

IMMUNITY: AYURVEDIC PERSPECTIVE AND PRACTICES-A REVIEW

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ABSTRACT

Introduction: The immune system which forms a base line of defence mechanism fails in combating the newer challenges of invading viruses, bacterias etc. Ayurveda as an ancient old science also believes in the concept of protecting the health by preparing the body to build its innate immune system stronger. *Vyadhikshmatva* is a much broader concept studied in Ayurveda in relation to immunity. Its practice also gives the newer path in discovering various immune enhancing medicines to help in building our own defence mechanism. **Aim and Objectives:** To study the Ayurvedic perspective of immunity by exploring ancient and modern science. **Material and method:** Various Ayurvedic references, research articles to be studied. **discussion:** The

clinical relevance of Ayurvedic immunology discussed with reference To *vyadhikshamatva*, *oaj*, *bala*. **Conclusion:** Various evidence in support of Ayurvedic perspective of immunity give newer hope to health care system to fight the odds of resistance microbes by developing immune system. Ayurvedic lifestyle, diet, yoga, antenatal post natal care, use of ayurvedic swarna prash, use of rasayanas as proven immunomodulators can help in fighting the plight of irresistible invaders in future too.

KEYWORDS: vyadhikshmatva, rasayanas, immunity, oaj, immunomodulators, prakriti.

INTRODUCTION

Fact for life is people spend their 'health gaining wealth, and then have to spend their wealth to regain health. Sharangdhar samhita quotes "no creature is immortal it is impossible to prevent death, but it is possible to prevent diseases. so one should try for which is preventable. Out of three basic pursuits (*trividh eshna*).^[1] of life namely desire to live desire to earn, desire to have superior position after death, the desire of longevity steals the prime position. The concept of immunity has been flaring waves amongst the population since the outbreak of covid 19. Immunity is body's defence mechanism against any unwanted invaders. The stronger is your immune system the more less chances of being affected by viruses, bacteria etc. The natural immune system of our body is build from the time we are at our mother's womb and this fact Ayurveda explores the importance of naturally building our self army to defend future challenges of health.

Ayurveda concept of immunity is dimensionally wide and interesting. Ayurvedic concept of *vyadhikshamatva* can have correlation to the trending concept of immunity in conventional sciences. *Vyadhi* implies disease and *kshamatva* is prevention and resistance against it. Similar synonym in Ayurveda which appears similar to the concept is *bala* which denotes strength. Ayurveda believes in concept of longevity and seeking proper life.^[2] hence it deals with four corners of "good-bad", "happy-unhappy" perspective of life (*ayu*) leading to promotion of health. The concept of *vyadhikshamatva* (immunity) and *bala* (strength), *oj* (exilir of dhatu) are such principles of ayurveda which lead to building newer horizon in Ayurvedic immunology.

REVIEWING OF LITERATURE

An overview of the immune system with modern scenario

The immune system consists of a set of specially evolved cells circulate through the body and deal wide variety of organisms that are faced in surrounding environment. The immune system selectively destroy foreign molecules and cells without harming the host's own normal healthy cells. The immune response may be divided into two broad overlapping parts based either on time kinetics of response or on functional events. The early response or first line of defence occurs within minutes to hours of encounter with the foreign antigen and is termed innate or non specific immunity or non adaptive immunity. The delayed response occurs within days and is known as adaptive or specific immunity.^[3]

In simple words survival of the fittest depends upon this strong system of defence is once body. The stronger we build our natural defence mechanism the stronger we are ready for any dreadful invasion of virus in current scenario this mechanism is the need of hour for fighting covid 19.

Reviewing ayurvedic perspectives of immunity and its practices

Integrity in concept of *vyadhikshamatva*, *bala*(vitality)in Ayurveda and immunity

Vyadhikshamatva is defined reducing the strength of disease which has occurred and which can prevent its occurrence.^[4] This principle in ayurveda clearly depicts the relation of immunity as it is also the defence concept which deals with protecting the body from getting diseased.

Influencing factors of *vyadhikshamatva* by gradation of types of *bala*

The further evaluation of *vyadhikshamatva* depends on *bala* (strength) of individual. This *bala* (strength) imparts firm integrity to muscles (mamsa), improves voice (swara), complexion (varna), fortifies motor, sensory and intellect to perform their functions properly.^[5] Any practice leading to balancing the strength of body by increasing *vyadhikshamatva* will increase the possibility of maintaining equilibrium of health.

The types of *bala* (strength) mentioned in ayurveda it has been divided into three main heads. *Sahaj bala* implies the constitutional *bala* present since birth.^[6] which depends on strong genetic constitution since birth that is strong *shukra* (sperm) and *artava* (ovum) uniting to give birth. Children born with strong genetic makeup are invariably healthy to survive all odds, this is the genome science known to sages of Ayurveda when genetics was not even born. Measures of increasing *sahaj bala* has been given in Ayurvedic text. The partners involving in giving birth to the child shall individually indulge in cleansing procedure of panchkarma like *vaman*, *virechan* according to dominance of doshas and shall undertake *anuvasan* and *niruh basti*.^[7] They are advised to consume *ghrita*, milk medicated with all herbs of *jeevaniya gana* like *jeevak*, *meda*, *mahameda* etc. Thus *sahaj bala* can be correlated to natural adaptive immunity which tends to be adapted since birth from mother.

Kalaj bala type is in accordance with season, age, time encompassing a day. Measures in augmenting *kalaj bala* may include following the rules laid for seasonal variation (*kritucharya*) in ancient text so to keep the balance of *dosha*, *dhatu*, *agni* and hence maintaining the *vyadhikshamatva*. Similar elimination of vitiated *doshas* in the season will

keep the balance of all important factors maintaining the *vyadhikshamatva* for instance *vaman in vasant, virechan in sharad and basti chikitsa in varsha kritu*.

Yuktikrita bala This is one type of acquired type of immunity which get enhanced by proper diet, exercise and various yog in particular *rasayanas*.

Conceptualising *oaj* with *vyadhikshamatva*, *bala*, *shleshma*, immunity

When *shleshma (kaph)* is in normal state, it is called *bala* as well as *oaj*, but when it is in abnormal state it is termed as *mala*(waste) and *papma* (diseases). It clears the fact that *bala*, *shleshma*, *oaj* are synonyms used to *vyadhikshamatva*. When *kaph* is in normal state it gives compactness, stability, virility, immunity and resistance.^[8]

Oaj or *bala* abnormalities are categorised as *oaj visransa*, *oaj vyapat* and *oaj kshaya*. Each entity deals with different set of symptoms. In case of *visransa* (means displacement from its normal place), *sandhivishlesh* (dislocation of joints), *gatradsan*(pain in body), *doshachyawan* (displacement of three doshas), *kriyasandhirodh* (impaired body functions). Where the symptoms of *vyapath* and *visran* relates to various stages of immune deficiency diseases and *kshay* highlights its relation to immune compromised patients like HIV, terminal stage of cancer. Planning the treatment of *oaj visransa* and *vyapath* which are the stages where one can regain vitality, management shall focus on use of drugs of *jeevaniya gana*, *mamsa rasa*, milk and *balvardhak*(nutrient diet) treatment. Rasayan therapy can be electively chosen for patients showing these symptoms.^[9]

Oaj visrana or autoimmune disorders can be treated with purification process of panchkarma to bring the dislodged doshas to their respective place. Hence in order to prolong life one has to take care of *para* as well *apar oaj*. As said with stable *oaj* there is stability to life.

a. *Ahar* (diet) and *vyadhikshamatva* (immunity)

Ayurveda put forth diet as one of the strongest pillar in maintaining health. *Ahar* (diet), *nidra* (sleep), *brahmacharya* (abstinence) are considered three vital entity.^[10] Wholesome food is the sole cause of living being. consumption of proper amount of food certainly helps the individual in bringing strength, good complexion, happiness, and longevity.^[11] This implies that *ahar* indirectly augments the *vyadhikshamatva*. It increases the vitality of all dhatus (tissue).

An unwholesome food article is harmful depending upon nature of locality, season, combination, potency, quantity. This concludes unwholesome diet becomes more unwholesome if taken in wrong place, with bad food combination, in improper quantity.

According to modern also, the use of food and beverages with high sugar, processed food, alcoholic beverages, tobacco are unwholesome items of contemporary sedentary society hampering their immune responses. Researches suggest use of garlic, turmeric and items with high vit C are found bound to increase immunity. So is Ayurveda suggest use of *chyawanprash* with vit C as best immunity enhancer. Use of garlic(lasun) as one of the *rasayana* has been advocated by archarya vaghbhatta. And An Indian food is rich source of all these immune enhancing food.

Ayurveda has described an important factor of digestion and metabolism in our body as *agni*. Ingested food is to be digested, absorbed, and assimilated which is unavoidable in maintenance of life and this performed by *agni*. Impairment in its vital function gives rise to various diseases. Even in conventional science the improper metabolism leads to diseases of metabolic origin like dyslipidemia, obesity, diabetes mellitus etc. So the very chance of maintain *agni* by diet, exercise, *panchkarma* and *rasayan* would augment the *vyadhikshamatva* (immunity) of any individual.

b. Nidra (sleep) and immunity

Ayurveda in the chapter of daily regimen has also jotted the importance of proper sleep. Acharya sushruta opines that one who take proper sleep at proper time will not suffer from diseases, their mind will be peaceful, will gain strength, complexion, virility, have attractive body and live healthy for 100 years to follow.^[12] Humans sleep and awake at fairly constant 24 hours called **circadian rythm**. When we attempt to stay awake against schedule dictated in circadian rythm our mental and physical performance greatly diminishes. Circadian release melatonin causes release of cytokines and thus regulating cell mediated immunity of t-lymphocytes.^[13]

c. Vyayam (exercise) and immunity

Vyayam with due course has been considered as an integral part of Ayurvedic daily regimen. It focuses on the fact that regular practise of exercise will result in light feeling, good exercise tolerance, good digestive power reduction, fit and attractive body.^[14] Researches in support of exercise promoting immune system have a different theory of explanation which collaterally

defines our Ayurvedic view. With similar view point researches on **athletes, sedentary subjects and women** prove that intense amount of exercise may increase the risk of infections. According to “j” curve study, It describes as moderate exercise enhance immune function above sedentary levels, while excessive amounts of prolonged high intensity exercise may impair immune functions.^[15]

d. Yoga and immunity

The term “*yoga*” has a wider meaning as compared to mere sets exercises. It is eventual event which connects mind, body and soul. Patanjali yoga Darshan explain the holistic approach of finding peace in health. It explains the benefits of practicing yoga can make you content, will give immense sense of happiness with healthy life.^[16] Some of the studies concluded the positive effect of yoga on physical as well as psychological wellbeing. It was found that yoga could reverse the expression of inflammatory mediators, maintains homeostasis and physiological functions of various other System that are in relation to immune responses. It reduces **pro inflammatory cytokines** in various chronic stress induced diseases, also maintain balance of endocrine hormones production.^[17] Thus yoga can prove one of **the influential non invasive therapy** to enhance immunity.

e. Prakriti (bodily constitution) and vyadhikshamatva (immunity)

Prakriti is an unique concept of Ayurveda which has its novel approach in deciding the plan of treatment. Ayurveda believes in that ever individual is uniquely designed at the time of birth. Similar is the formation of *prakriti* of each individual depends upon the conception of sperm and ovum, diet pattern of pregnant women during conception, the dominance of *doshas* at the time of conception which differentiate each individual from the other.^[18] It precisely distinguishes according to dominance of doshas as *vata*, *pitta*, *kaph* dominant *prakriti*. Ayurveda suggests that the *bala* (*vyadhikshamatva*) of *kaph* dominant individual is more. It concludes the least vulnerable bodily constitution to get affected by diseases are of *vata* predominance *prakriti* individual. *Kaph* dominant *prakriti* is strongest with *pitta* dominant with mediocre strength.

f. Child and mother health and immunity

Child and mother health if not discussed would be unfair by all means as a healthy nation depends upon the number of healthy youth. Ayurveda text has mentioned the care that one has to take care of antenatal and post natal period for healthy progeny. The monthly regimen (*garbhini paryacharya*).^[19] if followed would give miraculous results. Use of ghee,

krishara (porridge), milk and sweetened delicacies in first trimester will help in maintaining hydration for gravida getting dehydrated due to pukiness along with its anabolic action shall provide nutrition to mother and foetus. Similarly *gokshur* medicated ghee in second trimester shall give nourishment along with diuretic action will be helpful to reduce puffiness in gravid due to over retention of fluid in body during pregnancy.

This is another field that Ayurveda's contribution can never be challenged. All the *sanskar* (16 Regimen on child) have a scientific relevance. *Swarna prash sanskar* is statistically proven to show good result in terms of immunity. So for better healthy world the women's health should never be compromised. These textual references from Ayurveda make us think how immunity was of prime importance.

h. Swarnaprashan and immunity

Various references from Ayurvedic literature can be turned which promote physical and mental status of child. *Swarna prash*.^[20] is one such reference tempt to promote immunity in children. It is a combination of swarna, ghee and madhu. Kashyap samhita in describing its qualities states it as memory promoter, augments digestive power, prolongs life, righteous, sacred, aphrodisia, complexion promoter, devoid one of insane attack. This formulation is given at *pushya nakshatra* as been believed that *swarna* doubles its effects in *pushya*.

i) Rasayana and immunity

“Preserving Health” is a million dollar question for the health care world in developing countries as the resources fail to combat the requirements. **Rasayana** is one of the such comprehensive disciplines of Ayurveda, which comprises herbs, herbomineral drugs, food articles, a specific way of consuming these drugs with specific way of lifestyle with social etiquette to ultimately preserve the health. *Rasayan* at right age and with prior purification procedures (panchkarma) will shed various health benefits. *Rasayana* are thought to be give longevity, memory enhancer, intellect, youthness, it enhances complexion and strength of body.^[21] These verses give us the importance of *rasayanas* as immunity booster medicines.

Few among many easily available drugs mentioned by acharya vaghbhatta are *shunthi*, *vidand*, *triphala*, *guduchi*, *yashti*, *haridra*, *atibala*, *khadir*, *musta*, *devdaru*, *aguru*, *vijyasara* etc. Every *rasayan kalpa* mentioned in Ayurvedic text are taught to be taken in specific manner to gain all the benefits of the drugs. E. g. *Triphala* when processed in decoction of *khadir* and *vijyasara* seven times and taken with ghee and honey regularly serves as best

rasayan. Similarly *haritaki* taken in prescribed amount by acharya can serve as the most potent in augmenting bala (immunity) of individual. *Amalaki* as *rasayan* has been praised of having rejuvenating effect as the person consuming it will never fall for old age as said by acharya vaghbhatta.^[22]

DISCUSSION AND SUMMARY

This article study's the different perspectives of immunity in correlation with the existing evidence of Ayurvedic perspective which confines the similarity with immunity. *Vyadhikshamatva*, *bala*, *oaj*, *shleshma* are the different words used supporting the theory of immunity in ancient era too. Ayurveda being the most conceptual futuristic science which believes that keeping ones health along with eradication of ill health.

Exercise and yogasana have proven scientific correlation to enhance immunity. Exertion to the body in form of exercise beyond ones capacity will also prove hazardous to immune system. So is the Ayurvedic science too explain the season and capacity of every individual may vary with its constitution. Whereas yoga is beyond the boundaries of exerting ones body it unites mind and soul. Hence has proven benefit in enhancing immunity by relaxing the sympathetic responses.

It is documented that *kaph prakriti* has higher potency of *bala* in comparison with *prakriti*. Prakriti is the unique concept in Ayurveda but when experimentally studied by CD Count on healthy individual in randomised trial. This study concluded that the increased level of CD25, CD56 in *kaph prakriti* may indicate to elicit better immune response which is confirmatory with textual references in Ayurveda.^[23] Though study has limitations much more such evidence based study to prove the concepts of Ayurveda can be carried out. The world demands validation and Ayurveda it itself is the validating data proof of ample number of principles which if studied actually prove the relevance in contemporary sciences. The only thing needed is making us as a medium to make the world know this miraculous validating science.

CONCLUSION

Various aspects of immunity with reference to Ayurvedic perspective give a mirror image that our age old science was already aware of the concept of immunity and its importance. The ayurvedic principle when it says about '*swasthasya swasthya rakshnam*' actually speaks about the protection of immunity of an individual. Ayurvedic immunology is unique blend of

interlinked with tissue nourishment(dhatu poshan), balance of doshas, agni and oaj protection as a biological determinant of bio-strength(bala) and immune strength (vyadhi-kshamatva) in an individual. Its practice also includes the correct lifestyle, diet, exercise, mental strength, various Ayurvedic immune modulating drugs and use of panchkarma to protect the deranged *bala* or *oaj* or *vyadhi-kshamatva* in healthy as well as diseased individual. An evidence based data also proved the potency of various rasayanas in combating the immune system. This article gives a view point of exploring many such data in support of Ayurvedic immunology and its practices.

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