

## CONCEPT OF IMMUNOLOGY IN AYURVEDA

G.G. GANGADHARAN and R. RAM MANOHAR

L.S.P.S.S, P. B. No. 7102, Ramanathapuram, Coimbatore – 641 045, India.

**Received: 17 April, 1994**

**Accepted: 21 June, 1994**

**ABSTRACT:** *The concept of immunology in Ayurveda is discussed in this article.*

The word AYU and its synonyms, when examined, reveal that life exhibits two features. While life is constantly moving and approaching death, it is also struggling to express itself and survive.

AYU	- to be exhausted	DESTRUCTIVE
NITYAGA	- moving towards destruction	PROCESS
JIVITA	- to sustain	
DHARI	- to support	CONSTRUCTIVE
ANUBANDHA	- to continue	PROCESS

It is the nature of life to resist death and if it is not possible, to pass on the flame of life to successive generations. The internal factor that is responsible for the full vitality of life to express itself is called BALA.

BALA is said to be the foundation of positive health 'baladhithanamarogyam'. Treatment aims to restore health by establishing BALA – 'tadarthoyam kriyakramah'. Health is defined as the balanced state of the doshas – 'doshasamyamarogata' and BALA results in health by restoring the balance of the doshas – 'balam hyalam doshaharam'.

It can thus be understood that the crux of Ayurvedic therapeutics revolves around the concept of restoring or boosting BALA. Treatment works through the BALA, in fact therapy is only a support, a helping hand – 'hastalambo bhishagjitam'.

With this introduction, let us come to the topic – 'Immunological effects of Ayurvedic drugs'.

The concept of BALA corresponds to the modern concept of immunology. The difference is that immunology is not a compartmentalized discipline in Ayurveda. It is part and parcel of the approach to therapeutics. There is no therapy in Ayurveda that can ignore the BALA of the body – 'balam yatnena palayan'. Yet, we find measures to boost the BALA of the body dealt with in a specialized way in the branch of RASAYANA.

The very life style that Ayurveda advocates viz., 'svastha vrta' is based on the principle of maintaining the BALA of the body.

Let us understand the Ayurvedic concept of BALA before searching for drugs useful in immunology.

BALA is said to be of three types. 1) SAHAJA BALA – inherent strength; 2) YUKTIKRTA BALA – acquired by judicious use of external factors; and 3) KALAKRTA BALA – manifesting in different phases of time – during the day, seasons and stages of life.

Comparing with modern concepts, it can be said that SAHAJA BALA and KALAKRTA BALA are natural factors controlling immunity and YUKTIKRTA BALA as acquired form of immunity.

BALA is defined as

- 1) Capacity of the tissues to grow.
- 2) Capacity to withstand hardship and stress like hunger, thirst and sun.
- 3) Capacity to resist diseases.

What is the basis for this BALA? There is a factor called OJAS which is the material expression of BALA. It is customary to call OJAS as BALA and BALA as OJAS.

To understand BALA, we have to understand what OJAS is and before that review the fundamentals of Ayurveda.

According to the Darsanic view, the sensory world is made up of the PANCHAMAHA BHUTAS. Interpreted, this statement means that sensory experience of the world is at five basic levels. We understand the world in five modes as gradually evolving from the subtle to the gross. The subtlest experience is that of sound. We appreciate sound through our ears. The realm of the experience of sound is known as AKASA, loosely correlated as space. The next experience is that of touch, represented by VAYU or the principle of movement. The experience of form is

represented by AGNI or the principle of heat and transformation. The experience of taste is represented by AAPAS or the principle of cohesion. The experience of smell is represented by PRITHVI or the principle of grossness and stability. There is no sixth experience and so all experiences of matter are grouped into five.

Any substance in the material world is a combination of these five principles which are in constant flux and change. The human body is no exception to this rule. There is evolution from AKASA to PRITHVI and also dissolution from PRITHVI to AKASA.

Only PRITHVI and AAPAS has stable form (murthi). The form of AGNI is unstable (asthiramurthi). VAYU and AKASA do not have form (amurtha). For sake of understanding, PRITHVI and AAPAS are grouped together and called as KAPHA. AGNI is understood as PITTA and VAYU and AKASA as VATA. Thus the concept of tridoshas was evolved.

While PRITHVI and AAPAS are responsible for the structure of the body, AGNI is the factor that causes all transformations. VAYU regulates all these activities and AKASA is the space in which all this happen. When all these activities take place in optimum condition, the structure exists. If there is an imbalance, the structure is destroyed.

So the structural stability of any substance is based on the stability of PRITHVI and AAPAS components. This is possible when the AGNI functions in optimum level and transforms food (raw materials) and assimilates the same. The food that is consumed is worked upon by the AGNI and transformed to varying states of refinement. There are seven such states and they are called the SAPTADHATUS. In its final

stage of transformation, a very refined state is reached and this is called the OJAS. So the production of OJAS is synonymous with the completion of all transformative changes. In the process, all end products are expelled from the body as wastes.

Disease occurs when these transformative processes do not take place properly. There is no complete separation of the essence from the waste and the ingested food does not complete the transformative cycle. The quality of OJAS is affected and the BALA of the body lowered. The ideal situation for occurrence of disease is thus created.

The food substance that is not completely assimilated is a mixture of the essence and the waste. It is known as AAMA. This unassimilated food product is said to be the cause of all diseases.

Treatment is aimed at once again restoring the natural functions of the body. This is achieved by removal of these accumulated wastes and cleansing the channels of circulation. This is known as SODHANA. Restoring the functions of AGNI and DOSHAS is known as SAMANA. Finally boosting the BALA of the body is known as URJASKARA.

It was mentioned that RASAYANA is a branch exclusively dealing with the enhancement of the BALA of the body. But it can be seen that SODHANA and SAMANA precedes RASAYANA. A body that is not prepared for RASAYANA by SODHANA and SAMANA will not reap its benefits – ‘vastre ranga ivaaphala’.

RASAYANA, it is said is the means of obtaining body tissues of high quality – ‘labhopaya hi sastanam rasadinam rasayanam’. In other words, it is the means to promote all transformative process in the

body so as to culminate in the production of the refined essence called OJAS. It is highly refined state of PRTHVI and AAPAS. So it is called SOMATMAKA. It is therefore also said that pure KAPHA (PRTHVI plus AAPAS) is the strength of the body – ‘prakrtam hi balam sleshma’.

The nature of OJAS will differ from person to person depending on constitution, agni, satva and so on. So the level of BALA that can be attained by each individual varies. So the strategy for enhancing BALA is also different from person to person.

We have just glanced through the Ayurvedic concept of BALA superficially. But, one thing would have become clear. The Ayurvedic approach is not fundamentally drug oriented. To develop drugs with immunological effects would be to allopathise Ayurveda.

There are many drugs of plant, animal and mineral origin that are attributed with properties to boost the BALA of the body. But to reap the benefits, they have to be applied according to the principles of Ayurveda. So it is more important to understand the Ayurvedic approach to immunology than study some plants that have immunopromotive properties.

In this context, it seems relevant to discuss something about the general trends in research today and the need for a new perspective.

It appears that the problem is not with areas of priority in research, but the methodology itself. As long as a clear perspective based on Ayurvedic principles is not evolved, efforts in this direction are bound to prove counter productive.

To tackle the problem at its root itself, let us appreciate the Ayurvedic approach to therapeutics.

### **Development in Ayurveda – a misdirected movement.**

In recent things, there is a growing awareness about the significance of medical systems like Ayurveda in providing solutions to health problems of mankind that elude the grasp of conventional medicine. Yet, the new movement appears to be misdirected in spite of surging interest and initiation of full fledged research activities.

### **Western ethnocentric bias – a major hurdle in understanding Ayurveda.**

The major hurdle that prevents an unbiased appreciation of Ayurveda is the ethnocentric philosophy propagating the superiority of western culture and the universality of modern sciences as the only valid means of arriving at truth.

### **The concept of different ways of knowing.**

It is not within the scope of this discussion to digress from the topic and dwell at length on arguments to explode this myth. But it has to be stated that there can be different ways of knowing. Modern science is only one among them and it is by no means the measuring rod to validate or negate another system.

Ayurveda is based on a radically different epistemological foundation and world view. It must be studied with its own methods primarily. Unfortunately, strategies for development in the field of Ayurveda have been based on the framework and viewpoint of western science and medicine. This exercise has resulted in the reduction of Ayurveda to fit into the framework and

viewpoint of western science; or in other words, created an allopathised version, distorted in expression, as many have put it.

### **Ayurvedic approach – holistic consideration of the triad of patient, disease and drug.**

In therapeutics, three factors have to be considered. The patient, the disease and the drug. Disease manifests in the patient, for the well being of whom medicine is prescribed. Hence it is understood that the patient is the prime concern in therapeutics.

To think of solutions first and search for suitable problems to solve is not proposition that will always work. Disease is a problem and medicine the solution. The disease has to be studied first and then the medicine searched for. So it is said, ‘rogamadau parikseta tadanantara – mausadham’ – examine the disease first and then the medicine.

Biological phenomena are in a state of constant flux and dynamic change that no two situations are alike. Each disease, nay, each patient, it a new problem and requires a unique solution. Each consultation, in principle, has the potential of culminating in the development of a new drug combination. Thus the physician who attempts to treat all conditions with premade formulations without considering individual variations is bound to face failure – ‘yogaireva cikitsan hi desadyajno\paradhyati | vayobalasariradibheda hi behavo matah ||’.

Current research activities are on the contrary, drug based and make a mockery of this fundamental approach in Ayurveda. No wonder that clinical trials to assess the efficacy of Drakshadileha in anaemia or Rasnadi kvatha in rheumatoid arthritis backfire without proving anything.

Ayurveda gives due consideration to all the three factors – disease, patient and the drug. The study of disease comes first and this study must lead to indepth understanding of the patient’s personality as a whole. The physician who does not reach out to the patient is incapable of treating diseases – ‘jnanabuddhipradipena yo navisati tattvavit | aturasyanataratmanam na sa rogamcikitsati ||’. Then the medicine most suited to the individual specifications must be arrived at.

The focus must shift from the study of drugs primarily, to the study of the disease and the patient, based on the sound principles of Ayurvedic therapeutics – ‘tasmad dosausadhadini pariksyā dasa tattvatah | kuryat cikitsitam prajno na yogaireva kevalam ||’.

### **Uniqueness of Ayurveda – not empirical findings on plants, but sound concepts derived from Darśanas.**

Treatment does not become Ayurvedic simply because the drugs are of vegetable origin. It is better to call that herbal medicine. Unfortunately, very few realize that Ayurvedic pharmacopoeia also includes animal products and mineral substances.

It is the approach in therapeutics that makes Ayurveda unique and this is derived from the strong foundations of Darśanic insights. Mere knowledge of drugs, without the skill in applying the same to suit different situations, is discouraged strongly by the Acharyas. The skilled physician is extolled as superior to one with mere knowledge of drugs – ‘matrakalasraya yuktih siddiryuktau pratistitah | tistatyupari yuktijno dravyajnanavatam sada ||’.

Medicines or formulations have been described in the treatises only for the sake of illustrations – ‘etannidar – sanamatramuktam’|. Let us take the case of text books on mathematics. The problems and solutions in the text are just examples. One who does not appreciate the principles behind them will fare miserably in applications. So the intelligent physician is advised to devise drug formulations to number thousands and or even crores applying his intellect according to the situations – ‘svabuddhyaivam sahasrani kotirvapi prakalpayet | bahudravayavikalpatvat yogasankhyana vidyate ||’.

### **Research strategy – to create expert physician and not drugs**

Any realistic research strategy must give full freedom to the physician to select the course of treatment. There should not be any imposed restrictions on the usage of drugs.

There is nothing to be puzzled if the physician selects different medicines for different patients in seemingly similar conditions. One patient with asthma may be advised sudation and emesis as purificatory measure. Another will be given sudation and purgatives. Both may be given some common and specific internal medications.

Treatment of any diseases involves purification of wastes from the body (sodhana), correction of deranged functions (samana) and rejuvenation of vitality (urjaskara). Appropriate strategy has been devised considering the stages of evolution of diseases viz; sancaya (accumulative), prakopa (vitiative), prasara (spreading), sthanasamsraya (localization), vyakti (manifestive) and bheda (complicative). For this, any substance in this world can come to one’s aid as medicine –

‘jagatyevamanausadham na kincit vidyate dravyam|’.

### **Is individual specifically of treatment an idealization in theory rarely achieved in practice?**

Here it may be argued that the concept of developing unique combinations for each and every patient is not seen in actual practice. Even great physicians treat with fixed number of premade formulations.

On close observations, however, it can be seen that expert physicians treating with fixed formulations do so with great sophistry and ingenuity in application. Formulations may be used in situations not directly mentioned in the text and also in novel ways.

Does this mean that premade formulations are to be totally avoided? Not at all. Ayurveda puts forth two ways – one for the physician with mediocre intelligence and the other for those gifted with a highly creative mind. Both kinds of physicians are required. The former can be compared to a technician who follows the beaten track or trends set by their more creative counterparts. But it is the latter class of physicians that succeed in translating the tenets of the science into innovative applications. The real growth and progress of the science depends on them.

For the mediocre the Acaryas advise, - ‘alpabuddhinam to yathoktacara nameva sastam’ for they are only capable of mechanically following instructions. But the intelligent are expected to delve deep into the teachings and have the additional responsibility of guiding the others – ‘ buddhimata – manuktarthajnanaya |’.

Arogyakalpadrum, a treatise on the treatment of children’s diseases composed by a physician in Kerala, aptly represents the typical work of a creative master. Disease conditions prevalent in the region have been classified and named specifically and specific remedies devised for each condition. For instance, more than 50 conditions of Visarpa has been described which is a far way ahead of the 9 types described classically. Time has proved the value of the work and to this day, it is blindly followed by many a traditional physician.

Times have changed and disease conditions present new problems today. Does not the situation call for a fresh look at things?

It is from this viewpoint that current trends in research is being questioned with an utmost sense of humility. Should we end up with a generation of physicians of the caliber of mere technicians?

### **Research and Development in Ayurveda – need for a new protocol**

This vision will help us to evolve a research strategy that is oriented to create expert physicians who can apply the principles of Ayurveda in varied conditions rather than development of more and more tailored drugs.

This means nothing short of visualizing a new research protocol. But this is a subject that perhaps requires a seminar on its own.

### **Selected Bibliography**

1. Caraka Samhita
2. Susruta Samhita
3. Ashtangahrdaya