

EVOLUTION OF DISEASES

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SAMPRAPTI VIGNANA

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Abstract: - The Ayurvedic concept of evolution of disease, based primarily in the understanding of the host-man, meaning of disease without losing sight of either the extrinsic or the intrinsic factors is comprehensive by itself. The modern descriptive methods has taken direction of possible correlation and elaboration of the Ayurvedic views.

Origin and development of Ayurveda is, based on Research or discovery, bringing new things to light Anvesana Samprapti Vigyana or the concepts regarding the evolution of disease is one of the examples of what research can contribute to the advancement of knowledge.

Object of Ayurveda is to relieve mankind from diseases and death and to ensure long life - full of health and youthful vigour. This necessitates understanding of the mechanism of the disease, the causative factors and curative measures along with the understanding of the mechanism of the host i.e. man himself. Caraka has expressed this idea by saying that Ayurveda deals with the cause Hetu, the manifestation or symptoms Linga and the therapy Ausadha of the two conditions a man's health swastha or disease Atura. Susruta summarized the scope of science of Ayurveda in five heads – (1) Knowledge Man's Constituents Purusam

(2) Knowledge of disease vyadhi. (3) Knowledge of medicines Bhesaja. (4) Knowledge of the mode of application of different therapies Kriya (5) Knowledge of departure time Kala..

So, to understand the evolution of disease, we have to understand the disease and its host, the purusa-man or in other words – what is a Purusa? And then we come to the point-How a disease is produced?

What is a Purusa?

According to Susrutha Purusa is the product of the union of six constituents five Bhutas and Atma. This is physicochemical and biological definition of the Purusa According to Caraka, Purusa is the living mass coming into being as a result of the co-existence and co-ordination of 24 basic elements of in short, it is produced by mutual support and co-ordination of the

body, mind and Atma. Susruta too agrees with this view and emphasizes on the interdependence of the 24 elements, the outcome of Prakriti and the Purusa. Hence pain or pleasure is experienced by the whole being; not by separate factors independently nor in an organ or a limb but in the living body as a whole. This is the psychosomatic or physiological and biological definition of the living body. Not only the body but the universe, the environment on which man is dependent for his support and nutrition, is also composed of the same elements. This concept of oneness of the constituents of man and his environment has its roots in philosophy.

Cakrapai Datta, the learned commentator of Caraka Samhita explains that there is no basic difference in the concepts of Satdhatuka Purusha or Caturvimsatika or Panca Vimsatika Purusa. The latter should be taken as detailed version of the former. Susruta further adds that by contact with Purusa the whole inert mass becomes conscious and active while purusa, who is originally conscious but impartial and aloof, becomes full of reflections and motivated by three gunas by contact with the whole mass which is the product of Triguna Prakriti.

What is a disease?

According to both Susruta and Caraka, disease is a condition which gives rise to pain or discomfort to a living purusa, as described above. In other words, disease is experienced by Atma through mind, it is the abnormal condition of body and mind which gives the sense of displeasure and

pain to Atma. So really speaking departure which happens as a result of the contact with sources of disturbance, which may be extrinsic (Agantuka) or intrinsic (Nija). The diseases might be innumerable, but in each and every disease some departure from normal condition is a must and this departure gives rise to discomfort or malice or pain and then we know it as a disease.

How a disease is produced?

Departure from a basic normal condition to an abnormal state of the structures and functions of the body and mind gives rise to disease. This departure is called Vaisamyagamana. Vaisamyia is disorder, disturbance, imbalance, discordance, disharmony. What is disturbed? Where does the disorder or imbalance take place? And what is meant by imbalanced?

(I) Ayurveda believes that the whole body and mind are perturbed, but the imbalance may start with pain either in the body or in the mind and then spreads to the other components later. In the body, the Dosas, Dhatus and Malas are disturbed, but out of them the Dosas are always first to be disturbed and as they are the real active forces of the body. Subsequently Dhatus and Malas are passively vitiated by the disturbed Dosas. Hence they are called Dosas (which vitiates). While in the case of mind, the disturbance is of the nature of increase in either of the Rajas and Tamas components and the decline of Satva.

(II) The Vaisamyia or disturbance means, either increase or decrease of the Dosas,

Dhatus and Malas; Not only in their quantity but also in their quality i.e. properties and functions. Susruta further clarifies that our bodies are always flexible (Asthayitwa) ever changing and dynamic, so there is no constancy or static condition, more so because people vary in age, constitution and temperament from man to man (Vallaksanya). So it is difficult to state fixed quantitative values or norms of Dosa, Dhatu and Malas. But the properties of these components are constant so normal characters and functions are, the criteria on which we have to conclude by inference regarding the balanced condition and resultant health; or the imbalanced condition and resultant ill-health of a person. So, first step in the understanding of the evolution of disease or Samprapti Vijnan is the knowledge of Vaisamya.

(III) But how Vaisamya or imbalance takes place? Samprapti is defined as the process of disease formation Amayasya Mirvrttih or transformation to on balanced state, disturbed action of Dosa leading to the appearance of a disease Dosnam vyadhijanana Paryantam gamanarm or entanglement or intricate mixing up of Doss and Dusyas Dosadusyasammurchnana which gives rise to an abnormal structure and functions which is termed as a Vyadhi or a disease. Dosas are dependent on stress or internal sources or etiological factors which are varied and innumerable.

(IV) To understand the process of Vaisamya, a principle of the response of three factors i.e. mutual action and favourable or unfavourable amongst (1)

Nidana – causative agents, (2) Dosas and (3) Dusyas is laid down by Caraka. Another principle of Samanya & Visesa i.e. increases being caused by agents or causative factors similar to Dosas and Dusyas and decrease being caused by dissimilar ones is formulated. According to these principles Dosas should first get provoked or vitiated by the effects of causative factors, which may have similar or opposite properties to the Dosas in terms of their qualities e.g. hot or cold, light or heavy etc. and thus the results might be either increase or decrease in Dosas and Dusyas. Dosas when thus provoked and vitiated, vitiate the tissue of the body in their turn, which are referred in Ayurveda as Dusyas.

However if the property of the Dosas are opposite to those of the causative factor, agreement for co-operation in production of the disease is not possible. On the contrary these opposite properties counter and neutralize the effects of the causative factor and the inroads of the disease are checked. In this way, if provoked, Dosas does not find favourable response in the tissues if finds hard to vitiate and the process of disease formation does not progress further or is delayed? This concept of inherent susceptibility on the basis of similarity to Nidan and inherent power of resistance on the basis of opposite and antagonistic properties in the Dosas and Dhatus was one step further in the consideration of the evolution of disease.

(V) Even if the causative factors find favourable conditions in the host in the form of similar properties of Dosas and Dusyas, the disease is not produced instantly. The

development of a disease is generally a prolonged process and passes gradually through several stages before actual manifestation takes place. Unless Dosas reach to a certain degree of intensity and also find a favourable site (locus staudi) in the tissues, disease is not produced. This has led to the concept of the progress through six stages of a disease process viz. Sancaya, Prakopa Prasara Sthana Samsraya, Vyakti and Bheda; which may be translated respectively as accumulation or passing beyond the optimum level or threshold, circulating or spreading to distant parts of the body or all over the body from the point of entry or primary focus; setting down on some favourable spot of least resistance and start the mischief there, and produce well defined characteristics of a disease leading to its identification and differentiation. This is the most valuable contribution of Susruta Caraka has summarized the same pathogenic process in three words Caya, Prakopa and Prasama meaning subclinical accumulation of Dosa gaining strength before the flare up of a disease and finally restoration to normalcy or resolution or subsidence within normal limits. Accordingly all diseases has subclinical stage and only when symptoms manifest themselves they come to the clinical stage. These stages bear very close resemblance to the modern description of infection, incubation, septicaemia, Toxaemia localization, local manifestation e.g. inflammation or general manifestation of a disease respectively, or to antigen-antibody reaction.

(VI) Though, in this concept, the virulence of the causative factor and the

intensity of the provoked Dosas have predominant place, co-operation of the host i.e. Anubandha of Dosas and Dusyas i.e. humours and tissues, react is equally important. The behavior of the tissues, either in co-operating or in resisting the further progress of the disease, is also implied and clearly stated by coining the word Khavainya meaning inherent weakness of a particular spot or organ providing favourable ground for the lodgement of offending dosa; in other words, lowered resistance of the local tissues. Caraka has developed this idea by introducing the concept of Bala and Vyadhisahatva, which may be translated as natural immunity and power of resistance to the onslaught of disease. Both Caraka and Susruta have used the words Pratyanka Bala, meaning countering forces in the tissues of the body. The disease takes place only when this power of resistance or countering forces are, on any account, on the decline. This concept compares and correlates well with the modern concept of immunity and susceptibility of the individual as a whole or his particular systems, organs and tissues, and site of predilection of different germs.

(VII) Vagbhata has advanced the imbalance theory by adding that the Tridosas are always so set in an individual that they counter balance each other and thus maintain health. In abnormal conditions, again Dosas are the starting points, active and leading factors, in the production of a disease though they are also the normal constituents of our bodies. So Dosas, should be grouped in two categories – 1 Prakrt- Normal or those responsible for

making particular constitution of the body. Inherent as they are, they are responsible for maintaining our health within definite range or threshold in spite of the external provocation and also for giving characteristic frame to the body and mind. 2. Vaikrita-Abnormal Dosas are acquired as a result of the effect of environmental factors, food, season, climate and such extraneous factors. They are superimposed on and get fixed to the natural inherent Dosas and thus cause increase and imbalance and give rise to the disease so long as they are not disjointed from their internal allies and eliminated from the body. As these super added fractions are the real causes of imbalance it is these whom we have to dislodge, neutralize or eliminate by appropriate treatment and thus normal balance. Compliment fixation theory which propounds that normal complements existing in our tissues and body fluids are fixed by the antigen and not available for resisting the mischief monger may be the modern interpretation to the above concept.

(VIII) Another consideration in the evolution of disease is that of Ama and Agni. The factors which enter into the body are turned into such wholesome or innocuous form that they cease to be foreign elements, become homogenous with the body tissues and are assimilated else, are rejected and eliminated and not allowed to enter the circulation and disturb. This transformation is effected by the Agni. When transformation is defective, complete change to unharmful form is not effected and the substance in incomplete stage of transformation is called Ama. Ama acts as a

foreign body and instead of being one with the tissues and harmless causes disturbance. Whether the change is made in the alimentary tract or in the tissues or organs during intermediate metabolism, the process is the same, Hence Ayurveda conceived the Jatharagni, Dhatwagni, Bhutagni, Dososma, Malosma etc. i.e. different forms of Agni at different stages and levels of metabolism and faulty actions at any stage may give rise to some specific type of derangement. Vagbhatta has further advanced the idea of Ama and has considered Sama conditions of Dosas Dhatus and Malas. Ama is a condition of tissues which is not in its normal surrounding or internal environment. Cleavage product of the nutrient material which are not complete and in final stage is absorbed to be assimilated, but are rejected as foreign body and in its turn, it also causes obstruction to the normal function and also acts as toxin or poison. Every disease has two stages-first is Ama stage and later when body mobilizes the forces of defence, in which Agni is the foremost, comes the stage of Niram or pakwa stage in which harmful products are neutralized or transformed into normal constituents of the body, which facilitate the cure. Under this head of Ama and Agni, Antigen-Antibody reaction, chain of enzymic and phagoceytic activities biochemical products at the tissue and cell level and infection and defence mechanism of the body can be grouped and compared.

(IX) Caraka has further explained that the peculiar type of vitiation and derangements according to respective Dosas determine the future picture of a disease. Vata produces

roughness, leanness, emaciation, brittleness, disintegration, distortion in shape, frequency in motion and tremors, pain etc; pita produces redness, dark blue or yellow colours, excess heat and smarting and burning suppuration and necrosis with putrid smell, rise in temperature and fever, Kapha produces hardness heaviness, compactness, coldness, white discoloration; chronicity sluggishness of movements, slows the progress of changes, loss of appetite, pruritus and lethargy. These changes can be equated with hyper tonicity or motility and excitability spasticity hyper pyrexia and atrophy and degeneration inflammation and suppuration; hypertrophy and hyper plasis hypotonia, hyperacidity, hyperhidrosis and depression etc; described modern pathology.

(X) Through the change produced by the Dosa anywhere in the body are always similar and peculiar to the nature of the particular Dosa, the symptoms may differ in regions and organs. This is due to the disturbance in the functions and structure of that particular organ or the region. That is why Caraka has classified the disease under the heads of three Dosas, and also under the heads of thirteen different Srotas (System wise classification of the disease) and also according to the derangement of particular Dhātu or Mala. When we encounter a disease, we see the net results of the interaction of the Dosa, Dhātus and the Srotas affected eg in the affections of Pranayama srotas-Swasa Kasa Dyspnoea and cough will always be constant complaints. While the cough may be dry or copious and tenacious according to the preponderance of

Vata or Kapha. If Vata is affecting a nail there may be cracked nail, but if pitta is affecting, then the abscess will form in the nail-bed Nakha paka. Thus innumerable disease are produced by combination and permutation of three dosas, seven Dhātus, seven Malas, thirteen Srotas and different organ and further predominance of one or more properties of vitiating Dosas and vitiated Dhātus.

(XI) Summarising the whole process, Vagbhata says that in each and every case of a disease the vitiated Dosas are the main factor which produces the disease. They first get locally vitiated and then travel through the circulatory system and get to the organ and system which has already latent weakness inherent or acquired, settle down there and start the peculiar morbid changes there, according to their peculiar nature, and the result is a specific disease bearing signs and symptoms relevant to the responsible Dosas, Dhātus, srotamsi and organs, denoting organic changes like-inflammation, obstruction, pressure or distortion, stricture or laxity etc; and functional disturbance like stasis or excessive motility and secretion, flabbiness or stiffness, flaccidity, spasticity & convulsive movements or hyper motility or retardation and stagnation paralysis etc. anaesthesia or hyperesthesia or metabolic diseases like obesity and Diabetes or stunted or over growth & malnutrition (Santarpanaja and Apatarpanja Roga).

It is evident from the above description that the definition of a disease given by Caraka and Vagbhata as disequilibrium of Dosas and Dhātus resulting in experience of pain

as described by Caraka and Susruta is concise yet comprehensive and covers all modern concepts of various stages of development and manifestation of a disease.

If we have to understand the abstract condition of imbalance objectively we have to compare them with modern description of the pathological changes. Is there any equivalent to the words Samya and Vaisamya in modern concept of a disease, and if it is there, in what context it is used? We find that in modern physiology there are now so many aspects in which equilibrium and balance are described to be very important for the maintenance of health. e.g. Co₂-o₂-balance, Fluid and water balance acid-base equilibrium, Electrolytes balance or hormonal equilibrium, heat regulation. AG Ratio and normal values of cellular and other Biochemical contents of the blood and serum like proteins, fatty acids, cholesterol,

glucose, ketosteroids, enzymes, which are called threshold substances. Any departure from normal values-either Hypo or Hyper condition is indicative of abnormal processes taking place in the body. These facts support the Ayurvedic concept of Vaisamya being of either type-Ksava & Vrddhi: and Samya being the optimum within threshold, or balanced condition of the body constituents.

Thus it would be clear that Ayurvedic concept of pathogenesis of a disease though concise, is all comprehensive and has no sight of any important factor, either extrinsic (Adhi-bhautik) or intrinsic (Adhyatimik) and modern studies of bio-chemistry and morbid changes taking place in the tissues and serum are gradually coming nearer to Ayurvedic view and they show direction of possible correlation and elaboration.