

LITERARY REVIEW OF OJA BALA WSR TO IMMUNITY

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ABSTRACT

About 5000yrs back, ayurvedacharyas explained the term 'Oja' which correlates with the 'Bala' or Immunity of a human being. This article correlates the Ayurvedic verse of Aacharya Charak related to 'Ojabal' with the scientific concept of Immunity.

KEYWORDS: *Oja, Sahaj Bala, Yuktikrita Bala, Vyadhikshamatva, Karya-Karan Sambandha, Rajnichara, Roga pratirodhak kshamta.*

INTRODUCTION

*Prakritastu Balam Shleshma Vikrito Mala uchyate**Sa ch eva ojah smritah Kaye* (Ch.Su.17/17)^[1]

Oja according to Ayurveda is the *Prakrit Bala* of an individual. *Bala* again is categorised in three types according to Samhitakars ie

*Trividham iti Balam Sahajam Kalajam Yukti kritam ch**Sahajam yat sharir-satvyo Prakritam, Kalakritam Ritu-Vibhagam Vayakritam ch, Yuktikritam punah tat yat aaharcheshtita yogjam* (Ch.Su.11/36)^[2]

Ie *Sahaj, Kalaj and Yuktikrit* these three types of *Bala* are scientifically correlated with the types of immunity. Commentator Chakrapani describes the *Karya Karan Sambandh* between *Oja* and *Bala* because *Bala* is obtained from *Oja* itself.

Bala that exists in the natural form in an individual's body is called *Sahaj Bala* which can be correlated with innate and maternal immunity. *Bala* which depends upon Seasons or Age of an individual is called *Kalaj Bala*. And the *Bala* that is established by the consumption of best type of foods and the day to day activities is called *Yuktikrit Bala* or the Acquired immunity.

Objectives of the study

To correlate the Charak Samhita verse explaining three types of *Bala*, with the scientific concept of Immunity and its types along with the preventive measures to boost up the *OjaBala* or Immunity.

Literary review

Trividham iti Balam Sahajam Kalajam Yukti kritam ch

Sahajam yat sharir-satvyo Prakritam, Kalakritam Ritu-Vibhagjam Vayakritam ch, Yuktikritam punah tat yat aaharcheshtita yogjam (Ch.Su.11/36)^[2]

The verse given by Acharya Charak has a great Scientific validation. Immune system of every individual is classified into two parts^[3]

- Innate Immune System and
- Acquired immunity

Innate immunity is present during birth and is non specific type of immunity which fights with the foreign body by non specific enzymes, defensins, phagocytes etc. It may be Humoral (by chemicals in body fluids) or Cellular (by phagocytes). Examples are

- Enzymes present in digestive juices, saliva or tears
- Acid in stomach, vaginal tract, urine or sweat etc
- Cilia in respiratory tract trapping foreign material
- Coughing or Sneezing Reflex preventing arrival of foreign bodies
- Bacteria in gut, bacteria in genital tract
- Intact skin protecting foreign body
- Antibacterial proteins and Zinc in semen
- Mucus in mucus membrane of respiratory tract
- Defencins in epithelial cells of respiratory tract
- Neutrophils, macrophages, Natural Killer cells, interferons, complementary proteins, Reactive proteins etc. in plasma

Sahaj Bala described in Ayurvedic texts which is said to be existed since birth of an individual and develops naturally at the time of *Shukra Shonit Sanmyog* during conception, only is the Innate immunity of an individual described by modern science. This is said to be *Roga pratirodhak kshamta* gifted by God at the time of birth.

On the other hand, *Acquired Immunity* is the resistance developed after birth on exposure to microorganisms, toxins, foreign bodies, transplanted tissues, vaccines etc. It is more complex and powerful system of Immunity. B Lymphocytes and T Lymphocytes are responsible for acquired immunity. Acquired immunity is of specific type. Immunity developed by B lymphocytes is called Humoral Immunity and the Immunity developed by T Lymphocytes is called Cell Mediated Immunity. Circulating antibodies are responsible for acquired Humoral Immunity which is dependent upon B Lymphocytes. B Lymphocytes differentiate into Plasma cells which are responsible for formation of immunoglobulins (IgG, IgM, IgA, IgD & IgE) or antibodies. These antibodies are generated because of good nutrition only.^[4] Vitamin C vitamin D and Zinc play crucial role for the development and function of antibodies.^[5]

Yuktkrita Bala described by Acharya Charak, which is said to be established by the consumption of best quality of foods therefore is the acquired immunity. Good nutrition scientifically is proven to be the source of acquired immunity in our body. Malnourishment on the other hand impairs antibody production and the overall function of the immune system. Activities like Exercise, Pranayam, Meditation are said to be helpful for the development of *Yuktikrit Bala*. *Rasayan dravyas* are also responsible for developing *Yuktikrita Bala*.

Naturally acquired immunity further is of two types

- Active (Antibody formation) and
- Passive (Maternal)

Maternal immunity or passive immunity is due to antibody transfer to baby's body from Mother. it comes under *Sahaj Bala* itself.

Active acquired immunity is *Yukti krita Bala*.

This acquired active immunity is the only after-birth *Oja* or *Janmottar Oja*.

OjaBala-Vardhak dravya & Bala Vridhikar Bhava

In Ayurvedic texts, some dravyas are described which are said to be *Ojo-vardhak* for example milk, ghee, butter, fruits, vegetables, Ashwagandha, Shatavari, Amla, Guduchi, Triphala, Trikatu etc.

These meals and Herbs are helpful in production of interferons and antibodies in our body to fight with the micro-organisms. In Contemporary Science also, this is described that the antibodies and interferons are generated because of good nutrition only.^[4] Vitamin C vitamin D and Zinc play crucial role for the development and function of antibodies.^[5]

Tat ch ojah parirakshita

Pariharya visheshen manso dukkhetvah

Hridya yatsyad yatojasyam srotsam yat prasadnam

Tat tat sevyam prayatanenprashmo gyanamev ch (Ch.Su.30/13-14)^[6]

In order to preserve *oja*, one should give up all the possible causes of sadness or psychological depression along with the intake of those foods and practice those activities which are responsible for healthy heart and healthy channels with their proper functioning and smoothness.

This all is accepted by Modern Science also because of Recent Researches on the same. Staying sad for prolonged periods can lead to depression, and also weaken your immune system. And with a compromised immunity, your body becomes more vulnerable to illnesses and infections. When you're sad or depressed, your body releases higher levels of *cortisol, the stress hormone*. Cortisol, when elevated for long periods, suppresses your immune system, making it harder for your body to fight off infections like the flu or common colds. Research from the American Psychological Association shows that chronic sadness can directly weaken the immune response, leaving you exposed to viruses and bacteria more easily. Chronic stress also suppresses the body's immune system, making it harder to recover from illnesses. Chronic stress can significantly impact the immune system, making individuals more vulnerable to illness and interfering with the body's ability to recover from infections.^[7]

A heart-healthy diet, often called the cardiac diet, is designed to support cardiovascular health and can also positively impact the immune system. It emphasizes foods that reduce inflammation and promote overall well-being, which indirectly strengthens the body's ability to fight off infections.^[8] Many foods that support heart health are also beneficial for the immune system. Foods like fruits, vegetables, whole grains, healthy proteins, and unsaturated fats are rich in nutrients that can boost immune function. These foods contain antioxidants, vitamins, and minerals that help the body fight off infections and illnesses.

MadhurSnigdhaSheetani Laghuni ch hitani

OjasoVardhanani aahu

(Ka.Su.27/16)^[9]

Ie sweet, unctuous, cold, and light foods are ojobardhak.

It is well said in Modern medicine that Oily fish, nuts and seeds, sweet potato, broccoli, legumes, whole grains etc. are proven to be supportive of human immune system. Oily fish can positively impact immunity by providing essential nutrients like omega-3 fatty acids, vitamin A, and iodine.^[10]

Jeevaniya-aushadh-ksheer-rasadyastatra bhesjam

Ojovivradhou hi dehasya tushtipushti balodyah

(Ash.Hr.Su.11/41)^[11]

Means Jeevaniya aushadh, milk, soup of flesh are the best medicines for decreased quantities of *Oja* in the body. Satisfied, Nourished and physically strengthen are the 3 qualities of *OjaVridhhi*.

Milk and its products are said to be the important source of probiotics in our diet. These boost immunity by creating the growth of bacteria in the gut which is beneficial for digestion and absorption of nutrients. Bone broth, a key component of many "flesh" soups, contains amino acids like carnosine and glutamine, which can help the body fight infections and reduce inflammation. Broth from "flesh" (bone broth, especially chicken or beef) can contribute to a stronger immune system. Specifically, bone broth is rich in nutrients like amino acids (including carnosine), minerals (calcium, magnesium), and collagen, all of which support various aspects of immune function and overall health. Combining iron-rich foods with a source of vitamin C such as broccoli, red pepper and sweet potato can help boost your absorption even further.

Chicken soup made with *real* bone broth will also work wonders on your digestive and immune health. The gelatin in the bone broth contains a vital nutrient called glutamine which is the primary fuel for the cells lining your gut, keeping it healthy and able to block out pesky bugs.^[12]

Balavridhikarastivame bhava bhavanti tadyatha

Balavatpurushe deshe janmah, balvatpurushe kaale ch, sukhashch kaalyogah, beejksheetra gunsampanneh, aaharsampanneh, sharirsampanneh, saatmaysampanneh, satvasampanneh, savbhaavsamsidhhishch, yauvanamch, karmach, sanharshashcheti

(Ch.Sh.6/13)^[13]

Ie *Bala-Vridhikar Bhava* are described by Acharya Charak in Sharir Sthan to instruct how to be strengthen and fight against infection. These are

- Born in geographical area (State, district or country) of healthy people.
- Born in healthy season eg *hemant ritu*
- Born in normal season (Neither too hot nor too cold)
- Born of healthy sperm and ovum along with healthy uterus
- Intake of good nutrition and healthy foods
- Bodyparts and organs are in best quality and healthy
- Making Healthy foods best suitable for your body
- Satvasampann ie inculcating best psyche qualities within one self
- Naturally healthy (God gifted)
- Young Age itself is responsible for healthy physique
- Practicing physical activity or exercise
- Happiness, Joy are the last but most important of all *Bala-Vridhikar Bhava*

These all *Bala-Vridhikar Bhava* are scientifically proven to enhance physical and mental strength of an individual along with playing an important role in developing Immunity of an individual.

Environmental factors, including geography and socioeconomic status, further modulate the variety of the immune system responses. These, in turn, affect the susceptibility to infectious diseases and development of autoimmune disorders.^[14]

It is observed that Birth Season affects neonatal immune system development and results in differential potentiation of cord blood immune cells and early airway mucosal immune function.^[15]

Healthy sperm, ovum, and uterus play crucial roles in establishing a healthy pregnancy and the developing fetal immune system. Sperms are not just vehicles for genetic material; they also contribute to the development of the fetal immune system.^[16]

Healthy diet, good nutrition, physical exercise, happiness and joy have already been explained and proved to be accepted by Contemporary Science in above paragraphs.

DISCUSSION

Balam hi alam nighrahaay doshanaam

Balakrit-ch-tat (Ch.Ch.3/167)^[17]

Means that *Bala* or *Oja* definitely is enough to eradicate abnormal doshas in our body. *Bala* if exists in good quantity in our body will eradicate the abnormal doshas or wastes or toxins or foreign materials from our body.

Ojoashananaam Rajnicharanaam

Aahar-hetor-n Shariramishtam (Ch.Sh.2/10)^[18]

Means the food is never desired by the antigens (Called *Rajnichara* by Samhitakars) which digest *Oja* or the *Bala* (Antibodies) of an individual. Ayurveda describes the antigen-antibody fight in this way.

Antigen-Antibody interaction ends with the symptoms shown in the body, which depends upon the power of antigen or antibody. If antigen is strong the body shows severity of the disease and if antigen is weak and body's immune system is strong then body shows only mild or no symptoms of the disease.^[19]

Further it is said by Acharya Charak that

Na cha sarvani sharirani vyadhikshamatve samarthani bhavanti. (Ch.Su.28/7)^[20]

That is all individuals are not similarly capable to fight a disease.

Therefore every individual shows different levels of severity of a disease as per the power of their immune system. Environmental factors, Lifestyle factors, age, sex, nutritional status, medical conditions etc. are responsible for different levels of immunity in different people.

CONCLUSION

In Ayurvedic Classics, *Oja-Bala* is described very scientifically which plays an important role in preventing an individual from different types of diseases. This is called its *Vyadhikshamatva Bala* or *Oja*. This is scientifically proven by Contemporary Science immunologically as Immunity plays an important role in prevention of a disease and can be developed by healthy diet.

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