

**IMMUNIZATION ACCORDING TO AYURVEDA**

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**ABSTRACT**

**Background:** Child attending pediatric OPD with presentations of immune deficiency is quite common in India. Immunity of child is very important thing in maintaining the health of the growing child. Human body system is closed system, it doesn't require outside interventions for every mistake in the body except few conditions. It means there is inbuilt mechanism to cure the disease and preserve the wellness of the body, called as immune system. If one can keep immune system good he will be absolutely fine without any outside interventions like medicines. Healing is done by own our body, by own our immune system. Only few conditions require outside interventions and many of them can recover by body's immune system. Now a day

there is mind set tendency that is "I want medicine to cure it". Much research on Adverse Drug Reaction (ADR) shows ADR is the leading cause of death in the world. The major cause of kidney dialysis is ADR. Best example of ADR is non alcoholic cirrhosis of liver.

**Aim:** To study the concept of immunity and immunization according to Ayurveda. **Material and methods:** this is a conceptual study and literature is taken from Ayurvedic samhita and modern text books of medicine. **Conclusion:** Body's immune system is first line of defense and also provides protection on re-exposure. **Results:** Principles of Ayurveda are eternal and need to apply in today's 'ADR era'.

**KEYWORDS:** Immunity, Immunization, Sensitization, Lehana, Suvarnaprashana.

## INTRODUCTION

The main aim of Ayurveda is to give guidelines for maintenance and promotion of health as well as prevention and treatment of diseases. It describes all the methods for maintaining balanced state of Tridosha.

The self, the occult or invisible lord of the body cannot be detected except with the psychic eye or with that of the mind. He who has observed the internal mechanism of the human body and is well read in the works bearing on this subjects and has thus all his doubts expelled from his mind is alone qualified and has a rightful claim to practice the art of healing.<sup>[1]</sup>

In the western science of medicine, the cure of the disease is the one sole aim to be achieved by administering medicinal remedies which dealt with in the book of pharmacy.

Main goal of Aurveda is prevention of disorders in a healthy person and of diseased person. It is quite obvious that to achieve the first goal, immune system should be maintained at higher levels. Prevention of disease in a healthy person is directly related to healthy immune system. So, total concept of Suwastha in Ayurveda is definitely focused on immune system.

Ayurveda mentions different methods of developing and maintaining immunity. Viruddha Ahara may be such foods or combinations which have certain antigenic property and is used to stimulate body's immune system to produce antibodies. Concept of Vishkanya<sup>[2]</sup>, Madhu and Grita prayoga in newborn, Okasatmya are certain examples.

Lehana procedur is an unique procedure of Kaumarbritya. Growth of the brain is very rapid in the first two years of life. Many essential fatty acids, glycoprotein's, saturated fatty acids, lipoproteins, folic acids, vitamins are required for the optimum growth of the brain. Lehana aims to produce high quality neurons with maximum efficacy in early part of the life. Medhya rasayana drugs are indicated in different combinations of Lehana to produce high quality neurons by daily introducing Medhya drugs in Lehana. Suwarna prashana is special procedure explained under Lehana which has got effect on immunological status of the child. Combination of Ghrita and honey with gold act as ViruddhaAahara complex and slowly stimulate the body's immune system.

In the field of Kaumarbhritya routinely two words are used in daily clinical practice i.e. immunization and vaccination. Immunization is the process of stimulating immunosystem. It can be achieved by physical activities, lifestyle adjustment, diet and regimen, certain drugs, vaccination and subclinical infections which occur in day to day life. While vaccination is the method of administration of vaccine to get immunity against target disease.

Ayurveda always gives more emphasis on immunization rather than vaccination. Vaccine is one of the methods of immunization.

**AIM:** To study the concept of immunity and immunization according to Ayurveda.

### **OBJECTIVES**

1. To understand the scientific and broad view of Ayurveda about immunity and immunization.
2. To understand the concept of Lehana and Suwarna prashana.

### **MATERIAL**

Literature reviewed from

1. Authentic Ayurveda samhitas
2. Modern literature (books)

### **METHODS**

Conceptual study of- 1. Immunity 2. Immunization 3. Lehana and Suwarna prashana.

### **Concept of immunity in Ayurveda**

As per Ayurveda body immunity has been referred as Bala, is also synonym of Ojus which sustains the body. This Bala is of three types.

1. Sahaja (Innate immunity)- Innate immunity is attained by birth which is present in every individual but its level may vary. Depending on maternal, paternal, antenatal events, even facts and deeds of previous life.<sup>[3]</sup> mechanical barriers, chemical barriers, biological barriers, cellular barriers are the part of physical innate system (shasrir bala). Similarly psychologically strong, strong will power (Atmabala and Manobala), Satva contributes for one's own innate immunity. Both Atmabala and Manobala are clinically identified in person by observing his enthusiasm in day to day activities.
2. Kalaja –Immunity attained from time to time at different stages of life. Different virulent infectious disorders which occurs in early childhood becomes less common as age

proceeds. Elderly child shows more resistance against viral disorders as compared to young kid. Similarly as per seasonal variations body immunity fluctuates. Individual more prone to diseases in Ritusandhi kala and Yamadrashta kala. Ayurveda should be considered this period as the most vulnerable period (season) for infectious disorders.

3. **Yuktikruta** –This is referred as certain artificial methods to increase the body resistance against diseases. One can increase; sustain his immunity by methodical approach in his lifestyle, Ahara requirements by following rules and regulations of diet. Viruddha Ahara can also be used to stimulate the body immune system. Regular practice of Vyayama, Yoga and Pranayama helps to enhance the immunity.

**Vyadhikshamatva** (immunity) –Immunity is the capacity to fight against pathogens with antigenic in nature (cell mediated) and ability to prevent entry of antigenic substances along with minimizing its severity in the body.(Humoral immunity).

व्याधीक्षमत्वं नाम व्याधीबलविरोधित्वम् व्याधित्पादप्रतिबंधकत्वमिति ॥  
चक्रपाणी

Vyadhibalavirodhitvam – cell mediated immunity

The capacity of fight against pathogens with antigenic nature.

Vyadhi-utpadaaka pratibandhaka - Humoral immunity.

Ability to prevent entry of antigenic substances along with minimizing its severity in the body.<sup>[4]</sup>

**Viruddha Ahara-** may be such foods or combinations of them which have certain antigenic properties. When Viruddha Ahara which is antigenic to the body is given daily in small quantity, our body tissues get sensitized to toxic materials and offers resistance. Whenever foods of opposite qualities are mixed together and consumed, it forms an incompatible food complex with antigenic property. This antigenic compound will be resisted by body's immune system and evokes certain immune response. E.g. Fish and milk.<sup>[5]</sup>

### Sensitization as per Ayurveda

This is one among many great combinations of Ayurveda by introducing the method of sensitization of the body against diseases.

द्रव्यैस्तैरेव वा पूर्वं शरीरस्याभिसंस्कृतिः ।  
अ.ह.सु.७/४६

Viruddha Ahara when used with justification can be therapeutically used to cure and to prevent the disease as Viruddha Ahara has got definite quality of stimulating immune system, the same can be used for prior to sensitization of the body against those antigenic substances which a person is exposed in day to day life. Because negative effects of Viruddha Ahara is very less or negligible when it is taken in minute quantity of incompatible substances, taken daily stimulates body's immune system by evoking an immune response against such substances and then sensitize the body.<sup>[6]</sup>

### Concept of Antidote and immunoglobulin

कुप्येत स्वयं विषं यस्य न स जीवति मानवः ।  
तस्मात् प्रकोपयेदाशु स्वयं यावत् प्रकुप्याति ॥  
सु.कल्प.अलर्कविष ७/५८-६०

While explaining the treatment of Alarka Visha, Sushruta says that fast treatment schedule should be followed. He said before poison increase in the body with all its manifestations, efforts should be done to vitiate that poison by treatment i.e. as soon as poison enters inside, body should counteract the poison. It means in order to prevent severe manifestations of any poisonous materials, person should have been priorly administer either with certain antigenic substances, antibodies or small dose of poison itself, so that before activation of poison in the body's immune system the some nullify that poison by circulating antibodies.<sup>[7]</sup>

### Swabhaoparamavada

Inborn nature of the body which leads to disease termination.

जायन्ते हेतु वैषम्याद्विषमा देहधातवः ।  
हेतुसाम्यात् समास्तेषाम् स्वभावोपरमः सदा ॥  
च.सु.१६/२७

Whenever infections occurs by microorganisms(viral, bacterial, spirochetal, fungal, or parasitic pathogen) there will be disturbances in the body physiology leading to different symptomatology and pathological manifestations similar to that which occurs during disorders of Mithya Ahara-Vihara. This is followed by disturbed homeostasis of three Doshas

and there will be Vishamata in tissue level (Dhatuvaishmya). But later in due to course of time reversible changes takes place naturally to regain equilibrium of these Dhatu and Doshas unless the cause is very potent. Hence, the body overcome the pathological change and Dhatusamyata takes place naturally.<sup>[8]</sup>

देहधातुप्रत्यानिकभूतानि द्रव्याणि देहधातुभ्रिविरोधमापदयन्ते ..... तथा स्वभावादपराणि च।  
च.सु.२६/८१

This clearly shows body's defense mechanism against noxious, antigenic, allergic hypersensitive, poisonous material which introduced inside the body. This may manifest as different type of immune responses. Certain food articles are antigenic by nature like Visha while few can be converted into the same by the combination of two substances. Combination of foods having opposite qualities with respect to Rasa, Virya, Vipaka, Guna becomes antagonistic to the body and evokes an immune response.<sup>[9]</sup>

### **Lehana in Kaumarbhritya**

Concept of Lehana is the unique concept of Kaumarbhritya. All Samhitakaras explain 'Lehana' but detailed explanation of Lehana is available in Kashyapa samhita, which suggests that Lehana is not only restricted for physical and mental health, but also act as supplementary food. It has been aimed to stimulate and strengthen body's immunity. Hence multifactorial, multidimensional approach has been explained by Kashyapa, to bring all round growth and development of the child with the help of Lehana. Besides providing high caloric diet supplementation to the growing child. Lehana also takes care of physical, mental and immunological facets of child so that child can live a happy future life.<sup>[10]</sup>

### **Benefits of Lehana to child**

1. Niramaya – disease free state
2. Dhi, Sruti, Dhriti – high levels of intelligence with analytical mind
3. Nirvyadhi – high level of immunity
4. Tushti, Pushti – good nutrition and physical strength
5. Indriyajaya – control over sense organ and desire
6. Satisfactory social and personal life.<sup>[11]</sup>

### Understanding of Lehana in present day pediatric practice

1. Usually consistency of Leha is semisolid or sticky. It processed with honey, sugar, and other substances to make it palatable. Hence Lehan may be such procedure where non palatable high caloric substances which are essential for body growth and development are made palatable and administered.
2. Consistency of Lehana substances is thick, so child has to lick it and medicine stays in oral mucosa for longer time. This may enhance sublingual absorption of medicine so that absorption will be faster.
3. Lehana substances are enriched with sweet substances like Guda, honey ect. Due to rich content of glucose, maltose ect. presence of such kinds of carbohydrate rich food in the mouth for longer time not only initiate the digestion of maltose by salivary amylase but also stimulates the whole digestive system for process of digestion further.
4. This is an essential routine procedure to be adopted in growing children. This also smoothen the procedure of weaning with a smooth and comfortable transfer to the external food. This also provides essential calorific nutrients, macro- micronutrients to a growing child. Child requires daily supplementation as he spends his energy in playing and other activities.
5. Even diet of normal thriving child also lacks certain micro-macro nutrients. Lucine is absent in rice, pulses are lacking in methionine, folic acid give evaporated by boiling, vegetable foods are lack of vitamin B<sub>12</sub>; so selective deficiency of these elements can occur even in normally growing child. Lehana is a method which rectifies such deficiencies.
6. Growth of the child is directly related with the growth of central nervous system. Muscle tone, motor activities, speech, complexion, hormonal functioning of the master gland (pituitary), sensory functions primarily depends on the growth of central nervous system. Physical body deprives a lot with diseased central nervous system. So, maximum stress has been given to strengthen the central nervous system by Medhya and Rasayana drugs.<sup>[12]</sup>

### Suvarna prashana in Ayurveda

Acharya Kashyapa in Kashyapa samhita Lehana adhyaya explains Suvarnaprashana procedure and its benefits in detail. Gold licking is also mentioned by Vagbhata and Sushruta in Jatakarma samskara.<sup>[13]</sup>

Acharya Kashyapa in Jatakarma samskara and also in Suvaraprashana of Lehana adhyaya mentioned the procedure of Suvarna prashana as crude suvarna should be taken and rubbed it in stone and along with Madhu and Ghrita given to child for licking.<sup>[14]</sup> Giving this for one month child become intelligent and are not attacked by diseases, using this for six months continuously child will be able to retain whatever he listens.

It means Acharya Kashyapa has not mentioned the immunity improving action of Suvarna prashana but in benefits he mentioned, after administering it for one month child does not attacked by diseases(Vyadhibhirna). This clearly indicates the immunity enhancing property of Suvarna prashana.

There are two places where Suvarna prashana is mentioned, one in Jatakarma samskara and other is Lehana adhyaya. Probably Jatakarma samskara is an occasion where Suvarna prashana has been initiated and Suvarna prashana in Lehana is looks to be continuation of the same. Lehana procedure is explained for the growing child while Jatakarma samskara is for newborn.<sup>[15]</sup>

In the process of vaccination immune system is sensitized for specific disease to which the vaccine is targeted while Suvarna prashana stimulates generalized immunity where person achieves the immunity for all possible common disorders. Many research conducted over gold, proved that it has got free radical scavenging activity and acts as an antioxidant with immunomodulatory effects.<sup>[16]</sup>

## DISCUSSION

Routinely two words used in pediatric practice are Immunization and Vaccination. One should understand the difference between two words that is vaccination and immunization. Vaccination is one method of immunization in which immunosystem is sensitized for specific disease by administrating antigen in the body. Where immunization is broad term which includes different methods of stimulating body's immune system. This included food, lifestyle modifications, body activities, vaccines etc.

Ayurveda never talks about bringing specific immunity to particular disease, rather it always emphasizes on non specific immunity or generalized immunity where person achieves the immunity for all possible common disorders. It is not exactly prevention of the disease but keeping body's immune system in alert form by therapeutically modulating Ahara, Vihara,

Dinacharya, Swasthavritta, Sadavritta. By these immune system gives a strong positive response, reduces severity of the disease.

Viruddha Ahara may be such foods or combinations which have antigenic properties. In Suvarna and other Medhya, Balya substances are used. Madhu and Ghrita is become Viruddha ahara and this combination may acquire certain antigenicity. Madhu itself antigenic in nature as it contains pollens. Hence these combination administered daily in small quantity, constantly stimulates the body's immune system and yield antigen-antibody response and keeps immune system activated. Concept of Vishakanya is best the example for immunization against poisons. In present day scenario allergence, irritants, noxious substances can be included under the term visha.

Explanation given by Acharya Kashyapa about Lehana with respect to indications and contraindications suggest that this is the method of supplementation of micro-macro nutrients and trace elements to a child who is deprived of nutrition. This is also an essential routine procedure to be adopted in growing children, which may prevent possible nutritional disorders in a child.

By analyzing the benefits of Suvarnaprashana it is clear that it aims to yield all round development of the child by its Rasayana effect. Although the special attention has been given to physical, social, personal and immunity aspects. It is aimed to increase Agni, Bala, Kanti, Prabha etc. this increase non specific immunity of body and offers average resistance to all common infections.

Theory of self limiting nature, Swabhaoparamavada will hold good only in case of mild to moderately potent causative factors. Such rule is applicable for curable disorders.<sup>[17]</sup>

Utility of treatment is itself a challenge as sometimes Chatushpadayukta chikitsta (rational treatment) also leads to treatment failure while sometimes without the same also patient recover. Although Chikitsa has been mentioned only for curable disorders with no definite role in incurable disorders. Recovery of patient without medicine/ treatment is a matter of discussion.

## CONCLUSION

Ayurveda attempts to gain a similar effect of vaccination by certain other methods. It explains to develop generalized immunity or non specific immunity rather than specific

immunity. Vaccination gives immunity against targeted diseases but Ayurveda tries to condition the body against all possible common disorders. Instead of vaccine they used certain foods with antigenic property to stimulate body's immune system. Also used Rasayana drugs to strengthen body's immunity.

By careful analysis of the concept of Lehana by Acharya Kashyapa and other authors it becomes clear that the approach is multidimensional by which child acquires.

Physical growth (rich calorific food)

Mental growth (Medhya drugs)

Immunization status (suvarna + honey)

Prevention of nutritional problems

Prevention of social problems of malnutrition.

Suvarna (gold) is proved for its immunomodulatory effect. Although gold is not an essential component of the body; it has its role in immune-modulation.

## RESULT

Medicines constitute only a part of the treatment. Diet activity, psychological factors, environment, etc also influence and modify Doshas and play an important role in curing disease. Principles of Ayurveda are eternal and need to apply in present 'Adverse Drug Reaction era'.

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