṇī and Pittātisāra:* Correspond to inflammatory bowel diseases such as Crohn's disease and ulcerative colitis, featuring chronic diarrhea, malabsorption, and mucosal inflammation with *Doṣa* imbalance.
- *Vāta-vyādhi* and *Majjāgata Vāta*: Reflect neurological autoimmune diseases like multiple sclerosis, marked by degeneration of the nervous system and symptoms such as weakness, paralysis, and sensory deficits.
- *Galagaṇḍa:* Associated with *Kapha-meda* (phlegm-fat) imbalance and *Agni* dysfunction, it aligns with thyroid disorders including Hashimoto's thyroiditis, involving inflammation and gland enlargement (goiter).
- These correlations are based on symptomatic parallels and pathophysiological mechanisms described in Ayurvedic texts, offering a holistic interpretation of autoimmunity [3,4].

Therapeutic Principles in Ayurveda

Ayurvedic treatment focuses on restoring balance, enhancing *Agni*, eliminating *Ama*, and replenishing *Ojas*. The therapeutic approach rests on five main pillars:

- 1. Āma Pachana (Detoxification): This involves the use of herbs that kindle digestive fire and metabolize toxins. Common remedies include *Trikaṭu* (a blend of black pepper, long pepper, and ginger), Śuṇṭhī (dry ginger), and Guḍūcī (Tinospora cordifolia). These agents reduce Ama, improve digestion, and initiate systemic detoxification to relieve *Srotorodha*.
- **2.** *Śodhana* (Biopurification): Employing classical cleansing procedures mainly through *Pañcakarma*, involving:
- *Virecana:* Therapeutic purgation effective for pitta disorders and blood impurities.
- *Basti:* Medicated enemas valuable for *Vāta* disorders affecting joints and the nervous system.
- *Raktamokṣaṇa:* Bloodletting to eliminate vitiated blood in *Rakta* disorders like lupus.
- **3.** *Rasāyana* (Rejuvenation): Herbal formulations and therapies aimed at rejuvenating tissues and boosting

immunity through *Ojas* enhancement. Common *Rasāyanas* include *Aśvagandhā* (Withania somnifera), *Amalaki, Harītakī, Śatāvarī* (Asparagus racemosus), and *Gudūcī*.

- **4.** *Pathya-Apathya* (Diet and Lifestyle Regulation): Recommending a *Sattvic* diet with warm, light, and easily digestible foods, avoiding *Viruddhāhāra* (incompatible foods), and promoting regular digestive and elimination routines. Use of *Ghṛta* (clarified butter) and *Takra* (buttermilk) supports digestion and *Ojas*.
- **5. Yoga and** *Prāṇāyāma:* Specific Asanas and breathing exercises like *Anuloma-Viloma* (alternate nostril breathing) and *Bhrāmarī* (bee breath) help balance *Vāta*, reduce stressinduced inflammation, and enhance immune regulation [5-7].

Key Scriptural References Conceptually Linked to Autoimmunity in Ayurveda

1. Vedas (especially Atharva Veda):

- The Atharva Veda contains hymns for healing and protection, emphasizing the role of Prana (life force) and Ojas (vital essence) in sustaining health. It underlines the importance of Svasthya (steadiness of health via balanced Doshas), a principle central to Ayurveda's view of immune homeostasis and prevention of self-directed immune disturbance.
- Though not disease-specific, it sets the philosophical groundwork for maintaining systemic balance and detoxification which Ayurveda links to preventing autoimmune disorders.

2. Bhagavad Gita:

- Discusses mental equanimity and emotional balance (Chapter 2, Verse 14), crucial for moderating stress responses that Ayurveda and modern science recognize as autoimmune triggers.
- Highlights yoga and self-discipline (Chapter 6) as means to harmonize mind-body connection, supporting immune stability and ojas preservation, both critical to autoimmune disease management in Ayurveda.

3. Ramayana:

• Emphasizes dharma and harmonious living, which

- corresponds with Ayurveda's guidelines on lifestyle and dietary discipline that maintain *Dosha* balance and prevent *Ama* formation implicated in autoimmune pathogenesis.
- Though not directly about autoimmunity, its narratives reinforce holistic health principles including use of natural remedies aligned with Ayurvedic therapy.

4. Upanishads (e.g., Chandogya, Brihadaranyaka):

- Explores Prana, the subtle life-force energy responsible for vitality and immune strength, analogous to *Ojas* in Ayurveda.
- Discusses interconnectedness of Body, Mind, and Soul, offering a framework for holistic interventions aimed at restoring biological and psychological harmony disrupted in autoimmune conditions.

Integrative Context in Autoimmune Diseases in Ayurveda

- These texts do not directly describe autoimmune diseases but provide a philosophical and spiritual basis for Ayurvedic notions of health as a balance of physiological, energetic (Prana/Ojas), and mental factors.
- They underscore the importance of balance, detoxification (*Ama pachana*), immune vitality (*Ojas*), and mental equanimity core to autoimmune disease pathogenesis and Ayurvedic management.
- Ayurvedic explanations of autoimmunity as *Dosha* imbalance plus *Ama* accumulation blocking channels derive conceptual support from these scriptures' emphasis on harmony of energies and subtle essences.

Mapping specific autoimmune diseases to Ayurvedic equivalents involves correlating modern clinical features with classical Ayurvedic disease descriptions based on symptom patterns, *Dosha* involvement, tissue (*Dhatu*) affected, and pathophysiology. Below is a detailed approach with examples of common autoimmune diseases mapped to Ayurvedic counterparts:

| Modern Autoimmune Disease | Ayurvedic Equivalent(s) | Basis of Correlation |
|---------------------------------------|------------------------------------|--|
| Rheumatoid Arthritis (RA) | Āmavāta | Joint inflammation, pain, swelling due to $V\bar{a}ta$ aggravation combined with Ama accumulation causing $Srotorodha$ and systemic inflammation. |
| Systemic Lupus Erythematosus (SLE) | Vātarakta, Raktapitta | Multisystem involvement with joint pain, skin rashes; vitiation of <i>Vāta</i> and <i>Rakta</i> (blood) causing vasculitis-like features. |
| Psoriasis | Kuṣṭha (Eka-kuṣṭha, Kitibha) | Chronic inflammatory skin disease with scaling and itching; <i>Doshic</i> imbalances involving <i>Kapha</i> and <i>Pitta</i> affecting skin tissues (<i>Twak Dhatu</i>). |

| Inflammatory Bowel Disease (IBD) | Grahaṇī, Pittātisāra | Chronic diarrhea, malabsorption, mucosal inflammation; involving impairment of digestive <i>Agni</i> and <i>Srotas</i> blockage akin to <i>Grahaṇī</i> (intestinal disease) and <i>Pittātisāra</i> (<i>pitta diarrhea</i>). |
|-------------------------------------|--------------------------------|---|
| Multiple Sclerosis (MS) | Vāta-vyādhi, Majjāgata Vāta | Nervous system degeneration, sensory and motor deficits due to <i>Vāta Dosha</i> imbalance affecting <i>Majjā</i> (nervous tissue) and <i>Vāta</i> regulatory pathways. |
| Hashimoto's Thyroiditis | Galagaṇḍa | Thyroid inflammation and goitre related to <i>Kapha-meda</i> (phlegm-fat) imbalance and impaired <i>Agni</i> affecting thyroid tissues. |

Table1: Mapping to Ayurvedic to common autoimmune diseases.

Mapping Methodology: Key Considerations

- Symptomatology: Match modern clinical signs (joint pain, rash, neurological deficits) with classical Ayurvedic descriptions.
- **Dosha Pathology:** Identify which doshas are predominantly aggravated (*vāta*, *pitta*, *kapha*) and how ama (toxins) contribute.
- Tissue (Dhatu) and Channel (Srota) Involvement: Consider affected tissues (joints, skin, nerves, blood) and srotas (channels) in Ayurveda.
- Chronicity and Disease Course: Consider whether the

- classical disease is chronic, relapsing, and systemic like autoimmune diseases.
- Clinical Presentation and Ayurvedic Nidana (causative factors): Include dietary, lifestyle, and environmental triggers contributing to imbalance.
- Compare with modern science: The Ayurvedic concepts of autoimmune diseases align with several aspects of modern scientific understanding, providing a complementary systems perspective. Here is a comparison between Ayurveda's foundational ideas and modern biomedical science regarding autoimmune pathogenesis and management [8-10]:

| Aspect | Ayurveda Perspective | Modern Science Perspective |
|-------------------------------|--|---|
| Disease Cause | Impaired $Agni$ (digestive/metabolic fire) leads to formation of $\bar{A}ma$ (toxic metabolic byproducts), resulting in $dosa$ imbalance and srotorodha (channel obstruction), weakening $Ojas$ (immune essence). This causes immune dysregulation and autoimmunity. | Autoimmune diseases result from loss of self-tolerance, genetic predisposition, environmental triggers, molecular mimicry, and chronic inflammation mediated by immune cells and cytokines (e.g., TNF-α, IL-6). |
| Immune Dysregulation | Ojas depletion equates to impaired immunity; $ar{A}ma$ and do sa vitiation contribute to systemic inflammation and tissue damage. | Loss of immune tolerance leads to autoreactive T and B cells, chronic inflammatory cytokine production, and tissue destruction. |
| Role of Metabolism & Detox | Focuses on enhancing <i>Agni</i> to digest <i>Āma</i> and removing <i>doṣa</i> imbalances via detoxification (Śodhana, Pañcakarma). | Detoxification of harmful metabolites, addressing microbiome dysfunction, and reducing oxidative stress are emerging as important adjuncts in modulating autoimmunity. |
| Therapeutic Approaches | Uses herbs (e.g., <i>Tinospora cordifolia, Withania somnifera</i>), biopurification, rejuvenation (<i>Rasāyana</i>), diet and lifestyle regulation, and yoga for balancing doshas and improving immunity. | Uses immunosuppressants, biologics targeting cytokines (TNF-α, IL-6 inhibitors), diet, stress reduction, and lifestyle modifications. |
| Holistic Mind-Body View | Addresses psychological stress, mental balance (via yoga, pranayama) to preserve Ojas and prevent exacerbation. | Psychoneuroimmunology confirms stress influences immune function and autoimmune disease flares. |
| Safety Considerations | Emphasizes personalization, monitoring herbal safety, and standardization to avoid toxicity. | Concern with immunosuppressant side effects, infection risk, and biologic adverse events requires careful monitoring. |

Table2: Compare with modern science.

Evidence from Modern Research

Contemporary studies validate many Ayurvedic approaches in modulating immunity and inflammation:

- Tinospora cordifolia (Guḍūcī): Demonstrates significant downregulation of inflammatory cytokines like IL-6 and TNF- α in animal models of arthritis, supporting its anti-inflammatory and immunomodulatory properties [10].
- Withania somnifera (Aśvagandhā): Exhibits antiinflammatory effects by balancing Th1/Th17 immune responses and regulating cortisol levels, useful for chronic autoimmune conditions [5].
- Boswellia serrata: Shown to improve symptoms in ulcerative colitis in small randomized controlled trials, exerting anti-inflammatory effects through inhibition of 5-lipoxygenase.
- Kutaja (Holarrhena antidysenterica): Offers antidiarrheal activity and mucosal protection relevant to inflammatory bowel diseases.
- T-AYU-HM Premium: Herbo-mineral formulation with established immunomodulatory effects demonstrated in preclinical and clinical research. Its active ingredients such as Tinospora cordifolia, Piper longum, Terminalia chebula, and Asparagus racemosus are known for their ability to modulate both cellular and humoral immune responses, as supported by modern pharmacological studies and traditional Avurvedic use. Experimental and clinical investigations have shown that T-AYU-HM Premium enhances neutrophil function, improves antibody production, and supports hematological balance, confirming its role as a safe and effective immunomodulator in disorders characterized by immune dysregulation. These findings support its integrative therapeutic potential, particularly relevant for autoimmune and inflammatory diseases [11].
- **Pañcakarma therapies:** Clinical observations suggest they reduce systemic inflammation markers such as C-reactive protein (CRP), indicating effective body detoxification and immune restoration.
- **Yoga and meditation:** These practices reduce proinflammatory cytokines IL-6 and nuclear factor kappa B (NF-κB) activation, aligning with the classical view of stress reduction and ojas preservation.

Safety and Research Gaps

Despite promising findings, Ayurvedic treatments require cautious application:

- Reports of rare but significant herb-induced liver injuries, especially with *Tinospora*, highlight the need for correct identification, standard dosing, and clinical monitoring [11].
- · Lack of standardized formulations and batch-to-batch

- consistency presents challenges for reproducibility.
- Many clinical trials suffer from small sample sizes, lack of adequate controls, and short durations, limiting generalizability.

Future research should focus on rigorously designed, large-scale clinical trials integrating Ayurveda with conventional therapies, emphasizing safety, efficacy, pharmacovigilance, and standardized protocols.

Conclusion

Ayurveda offers a comprehensive, systems-based understanding of autoimmune diseases, interpreting them through agniimpairment, āma accumulation, doṣa imbalances, srotas obstruction, and ojas depletion. Classical entities such as āmavāta, kuṣṭha, grahaṇī, vātarakta, and galagaṇḍa reveal a rich traditional framework with parallels to modern autoimmune pathologies. Therapeutic strategies combining metabolic detoxification, biopurification, rejuvenation, diet-lifestyle regulation, and yogic practices are supported by emerging pharmacological and clinical evidence. With appropriate standardization, pharmacovigilance, and integrative clinical research, Ayurveda can significantly contribute to the holistic management of autoimmune diseases.

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