

IMMUNITY – AYURVEDIC PERSPECTIVES AND PRACTICES

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ABSTRACT

The word immunity means the state of preservation from infectious disease. The immune system evolved as defense system to protect body from invading microorganisms and malignant disorders. Immunology is a branch of biomedical science that covers the studies of all aspects of the immune response in all organisms. In Ayurvedic system of medicine not only deals with treating the diseases but also aims to prevention the disease. Vyadhikshamatva (Immunity) is described in Ayurveda and this concept is considered similar to immune systems. Hence in this article we discuss on immunity Ayurvedic perspectives and practice.

KEYWORDS: Vyadhikshamatva; Bala; Agni; Rasayana; Lehana.**INTRODUCTION**

Immunity in Ayurveda is known by the word 'Vyadhikshamatva' the term Vyadhikshamatva is formed by two words vyadhi & kshamatva. Vyadhi – Disease Kshamatva – Resistance. It is the capacity of the body to resist the body. Chakradutta defined immunity into two terms- Vyadhi bala virodhitvam – Capacity of body to fight against the manifested disease, Vyadhi utpadaka pratibandhakatvam- capacity of the body to resist the pathogenic process of forming disease. In few words immunity in Ayurveda refers to prevention of disease and quick recovery from disease. Concept of Vyadhikshamatva (Immunity) described in the classical texts of Ayurveda is similar to immunity. It is not exaggeration to mention that, Ayurveda described Vyadhikshamatva in more detail and magnificent way which can be considered equivalent to modern concepts of immunity.^[1]

Concept of Vyadhikshamatva

In Sanskrita, the word Vyadhikshamatva" is made up of two words; Vyadhi (disease) and Kshamatva (suppress or overcome). According to Ayurveda, Vyadhi is conditions which come into existence as consequence of non-equilibrium between Doshas (physiological factors i.e vata, pitta & kapha), Dhatus (tissues systems) and Malas (excretory products of body). These factors, in their normal status are responsible in maintaining the physical and psychological health. The other word, Kshamatva" is derived from, Kshamus sahan" which means to be patient or composed to suppress anger, to keep quite or to resist. Therefore Vyadhikshamatwa means the factor

which limits the pathogenesis and opposes the strength of disease. Chakrapani Datta, while commenting on Charaka Samhita, gave his view on the term Vyadhikshamatva and explained the term in two divisions, viz.^[2]

Vyadhi-balavirodhitvam: It is the capacity to restrain or withstand the strength (severity) of the diseases i.e. strength to resist the progress of disease.

Vyadhi-utpadakpratibandhakatva: The resisting power of the body competent enough to prevent the occurrence and re-occurrence of the disease. These sub-types of Vyadhikshamatva commutatively form the resistance which now a day known as Immunity. There are nine factors mentioned in Ayurveda which promotes body towards incapability to resist the disease manifestation i.e. factors responsible for decreasing immunity. 1) **Ati- Sthoola** (Excessively obese persons) 2) **Ati-Krisha** (Excessively emaciated person) 3) **Anivista-Mamsa** (Individual having improper musculature) 4) **Anivista-Asthi** (persons having defective bone tissues) 5) **Anivista-Shonita** (persons with defective blood) 6) **Durbala** (Constantly weak person) 7) **Asatmya-Aaharopachita** (Those nourished with unwholesome food) 8) **Alpa-Aaharopachita** (Those taking diet in small quantity) 9) **Alpa-Sattva** (Individuals with feeble mind).^[3]

Relation of Vyadhikshamatva with various factors

1. Sleshma Kapha- is one of the Tridosha (three humors Vata, Pitta and Kapha-which are said to be

responsible for maintenance of homeostasis or equilibrium in the body), which possesses properties such as Snigdha (unctuousness), Sita (cold, producing coldness), Guru (heavy) Manda (slow in action), Slaksna (smooth), Mrtsna (slimy) and Sthira (stable/static). Sleshma in normal state considered as Bala and Oja while in abnormal state it is Mala (waste) and Papma (diseases) Function of normal Kapha is like that of Ojas. Kapha in normal state provides compactness, stability, heaviness, virility, immunity, resistance, courage and gracelessness.

2. Hita and Ahita food- Some food substances are wholesome and suitable for the body as the body can inheritably transfer those substances into its own by virtue of Jatisatmya. These are called as Satmya or Hita substances. Water, ghee milk and rice are few examples of general wholesome food as these are completely suitable for every human. On the other contrary some substance do not suit to the body and cause some adverse reaction. These are known as Ahita or Asatmya substances. Fire-burns, alkalis-cauterize, toxin-kills these are the examples of Ahita substance. There are three reasons seen for the ill-effects being present in Ahita substance i.e. natural inherent feature, physical or chemical combination and refinement.^[4]

3. Relation of Bala and Vyadhikshamatva Health of an individual depends upon good strength of the body tissues. It is difficult to treat the disease occurred in one whose body strength is low and hence Acharya Charaka prefers the Bala (strength) examination of an individual before starting the treatment. Acharya Sushruta mentioned that the final and excellent essence of Dhatus begins with Rasa to Shukra is Ojus and this Ojus is said to be Bala. Dalhana has commented on this as Ojus is the cause for predominance of Bala of whole body. Acharya Vagbhata also supported view of Acharya Sushruta and mentioned similar concept which clearly indicates the close relation between Oja and Vyadhikshamatva.

Types of Bala^[5]- It is of three types Sahaja (constitutional), Kalaja (temporal) and Yuktikrutajabala (acquired).

Sahaja Bala- Constitutional strength is the one which exists in the mind and body from the very birth.

Kalaja Bala- Temporal strength is the one which is based on division of seasons and age of the person. In Adana kala (late winter, spring and summers) Bala of individual will be less and in Visarga kala (rainy seasons, autumn and winter) it will be more. Bala will be Alpa (minimum) in child and old age, Uttama (maximum) in young age.

Yuktikrutaja Bala- Acquired strength is the one which is achieved by the combination of diet and physical activities. Factors responsible for promotion of strength

There are 12 factors responsible for increasing Bala (strength) of the body.

- A. Birth in a country where people are naturally strong.
- B. Birth at a time when people naturally gain strength i.e. Hemanta (November to January) and Shisira (January to March)
- C. Favorable deposition of time (pleasant and moderate climate)
- D. Excellence in the qualities of seed i.e. sperm and ovum, and Asaya i.e. proper anatomical and physiological status of uterus of mother
- E. Excellence of the ingested food.

The individuals possessing most of these factors are naturally immune i.e. Vyadhikshamatva for diseases.^[6]

4. Relation between Agni (food assimilation power of body) and Vyadhikshama Acharya Charaka in the context of functions of Agni narrated that, Dehagni or Jatharagni (digestive power of stomach) is responsible for life, color (luster of the skin), strength, health, enthusiasm, plumpness, complexion, Ojas (energy), Tejas (gleam of the body), other varieties of Agni and Prana (vitality). Extinction of this Jatharagni leads to death. Its proper maintenance helps a person to live a long life and its impairment gives rise to diseases. Therefore Jatharagni is considered to be the root or the most important sustaining factor of living beings. In this way immunity is influenced by the power of Agni, digestive fire and our ability to digest, assimilate and absorb nutrients in human bodies. In a healthy, strong and immune body, invaders get neutralized or destroyed and expelled out of body. If Agni is impaired by an imbalance within, the Tridosha then metabolism will get affected, immune response and natural resistance will also be lowered.

5. Relation between Oja and Vyadhikshamatva - According to Acharya Charaka, oja appeared foremost in the human body during embryogenesis. The essence of Saptadhatus (seven bodily tissues as from Rasa to Shukra Dhātu), i.e. Rasa (plasma and lymph), Rakta (blood cells), Mansa (connective and muscular tissue), Meda (body fats e.g. adipose tissue), Asthi (bones), Majja (bone marrow) and Shukra (reproductive systems) is called Oja and it is the seat for strength, hence called Bala. Ojas is Sara (essence) of Dhatus ending with Sukra; through located in the heart, it pervades all over body and control the working of the body. It is viscous, unctuous, greasy, Somatmaka (preponderant in watery principal), clear (transparent) and slight reddish yellow in color. By its loss (destruction, absence) death will occur and by its presence the body (and life) sure to survive. Oja is the reason for different condition and activities related with the body.^[7]

6. Rasayana (Rejuvenation therapy) and Vyadhikshamatva Rasayana means the way for attaining excellence in all body tissue through some special measures and medicines. Rasayana therapy is one

of eight major specialties of Ayurveda. The concepts of immunity and immunomodulation are extensively explored and used in Ayurveda, particularly in the form of Rasayana therapy. According to Ayurveda, Rasayana helps in strengthening Oja, Bala and thus increases Vyadhikshamatva.

Benefits of Rasayana therapy Long life (good), memory, great intelligence, perfect health, youthfulness, bright complexion and color bold voice and magnanimity, increase strength, of the body and sense organ, perfection in speech, sexual power and brilliance are all obtained from proper Rasayana therapy.

Classification of Rasayana According to method of use.

- 1) Kutipraveshika Rasayana (indoor Regimen)
- 2) Vatatapika Rasayana (outdoor Regimen)

According to purpose - 1) **Aajasrika Rasayana** (promoter of health by some drug regimen and can be consumed in all conditions) 2) **Naimittika Rasayana** (promoter of specific vitality in specific disease) 3) **Kamyas Rasayana** (promoter of health in specific way in normal individual).

Concept of improving Vyadhikshamatva (Immunization)^[8] - The following are looking to be the immunization measures in Ayurveda.

1. **Rasayana** 2. **Lehana** (Lickables or Electuaries) Taking Rasayana is helpful to increase the immunity of the person to keep him away from opportunistic diseases. The possible mechanisms by which action of Rasayana can be interpreted with modern aspects are; nutritive function, immunomodulatory action, antioxidant action, anti-aging effect, neuroprotective action, haemopoietic effect etc. In recent years numerous researches have been done to explore Ayurvedic treasure for benefit of common people to improve health by using different Ayurvedic drugs. Some examples are.

- A. Immunostimulatory effect of *Curculigo orchioides* Gaertn.
- B. Macrophage activation property of *Tinospora cordifolia*
- C. Effect of some Indian herbs (*Asparagus racemosus* Willd, *Tinospora cordifolia* Willd., *Withania somnifera* Daul and *Picrorhiza kurrooa* Royle ex Benth.) on macrophage functions in mice.
- D. Immunoprotection by *Withania somnifera* Dunal, *Tinospora cordifolia* Willd. and *Asparagus racemosus* Willd. during cancer chemotherapy.
- E. Immunopotentiating property of *Tinospora cordifolia* Willd.
- F. Augmentation of non-specific immunity by gold preparations.
- G. Anti-cataleptic, anti-anxiety and antidepressant activity of gold.

There are number of such studies through which Ayurvedic single or multiple formulations tested by

experimental studies on albino mice/rats etc. or reported the beneficial effect of human trails, So these studies reveals that there are wide range of possibilities improving immunity and treatment in various disease.

The selection of Rasayana^[9]- According to need, Rasayana drugs can be administered by considering various factors such as Age, Dhatu Deha Prakruti, Kala, Disease, to enhance memory. And Srotas, Medhya Rasayana drugs are life-promoting, disease-alleviating, promoters of strength, and power of intellect.

Level of action of Rasayana drugs- Rasayana act at three levels such as at the level of Poshaka Rasa (increases nutrition), at the level of Agni (increases digestion and assimilation of food) and at the level of Srotas (increases absorption of food from serum to various parts of body).

Lehana In Ayurvedic texts, various Acharays have described countless useful formulations and mode of conduct for children. Acharya Kashyapa describes a special formulation by the name of "Lehana". The facts stated about Lehana are as under.

Purposes of Lehana 1. To enhances growth & development by providing sufficient nutrition. 2. Promote health, complexion and strength (immunity). 3. Protect from various infections along with improving intellect and speech (delayed milestone).

Indication of Lehana - The children of a mother who are having no breast milk, deficient milk, or vitiated milk of parturient women (mother) or of a wet nurse of similar condition who have predominance of Vata and Pitta but not Kapha, who do not get satisfied with the breast milk and cry inspite of repeated sucking, children who do not sleep at night, eat too much, pass scanty urine and feces; children who have increased digestive power, though free from disease yet scraggy, have delicate body part and emaciated, do not pass urine and feces even for three days; such type of children should be prescribed lehana (electuaries).

Acharya Kashyapa- 1. Svaran Prasana - Pure gold (in small quantity) is rubbed in water on a clean stone and given with honey and Ghrita, be given to child for licking. Licking of gold increase intellect, digestive power and metabolic power, strength, gives long life, is auspicious, virtuous, aphrodisiac, increase complexion and elimination the (evil effect of) Graha.^[10]

2. **Samvardhan ghrit**

3. **Brahmi ghrita**

B. Acharya Charaka^[11]

1. Panchagavya ghrita (Ghrita means clarified butter made from cow's milk).
2. Brahmi ghrita.
3. Kalyanaka ghrit.

C. **Acharya Sushruta** Sushruta has mentioned 4 recipes (containing gold) which provide general immunity, body resistance, helpful in growth and development and enhancing the intelligence. These are.

1. Svarna bhasm with Kustha (*Saussurea lappa* C.B,Clarke), Vacha (*Acorus calamus* Linn), Madhu (honey) & ghee.
2. Svarna bhasm with paste of Brahmi (*Bacopa monnieri* Linn), Sankhapuspi (*Convolvulus pluricaulis* Chois.), with honey & ghee.
3. Svarna bhasm, Arkpushpi (*Holostemma annularium* Roxb.), Vacha (*Acorus calamus* Linn), honey & ghee.
4. Svarna bhasm, Khaidarya (*Murraya koenigii* Linn), Sweta Durva (*Cynodon dactylon* Linn.) ghee.^[12]

D. **Acharya Vagbhata**- 1. Ashtanga ghrita 2. Sarshvata ghrita.

Rasayana drugs according to age^[13]

Decade of life (In years)	Loss of impact	Desirable Rasayanas
1-10	Balya	Vacha, Svarna
11-20	Vruddhi	Kashmari, Bala
21-30	Chhavi	Aamalaki, Lauha
31-40	Medha	Shankhapuspi
41-50	Twak	Jyotishmati
51-60	Drushti	Jyotishmati
61-70	Shukra	Aatmagupta, Ashwagandha
71-80	Vikrama	Aamalaki, bala
81-90	Buddhi	Bramhi
91-100	Karmendriya	Bala rasayana

Rasayana according to Dhatu^[14]

Rasa	Draksha, Kharjura, Kashmari
Rakta	Aamalaki, Palandu, Lauha
Mamsa	Haritaki, Guggulu, Guduchi
Meda	Laksha, Shukti, Shankha
Asthi	Aswagandha, Bala
Majja	Lauha, Majja, Vasa
Shukra	Aatmagupta, Pippali, Nagabala

Rasayana according to Deha Prakruti^[15]

Dosha	Rasayana dravyas
Vatika	Bala, Ghrita
Paittika	Aamalaki, Shatavar
Kaphaja	Bhallataka, Guggulu, Pippali

Rasayana according to Disease

Disease	Rasayana dravyas
Prameha	Shilajatu, Haridra, Aamalaki
Aamavata	Bhallataka
Medoroga	Guggulu, Haritaki
Shvasa	Bhallataka
Kushtha	Tuvaraka
Pandu	Lauha
Manasaroga	Medhya Rasayana

Medhya Rasayana

Drug	Part used
Mandukaparni	Swarasa (juice)
Yashtimadhu	Churna (powder)
Guduchi	Swarasa (juice)
Shankhapuspi	Kalka (paste)

Rasayana according to srotas^[16]

Srotas	Rasayana Dravyas
Pranavaha Srotas	Pippali, Bhallataka, Aamalaki, Maricha, Kasturi
Udakavaha Srotas	Panchakola, Kapardika, Shankha bhasma, Hingu,
Rasavaha Srotas	Kharjura Manth, Laja Manda, Guduchi
Raktavaha Srotas	Lohabhasma, Go-Ghrita, Gorochana,
Mamsavaha Srotas	Karaskar, Svarna bhasma
Medovaha Srotas	Guggulu, Shilajatu, Kumbha
Asthivaha Srotas	Aabha
Majjavaha Srotas	Vacha, Markava, Raupya bhasma
Sukravaha Srotas	Cow milk, vang bhasma
Mutravaha Srotas	Shilajatu, Gokshura, Punarnava
Purishvaha srotas	Kutaj, Bilwa, Haritaki

DISCUSSION

Vyadhikshamatva - resistance to diseases or immunity against diseases is of two kinds i.e. the one which attenuate the manifested disease and other variety prevents the manifestation of diseases. Sleshma in normal state considered as Bala and Oja and function of normal Kapha like that of Ojas. Agni (food assimilation power of body) is important for proper digestion of diet. Proper nourishment of Dhatus will be depends on wholesome and unwholesome food. Doshas are vitiated due to continue taking unwholesome food ultimately production of excellent essence of Dhatus i.e Ojas is not done. Final and excellent essence of Dhatus beginning with Rasa to Shukra is Ojus and that Ojus is said to be Bala. The concept of Vyadhikshamatva is related with Kapha, Bala, Agni and Ojas. Ayurvedic Rasayana therapy in light of the concepts of modern immunology, particularly the immunomodulation will be quite rewarding. Many research works on the Rasayana drugs are effective in improving immunity and prevent the disease as antibacterial and antifungal. Lehana is also helpful for the strength, intelligence and ultimately improve the immunity. Such attempts might bring about much needed integration of traditional Indian Ayurveda and modern scientific medicine and help in the development of a holistic approach towards human health.

CONCLUSION

Ayurvedic concept of Vyadhikshamatva is similar as normal condition of the Kapha, Bala and Oja. Oja is final and excellence of the product Dhatu and Vyadhikshamatva depends on it. Production of excellence of Dhatu depends on the Hita and Ahita Ahara and Agni. Rasayana therapy help in produce excellence Dhatu and lastly it convert into Oja, ultimately increase in Oja and similarly increase in immunity. Many researches proved immunomodulatory effect of drugs which are used in Rasayana therapy. Medhya Rasayana (Nootropics drugs) is life-promoting, disease-alleviating, promoters of strength, Agni, complexion, voice and intellect-promoting. Lehana will be also helpful in the improve immunity.

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