

CONCEPT OF IMMUNITY AND CHALLENGES IN CHILDREN: AN AYURVEDIC  
REVIEW

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Article Received on 21/03/2021

Article Revised on 11/04/2021

Article Accepted on 01/05/2021

## ABSTRACT

India has the highest number of child deaths for any single nation in the world & Infectious diseases are one of the important cause of child death. Immature immune system of children is considered behind the vulnerability to infections. *Ayurveda* also describes children's susceptibility towards contagious diseases. *Ayurveda* describes physiological limitations in the pediatric age group, which can be considered as reason behind their weak immunity. *Ayurveda* also gives special measures of protection from contagious & other diseases in children, which can be considered either protective in nature or boosting strength & immunity. Therefore here is an effort to understand immunity through concepts of *Ayurveda* with given challenges in children and also studying measures given in the context of immunity.

**KEYWORDS:** *Ayurveda, Immunity, Vyadhikshamatva, Bala.*

## INTRODUCTION

The word Immunity means the state of protection from infectious diseases. Children are born with an immature immune system, hence are at risk from many pathogenic viruses, bacteria, fungi & parasites.<sup>[1]</sup> India has the highest number of child births as well as child deaths for any single nation in the world and infectious diseases is one of the important causes of child death.<sup>[2]</sup>

*Kaumarbhritya* is the branch of *Ayurveda* which deals with the pediatric health care. *Ayurveda* also describes that children are weak and there is always fear of *Upasarga* i.e. contagious diseases, hence require continuous protection.<sup>[3]</sup> *Ayurveda* also describes measures of protection in details.

Concept of Immunity in *Ayurveda*

The human body has the ability to resist most types of organisms or toxins that tend to damage the tissue and organs. This capability is called Immunity.<sup>[4]</sup> *Ayurveda* also describes this resistive power of body under different headings. In Charak *Samhita* term 'Vyadhikshamatva' is coined, which is widely used in translations as literal meaning of word Immunity. The word *Vyadhikshamatva* is derived from two words *vyadhi* and *kshamaatva*. *Vyadhi* means disease and *kshamatva* means resistance. Therefore word *Vyadhikshamatva* means resistive power to diseases.<sup>[5]</sup>

*Charaka* commentator *Chakrapanidatta* gives two significant terms regarding *Vyadhikshamatva*<sup>[5]</sup>

i) *Vyadhi-bala-virodhitvam*: Reducing the strength of disease those already manifested.

ii) *Vyadhi-utpad-Pratibandhakatva*: Prevention of diseases before they manifest.

Factors that mainly contribute to resisting power of the body i.e. *Bala* are balanced *Dosha* state, purity of *Dhatu*, normal *Agni*, normal condition of *Kapha*, *Ojus*. We can say that this *Bala* contributing factors are also factors contributing to *Vyadhikshamatva* therefore Immunity as both perform same function.<sup>[6,7,8]</sup>

## Challenges in Children regarding Immunity

*Ayurveda* divides age in three stages, *Baala* (child age), *Madhya* (middle age), *Vriddha* (old age). *Baala* stage is upto 16 years of age.<sup>[9]</sup> This stage is characterised by following physiological limitations<sup>[10]</sup>

1. *Aparipakva Dhatu*: In children *Dhatu* (body building constituents) are immature in structure and functions as they are not fully formed.
2. *Sukumar*: Children are delicate physically and mentally. They can not sustain mental or physical trauma as adults can.
3. *Akleshasaha*: Children are not only delicate but also their threshold is also less. Hence their body can produce immature reactions towards adverse events.
4. *Ajaatavyanjana*: All characteristics of fully grown adult are not present.

5. *Asampurna Bala*: Body strength is not achieved completely. They don't have potential of adult. Body strength is directly comparable with Immunity.
6. *6.Aahar Sankar*<sup>[11]</sup>: Child goes through different stages of development where his diet and dietary habits change drastically. These changes are adopted slowly by body hence their *Agni* i.e. Digestive power may become unstable. And *Agni* contributes greatly towards resistive power of body.
7. *Dantodbhed*: During Dentition, child is prone to different diseases as process of dentition create stress in immature and little bodies of children.<sup>[12]</sup>
8. *Anavasthita Mana*: In children *Mana* (mind) is not stable, which is reason behind limited knowledge and control.
9. *Asamatvagata Prana, Dosha, Dhātu, Ojus*: *Kashyapa Samhita* describes that in children *Prana, Dosha, Bala, Ojus* are not fully achieved and they are not even with each other leading to early deterioration of condition and fall in body strength.<sup>[13]</sup>
10. *Paratantrya*<sup>[14]</sup>: Children are dependent on parents or care takers for all their needs & activities since conception. Hence parents health, level of knowledge, socioeconomic status, understanding etc factors affect children's health.

#### Ayurveda solutions to prevent diseases in children

Being discussed above limitations in children, *Ayurveda* also gives solution to prevent diseases arising because of it.

Solutions can be grossly divided into two parts.

I) External factors modification: which gives protection from harmful external factors.

II) Internal factor Modification: which improves body strength to prevent & fight diseases even if contact with external factors occur. Also it take care of conditions that could arise due to internal factors.

#### I) External factors modification

1. Avoid or minimise contact with unnecessary people, especially in small children.<sup>[3]</sup>
2. Hygiene: It is one of the important factor. Place where child stays should be clean and should be devoid of insects. Clothes, bed sheets etc should be cleaned. Bath should be given daily. Brushing etc age appropriate daily activities should be encouraged at earliest. Child should be protected from eating mud.<sup>[15,16]</sup>
3. *Ayurveda* also gives agewise *Balaparicharya* and timeline for different developmental milestones along with does and don'ts.<sup>[16]</sup>
4. *Rakshoghna Karma*: *Sushruta Samhita* says that child should be protected with *Rakshoghna Karma*. *Rakshoghna karma* is protection from unknown invading powers. Even though all the hygiene and care practices are done, there are chances of diseases in children. Hence concept of *Rakshoghna Karma* to protect the child from unidentified, invisible invading powers, is used in *Ayurveda*. Few things

included in it are: i) *Homa*, ii) *Pottali* (tied packets of drugs) tied on door, vessels and neck, wrist, arm or waist of child and mother, iii) Fire, iv) *Dhoopana* - medicated smoke, v) Wearing precious stones or stones made of specific tree of animal parts.<sup>[17,18,19]</sup>

**II) Internal factor Modification:** This mainly deals with *Aahar* (food) and medicine.

i) Balanced Diet: Balanced Diet is key to health. Hence *Ayurveda* gives lot of importance to diet. Diet should nourish the *Dhatus*, keep baance of *Dosha* and *Mala* & should protect *Agn*.<sup>[5]</sup> Even in Infants impure mother's milk is considered cause of illness. It should be pure to provide health, growth, *Bala* to child.<sup>[20]</sup>

ii) Rules for food consumption: Not only balanced diet is sufficient, Hot food consumed at right time, prepared with proper method, without mixing *Viruddha* food items should be taken.<sup>[21]</sup>

iii) *Rasayana* like *Swarnaprashan*: As per *Ayurveda* many medicinal plants especially from *Rasayana* category offers immunomodulatory activity. They are popularly known as *Medhya Rasayana* meaning brain tonic. The various formulations decribed by *Acharya Kashyapa, Vagbhata* and many later authors, can improve *Vyadhikshamatva* in children through their *Lehan karma*. *Rasayana* and *Ojovardhaka* remedies help remarkably to improve immunity in children.

*Swarna Prashana* is classical *Ayurveda* practice described in *Kashyapa Samhita*, which helps to increase immunity and also improves cognitive performance and physical strength in children.<sup>[16,22,23]</sup>

iv) Oil Massage: *Ayurveda* describes various procedures to perform regularly in daily life to improve health and strength. *Abhyanga* or oil massage is one of the important procedure which promotes growth and development, helps in speedy recovery and also strengthens immune response in children.<sup>[16,24]</sup>

#### CONCLUSION

Concept of Immunity in *Ayurveda* can be understood through concept of *Vyadhikshamatva*, which is a type of *Bala*, contributed by various factors like balanced *Dosha* state, purity of *Dhātu*, normal *Agni*, normal condition of *Kapha, Ojus*. *Ayurveda* clearly mentions children's vulnerability to contagious diseases, which is product of physiological limitations of child like *Aparipakva Dhātu, Sukumara, Akleshasaha, Asampurna Bala, Ajaatavyanjana, Anavasthita Mana*. They are also vulnerable because they have to cope with changes due developmental stages with their weak bodies. *Dantodbheda* and *Aahara sankara* are exaples for that. *Ayurveda* suggests different measures to avoid diseases in children despite their limitations. These measures can grossly divided into 2 parts. Protective measures which modify external factors include avoiding overcrowding, daily hygiene practices, age wise lifestyle management and *Rakshoghna Karma*. Second part is prevention by improving internal factors through balanced diet, rules for food consumption, *Rasayana* like *Swarna Prashana* and daily activities like *Abhyanga*. Combination of all

these can help child prevent diseases and build own Immunity. Hence understanding Immunity through *Ayurveda* & studying physiology of childhood can definitely help in protecting them from contagious diseases through above measures when practiced regularly.

## REFERENCES

- OP Ghai, Vinod K Paul, Arvind Bagga, Ghai Essential Pediatrics, 7th Edition, New Delhi: CBC Publishers, 2010; 160.
- Vinod K Paul, Arvind Bagga eds, Ghai Essential Pediatrics, 9th Edition, New Delhi: CBC Publishers, 2019; 2.
- Jadavaji Trikamji Acharya ed., Sushruta Samhita with Nibandhasangraha commentary by Shri Dalhanacharya, Shaarirasthaan, Chapter 10, Verse 50, Varanasi: Chaukhambha Sanskrit Sansthana, 2010; 392.
- Arthur C. Guyton, John E. Hall, Textbook of Medical Physiology, 11th Edition, Noida: Elsevier, 2008; 439.
- Jadavaji Trikamji Acharya ed., Charaka Samhita with Ayurveda Dipika commentary by Chakrapanidatta, Sutrasthana, Chapter 28, Verse 7, Varanasi: Chaukhambha Sanskrit Sansthana, 178.
- Dr. Asha Bhardwaj, Dr. Nikhila Ranjan Nayak, Dr. Chandrasherkar Ghatge and Dr. Shraddha, AYURVEDIC CONCEPT OF IMMUNITY: A REVIEW, EJPMPR, 2019; 6(10): 292-298.
- Sharma MK. Concept of vyadhikshamatva (immunity) and its relationship with Bala (Vital strength). Global J Res. Med. Plants & Indigen. Med., 2013; 2(5): 386-391.
- Dr. Kusum Lata Bhatt, Dr. Abdul Khader, Conceptual and clinical approach of Immunology in Ayurveda, JAISMS, July-Aug, 2020; 5(4): 164-168.
- Jadavaji Trikamji Acharya ed., Sushruta Samhita with Nibandhasangraha commentary by Shri Dalhanacharya, Sutrasthana, Chapter 35, Verse 29, Varanasi: Chaukhambha Sanskrit Sansthana, 2010; 155.
- Jadavaji Trikamji Acharya ed., Charaka Samhita with Ayurveda Dipika commentary by Chakrapanidatta, Vimansthana, Chapter 8, Verse 122, Varanasi: Chaukhambha Sanskrit Sansthana, 280.
- Vridhha Jivak, Kashyapa Samhita with Vidyotini Hindi Commentary by Shri Satyapal Bhishagacharya, Khilasthana, Chapter 3, Verse 82, Varanasi: Chaukhambha Sanskrit Sansthana, 246.
- Dr. Shivprasad Sharma, Asthanga Sangraha of Vriddha Vagbhata with Shashilekha commentary by Indu, Uttarantra, Chapter 2, verse 13, Varanasi: Chaukhambha Sanskrit Sansthana, 639.
- Vridhha Jivak, Kashyapa Samhita with Vidyotini Hindi Commentary by Shri Satyapal Bhishagacharya, Khilasthana, Chapter 3, Verse 59, Varanasi: Chaukhambha Sanskrit Sansthana, 245.
- Jadavaji Trikamji Acharya ed., Charaka Samhita with Ayurveda Dipika commentary by Chakrapanidatta, Chikitsasthana, Chapter 30, Verse 283, Varanasi: Chaukhambha Sanskrit Sansthana, 645.
- Jadavaji Trikamji Acharya ed., Charaka Samhita with Ayurveda Dipika commentary by Chakrapanidatta, Sharirasthana, Chapter 8, Verse 59-60, Varanasi: Chaukhambha Sanskrit Sansthana, 351-352.
- Dr. Shivprasad Sharma, Asthanga Sangraha of Vriddha Vagbhata with Shashilekha commentary by Indu, Uttarantra, Chapter 1, verse 27-57, Varanasi: Chaukhambha Sanskrit Sansthana, 631-636.
- Jadavaji Trikamji Acharya ed., Charaka Samhita with Ayurveda Dipika commentary by Chakrapanidatta, Sharirasthana, Chapter 8, Verse 47, Varanasi: Chaukhambha Sanskrit Sansthana, 349.
- Dr. Shivprasad Sharma, Asthanga Sangraha of Vriddha Vagbhata with Shashilekha commentary by Indu, Uttarantra, Chapter 1, verse 15- 18, Varanasi: Chaukhambha Sanskrit Sansthana, 629.
- Jadavaji Trikamji Acharya ed., Sushruta Samhita with Nibandhasangraha commentary by Shri Dalhanacharya, Shaarirasthaan, Chapter 10, Verse 23, Varanasi: Chaukhambha Sanskrit Sansthana, 2010; 390.
- Jadavaji Trikamji Acharya ed., Sushruta Samhita with Nibandhasangraha commentary by Shri Dalhanacharya, Shaarirasthaan, Chapter 10, Verse 31, Varanasi: Chaukhambha Sanskrit Sansthana, 2010; 391.
- Dr. Shivprasad Sharma, Asthanga Sangraha of Vriddha Vagbhata with Shashilekha commentary by Indu, Sutrasthana, Chapter 10, verse 1- 14, Varanasi: Chaukhambha Sanskrit Sansthana, 102-104.
- Vridhha Jivak, Kashyapa Samhita with Vidyotini Hindi Commentary by Shri Satyapal Bhishagacharya, Sutrasthana, Lehadhyaya, Varanasi: Chaukhambha Sanskrit Sansthana, 4-5.
- Bhaskaran JK, Patel KS, Srikrishna R. Immunomodulatory activity of Swarna Prashana (oral administration of gold as electuary) in infants - A randomized controlled clinical trial. Ayu., 2019; 40(4): 230-236. doi:10.4103/ayu.AYU\_33\_19.
- Pandit Hari Sadashiva Shastri Paradakara, Ashtanga Hridaya with the commentaries: Sarvangasundara of Arunadatta and Ayurvedarasayana of Hemadri, Sutrasthana, Chapter 2, Verse 8-9, Varanasi: Chaukhambha Surbharati Prakashan, 26.