



A Role of Ayurveda in Autoimmune Diseases

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ABSTRACT

Ama formed at the levels of Jatharagni and Dhatvagni and initiated many pathological events inside the body. Ama further deteriorates digestive and metabolic activities, obstructs Strotas, vitiated Dhatusand Rakta. The Ama is caused by low Agni (digestive fire) and low Ojas (immunity). Thus, the root causes of auto-immune disorders are poor digestion capacity and weak immune system are root causes of auto-immune disorders. Hence the Ayurveda management focuses on restoring Agni (digestive fire) and Ojas (immunity). By enhancement of digestive fire and immunity, one can naturally reverse the disease process and restore balance to the system.

KEY WORDS: Agni, Ama, Langhana

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INTRODUCTION

The immune system of the body reacts against the tissues of its own body; it is called an autoimmune disorder. To put it more dramatically, the body becomes its own enemy. The immune system of your body keeps fighting disease causing germs and bacteria, but in rare cases, the immune system might malfunction and fight its own body causing different disorders. These disorders may be caused due to genetic issues or due to mutations. According to ayurveda, autoimmune disorders are a result of constant unhealthy lifestyle and diet. Ayurveda works at the root cause of the disease where it starts treating the malfunctioning immune system. To study Nidan Panchak of autoimmune disorder [1].

MATERIAL AND METHODS

The methodology followed in the present study encompasses the following aspect

CAUSES OF AUTOIMMUNE DISORDERS: -1. Bacteria 2. Toxins 3. Virus 4. Germs and parasites 5. Fungi 6. Drugs 7. Chemical irritants 8. Environmental irritants 9. Hereditary

Common Symptoms of Autoimmune Diseases: - The following are the most common early symptoms for various autoimmune diseases: - ▪ Low-grade fever ▪ Rashes on skin ▪ Tingling and numbness in the arms and feet ▪ Fatigue ▪ Swelling and redness ▪ Hair loss ▪ Muscles-ache ▪ Difficulty in concentrating

Depending on the affected body area, there are different symptoms and different organs involved in Autoimmune Diseases: - .1) Acute Disseminated Encephalomyelitis 2) Addison's Disease 3) Agammaglobulinemia 4) Atopic Dermatitis 5) Auto-Immune Cardiomyopathies 6) Myasthenia Gravis 7) Graves' Disease 8) Auto-Immune Hepatitis 9) Sclerosis Multiple (Ms) 10) Systemics Lupus Erythematosus 11) Psoriasis, Psoriatic Arthritis 12) Rheumatoid Arthritis 13) Guillain-Barre Syndrome 14) Auto-Immune Aplastic Anemia are some of the autoimmune diseases that occur in a variety of tissues and organs.

Autoimmune disorders may not be easily treated, Autoimmune disease can be frustrating, uncomfortable, and even debilitating but that doesn't mean you cannot expect it to cure or witness a miracle. Ayurveda has its own unique fundamental principles and Principles of treatment. Ayurveda suggests that the

immune system attacks the body's own cells do not accidentally, but it does to defend against a form of harmful metabolites body is 'Ama'. Ama is produced in the tissues that are attacked. Autoimmune diseases are usually caused by large amounts of Ama penetrate certain body tissues or physiological systems. In addition, prolonged exposure to poorly digestible food, pollutants, allergenic, toxic stiffen, synthetic chemicals and drugs is another cause of autoimmune diseases [3].

Poor treatment of the disease and repeated suppression of symptoms without addressing the cause, also accelerates disease progression. The AMA is now up to the level of tissue has penetrated, starts our immune system to attack the affected cells to. This causes inflammation or allergic reactions that without proper treatment can lead to auto-immune diseases. If the disease once manifested, it is difficult to control the condition in its entirety.

Though we don't know the exact triggering factors for this over-activity of the immune system, researchers suspect that genetics, infections, exposure to chemicals and solvents in the environment, and western diets which contain high-sugars, high fats, and processed foods are the risk factors of autoimmune diseases [4].

CONTRIBUTING FACTORS [5]

The following factors, alone or in combination with each other, may contribute to the development of autoimmune diseases: A. The penetration of deep tissues Ama. The reasons for this are as follows:

1. Weak digestion: - Weak digestion leads to the accumulation of incompletely processed metabolites in coarser level. This in turn has an impact on all metabolic processes, allowing the production of Ama, both superficially and on a deeper level rise.

2. Vitiating of Dosha: - When the Dosha be for any reason, also adversely affected, they cause a variety of diseases. Depletion of Dosha, where the normal physiology of metabolism disrupts touches, also leads to Ama.

3. Accumulation of metabolic waste: - Suppressing the natural urge to get rid of metabolic waste, leads to physical obstructions in the discharge channels of the body. The resulting accumulations of waste at different levels of metabolism, does the number of toxins rise, which ultimately leads to an increase in the body Ama.

When there is dysfunctioning of Agni proper digestion is hampered resulting in the formation of Ama. Then Bhutagni have been enumerated, Bhuta means the physico-material classification of food and body elements.

Thereafter Dhatvagni have been expounded, Dhatu here means the basic elements of the body. The functions of Dhatvagni refer to tissue metabolism.

Ama formed at the levels of Jatharagni and Dhatvagni and initiated many pathological events inside the body. Ama further deteriorates digestive and metabolic activities, obstructs Strotas, vitiating Dhatu and Rakta therefore causes various diseases including auto-immune disorders.

In Sum, Jatharagni, Bhutagni and Dhatvagni constitute the thirteen types of Agni or metabolic factors of hampered in Autoimmune disease.

Ama: - is formed due to Agnimandhya and Aama production cause Agnimandhya & vice versa. General characteristic of Ama is also seen in Autoimmune diseases: - 1) Srotorodha (Obstruction of Channels) 2) Balabhransha (Loss of strength) 3) Gaurava (felling of heaviness) 4) Anilmudhata (Obstruction of Vayu) 5) Alasya (Laziness) 6) Apakti (Indigestion) 7) Nisthiva (Excessive Salivation) 8) Mala-Sanga (Constipation) 9) Aruchi (Anorexia) 10) Klama (Fatigueless).

Ayurveda looks at what causes the inflammation and work backward. Inflammation caused by lack of cellular recognition / communication. This breakdown in communication is due to cells being covered with something or having some intercellular component bad behavior.

In Ayurveda this mis-behavior of cell component or covering is considered due to metabolic disturbance and excess production of toxins in body which is correlated with Aama Dosha and this Aama. Dosha is form due to Manda - Agni which at end leading to low Oja (vital essence of all seven dhatus in body). So, the root cause of auto immune disorders is Manda – Agni and weak Oja in body. Therefore, the Ayurveda treatment focuses on restoring Agni and Oja.

Vata Dosha and autoimmune: - Vata doshas can be effective in treating autoimmune disorder. If the immune cells are high then Vata should be decreased and if the antibodies are high then Vata should be increased. In Vitiating Vata doshas may need medicine to reduce both antibodies and Vata dosha by using of Rasayana Dravyas (Immunomodulatory drugs)

Pitta doshas: - Pitta Doshas should be treated anti-inflammatory and immune – modulating drugs to balance Pitta. Herbal medicines help boost immunity and treat autoimmune disorder.

Kapha Doshas: - Autoimmune disorder have high level of toxins that can lead to immune suppression as well as infection. They may need antibiotics, anti-viral agents or antifungal medication depending on their clinical presentation.

As per Ayurveda, the Dhatus (tissues) and channels (Srotas) of the body when intoxicated may result in the Ama buildup within which results in many life-threatening conditions. So, the aim of ayurvedic medicine is to ensure that the body is rid of toxins. There are procedures and therapies to help you with it, such as Panchakarma followed by oral administration of medicines to get the most out of ayurvedic treatment. Along the line, immunity is restored, so that body's self-healing mechanism works and you are able to fight off disease [6].

Autoimmune Disorder can be Treated by drug, diet or even a life style and conduct Shodhana, Shaamana, Rasayana Chikitsa measures act by one of the following three ways. Acting at the level of Rasa: Thus, directly improving the quality of nutrition. (2) Acting at the level of Agni: i.e., by improving the digestion and metabolism of the body and thereby affording better nutrition. (3) Acting at the level of Srotas: i.e., by improving the micro-circulation, it ensures proper perfusion and nourishment of the tissues.

According to Vagbhatta (A.H.Su. 8/20) - Ama become relieved by Apatarpana kinds of Apatarpana should be adopted appropriately in case of Tridoshas after careful consideration of all aspects like Desha, Kala etc. 1) Langhana is indicated when Doshas are in a mild state. 2) Langhana-Pachana is indicated when the Doshas gets aggravated moderately. 3) Shodhana-When Doshas vitiates excessively expulsion is the only way to root out them from their origin. Shodhan Chikitsa like Vaman, Virechan, Basti, Raktmokshana. In medicine like Gugguls and Haritaki promote systemic nutrition by way of Sroto- Prasadana or Sroto-Shodhan by its Lekhan action which intends to do toxin removal and act as Rasayana in body [7].

Metabolism Correction – After Shodhan Chikitsa certain Pathya-Apathya and daily routine changes is advisable which helps in metabolic correction and formation of new tissues by enhancing Agni.

Neem, Guggulu, Guduchi, Vasa, Patola Patra and Ghrita are used to correct the metabolism. At the level of Agni some Rasayana such as Pippali and Sunthi work as digestive and metabolic enhancer and lead in turn to improved tissue metabolism.

Increase in Ojas Production – As we all know well that immune status of an individual plays an important role for conservation of health and prevention of disease. Dosh is form due to Manda-Agni which at end leading to low Oja (vital essence of all seven dhatus in body). So, the root cause of auto immune disorders is Manda-Agni and weak Oja in body.

Therefore, the Ayurveda treatment focuses on restoring Agni and Oja.

RASAYANA is improve metabolic processes, which results in the best possible biotransformation and produce best quality body tissues, eradicate senility and thus help prevent diseases of the old age. It helps attain optimal physical strength and sharpness of sense organs. Rasayana nourishes the whole body, helps maintain physiological functions at optimum level, thus also improves body's natural resistance against infections by increasing Immunity [8].

Rasayana therapy which regulates the circulation of vital fluid, eliminates the waste product, rejuvenate the nervous system as well. It prevents wasting of muscles, delays the ageing process, nourishes bones, tendons etc. 2) Rasayan Dravyas work as Immunomodulators and have antioxidant activity as well. In relation to nonspecific immunity these drugs increase activation of poly morpho neutrophils (PMN) for phagocytosis and enhance their chemo-attractant capacity. In relation to specific immunity, they lead to proliferation of lymphocytes leading to production and also cytotoxic induction of T-helper and Natural Killer (NK) cells and activation of complement pathways. Also, they significantly increase immunoglobulin levels. Immunostimulants offer promise in enhancing antigen specific (vaccine) and non-specific immune response against infections [9].

Ayurveda describes a number of drugs as Rasayana and Ojovardhak remedies, which are claimed to possess " immunomodulatory effect. Some of the Rasayana which have been subjected to scientific studies and found to possess immunomodulatory effect are 1) Tulasi (Ocimum Sanctum), 2) Brahmi (Bacopa Monerie), 3) Biranjasipha (Yarrow), 4) Anantmool (Hemidesmus-Indicus), 5) Kumari (Aloe Vera), 6) Shatavari (Asparagus Racemosus) 7) Ashwagandha (Withania Somnifera), 8) Guduchi (Tinospora Cordifolia) 9) Haldi (Turmeric)10) Nimba (Neem)11) Akanadi (Cissampelos Pareira) 12) Shankapushpi (Morning Glory) 13) Shalaparni (Desmodium Gangeticum) 14) Amalaki (Embilica Officinalis) 15) Vidang (Embelia Ribes In)16) Yashtimadhu 17) Haritaki (Terminalia Chebula), 18) Shilajatu 19) Pippali (Piper Longum) 20) Punarnava (Boerhaavia Diffusa) etc. are some of the herbal immunomodulators that can help you control autoimmune disorders naturally. The phytoconstituents such as flavonoids, saponin, thiosulfates, terpenoids, volatile oils, alkaloids, coumarins, and glycosides present in these herbs are responsible for stronger immunomodulatory activity [1, 3].

List of Rasashastra Dravya and their Karma related to Immunity Modulator [10-13]

- 1) **Abhraka:** - Swadu, Snigdha Param Shishir Vat, Pitta Kaphaghna Param Amruta, Aayushya Agrya, Balya - R.R.S.2/2 Chatibalya, Medhya - R. T. 10 / 72-73 Praghya Bodhi - R.R.S.2/2.
- 2) **Vaikrant:** - Doshatrayapahar Ayushpradshrch, Balavarnakara, Pragyaprad - R.R.S- 2/55- 57 Bahuyogvahi, Atirasayanchha, Jarashoshadi Shamana, Dehadardhyakara - R. T. 23/167- 169 Pragyaprad - R.R.S- 2/55- 57 Paramachha Medhya R.T. - 23/167-169
- 3) **Swarnamakshik:-** Madhur Rajat Makshik Amla Vipaka - Katu Virya - Sheetal Tridoshaghna Jaravyadhi, Param Hi Vrushya, Sarva Rasayan Agrya- R.R.S. 2/79 Yogavahi Param - R. T. 21/26-28
- 4) **Shilajatu:** - Tikta Vipak - Katu Balya, Rasayan, Balya, Yogavahi - R.T. 22/85-86
- 5) **Sasyaka Rasayanam:** - R.R. S. - 2/128 Balya, Rasayana- R. T. 21/127-129
- 6) **Gandhak:** - Madhur Vipak - Katu Virya - Ushna Atirasayana, Vishahar - R. R. S. 3/16 Rasayanottama - R. T. - 8/36- 38
- 7) **Kasis:** - Kashay Vipak - Katu Virya - Ushna Balya, Vishaghna - R.T. 21/231-233
- 8) **Harataal:** - Katu Virya - Ushna Kaphaghna Vishghna- R.R.S. 3/68 Rasayanam- R.T.11/52-54 Bhootnut - R.R.S. - 3/68
- 9) **Manasheela:** - Tikta, Katu Ushna Kaphavatahanti Sarvarasayan Agrya, Vishaghna - R.R. S.- 3/91 Rasayani, Vishapaha- R. T. 11/116-116 Bhootaghna - R.R.S.- 3/91
- 10) **Neelanjan:** - Guru Virya - Sheet Tridoshashamak Rasayanam - R.R.S. 3/100- 104
- 11) **Hingula:** - Sarvadoshaghna Deepana, Atirasayana, Vrushya - R. R. S. 3/140- 141 Dehakanti Bala Vardhanam - R. T. 9/18-19 Buddhivardhanam - R.T. 9/ 18 -19
- 12) **Manikya:** - Madhur Vatpittahar Param, Kapha Prashaman Rasayanam, Deepanam, Vrushya, Aayushya, Vajikaranam - R.T. - 23/57- 58 Bhootvetal Papghna - - R.R.S. - 4/12 Medhya - R.T. -23/57-58
- 13) **Mukta:** - Madhur Virya - Sheetal Kaphapittaghna Agnipushtikaranam, Vishahari, Vrushya, Aayushya, Veeryaprad - R.R.S. 4/13 Vrushya, Aayushya, Deepan, Vishapaha, Dehaveerya Balavardhanam - R.T. 23/72-74 Medhya, Buddhivardhanam - R. T. 23/72-74
- 14) **Praval:** - Madhur Virya - Sheetalam Tridoshashamanam Visheshat Kapha Vaatnut Veerya Varna Vardhanam, Balya, Vishaghna - R. T. 23/ 139-141 Bhootshamanam - R.T. 23/139-141
- 15) **Tarkshya:** - Visha, Oojovivardhanam, Agnimandyanut - R.R. S. - 4/22 Balya, Vrushya- R.T. 23/ 109-110
- 16) **Pushparag:** - Kapha-vataghna Aayushya, Bruhana, Vishaghna - R.T. 23/93-94 Medhya- R. T. 23/93-94
- 17) **Vajram:-** Shadarasanvitam Doshatraya Prashamana Aayushprada, Mrutunjay, Amrutopama , Vrushya - R.R.S.- 4/32 Yogavahi, Sarvotkrushta Rasayana, Maha Ayushyam Ativ, Balya- R.T. 23/25-26 Medhya- R. T. 23/25 -26
- 18) **Indraneel:** - Tridoshaghna Balya - R. T. 23/101 -102
- 19) **Gomed:** - Kaphapittaghna Deepan, Pachan, Balya - R.T. 23/125- 126 Buddhi Prabodhanam R.R.S. 4/56
- 20) **Vaidurya:** - Madhur Virya Sheeshir Pittapradhan Rogaghna Pradhnya Aayu Balavardhanam, Deepan - R.R.S. - 4/59 Aayushya, Balya, Bruhana Param - R.T. 23/117-118 Medhya - R.T. 23/117- 118
- 21) **Suvarna:-** Madhur Vipakswadu Ayukara, Saukhyapushti Prakash, Gadahara, Viryavruddhi, Vishagadaha, Vrushya, Balya, Rucha, Dipti - R.R.S. 5/10-11 Rasayana, Vishapaha, Aayushya Agrya, Balya, Vayasthapan Uttam- R. T. 15/69-78 Dhi, Smrutikara, Bhootavesh Prashanti, Medha Buddhi Smruti Sukhakar- R.R.S. 5/10-11 Param Medhya, Chinta Shok Bhaya Krodh Sambhut Aamay Nashanam R. T. 15/69 - 78
- 22) **Raupya:** - Kashay, Amla Vipak - Madhur Virya - Sheet Kaphavataghna, Agnidipti Balya Param, Sthirvayakaranamch- R. R. S. 5/28-29 Vayasthapan Uttam, Balya Param, Param Rasayana, Aayushya, Vanhimandya Prashamana R.T. 16/ 46-51 Medhya R.R.S. 5/28-29 Smruti Vardhana, Kshin Buddhi Smruti Sahasa and Adhyapanadao Suchir R. T. 16/46-51
- 23) **Lauha:** - Tikta Sheet Tridoshashaman Kantlauha- Atirasayana, Chirayuprada Lauhabhasma Guna - Balakar, Vrushya, Vayastambhanam, Rasayanvar, Vishapaham R. R.S. 5/ 136-139 Balya - R.T. 20/83 Medhya - R.T.20/83
- 24) **Naga Rasayana:** - R. R. S. 5 / 180 25. Vanga Tikta, Kashay, Lavan Kinchit Virya - Sheet Sleshma Prashaman Rasayana, Balya - R.T. - 18/40 Medhya, Dhruvikaram R.T. 18/40 26. Mritparad Bala Vriddhi, Virya Vriddhi, Deha Drudhakar, Jarahar - R.T.11/36-40 Smritivardhak R. T. 11/36- 40

RASA DRAVYA (BHASMA) TO EVALUATE IMMUNE RESPONSE OF RASA DRAVYA: -1) Swarna Bhasma: -1) Immunomodulatory effect Non-Specific Immunity Increased counts of peritoneal macrophages and also stimulated the phagocytic index of macrophages, validating its immunomodulatory effect. Traditional preparations of gold exhibited immunostimulant activity on macrophage functions in

contrast to immunosuppressive effects of AN (Auranofin). 2) Free Radical Scavenging Activity In an experimental animal model, chronic Swarna Bhasma-treated animals showed significantly increased superoxide dismutase and catalase activity, two enzymes that reduce free radical concentrations in the body. Swarna Bhasma enhanced activity of SOD (Superoxide dismutase) and catalase (80% compared control haemolysate) which can be co-related with the improved pathophysiological conditions of the patients. 3) Immunoenhancement effect to study effect of gold on immune response, separate concurrent injection of organic gold compounds and antigen into mice resulted in immunoenhancement that could be measured by direct and indirect plaque-forming cells, rosette forming cells, and serum antibody assays.

2) Swarnamakshika Bhasma:- 1) Phagocytic activity Positive control group showed significant ($p < 0.001$) phagocytic activity at the dose of 0.6 mg when compared to other different doses

3) Mukta Bhasma:- 1) Immunomodulatory Effect Increase in the NBT assay, Phagocytosis and Chemotaxis represents good Immunomodulatory effect of Mukta Bhasma at the dose of 0.06mg.

4) Abhrak Bhasma:- 1) Immunomodulator Effect Shataputi Abhrak Bhasma brings about stimulation of Leucocytes in concentration dependent manner. 5% and 10 % solutions of Shataputi Abhrak Bhasma stimulated 93% and 93.5% leucocytes respectively, which is an indicator of highly significant phagocytic activity [6].

Diet For Autoimmune Disease: - A. Foods To Consume: - 1. Seasonal fruits in moderation 2. Green leafy vegetables and tubers such as sweet potatoes, yams, etc. 3. Herbs and spices such as ginger, garlic basil, cilantro, lemongrass, sage, turmeric, cinnamon, bay leaves, cloves, saffron, etc. that are not derived from seeds. 4. Healthy fats from minimally processed vegetable oils, coconut oil, or olive oil. 5. Fish, other seafood, poultry, and organ meat, which is minimally processed. 6. Bone broth 7. Black and green tea along with other herbal teas made of ginger, chamomile, mint, etc. 8. Natural sweeteners such as honey and maple syrup in moderate levels. 9. Sugar-free vinegars

B. Foods to Avoid: - 1. Grains 2. Dairy 3. Red meat 4. Legumes 5. Nuts 6. Seeds 7. Nightshade vegetables 8. Eggs 9. Processed vegetable oils 10. Caffeine 11. Alcohol 12. Refined and processed sugars 13. Food additives and artificial sweeteners.

But in the end, "prevention is better than cure". So, stay healthy by incorporating a healthy diet and exercise into your lifestyle.

CONCLUSION

Ayurveda treatment includes various remedies and medicines that can be helpful to treat these autoimmune diseases. This is a natural treatment and include detoxification of the body, improving metabolic activities, increase Ojus production Yoga and considerations of concept of Pathya and Apathya helps to avoid prevalence of autoimmune disorders.

The Ayurvedic line of treatment for autoimmune disorder focuses on restoring balance and strengthening the natural immunity. In addition to that, a customized combination of remedy, medicines, diets and lifestyle recommendations work on the overall problem.

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