

CONCEPTUAL STUDY ON DHATU POSHAN NYAYA AND A PROCESS OF METABOLISM**Dr. Afreen Siddiqui^{*1}, Dr. Gitanjali Sasmal² and Dr. Vinay Bhardwaj³**^{*1}P.G. Scholar ²Reader and H.O.D. ³Lecturer.

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ABSTRACT

Dhatus are those entities which actually sustain living body. Even though all three entities, Dosha, Dhatu, and Mala sustain body and for this reason are called "Tridhatu". Dhatu indicates sustenance of body and nourishment from only and only Sara portion of Ahara Rasa. Food has to undergo digestion by Pachakagni, Dhatwagni, along with Bhutagni. Dhatu also gets nourished from Dhatu and nourishes other Dhatu. The term metabolism of a food substance is meant by a series of specific biochemical reactions occurring within the living organism from the time of its incorporation into the cell or tissue till its excretion, of which some are concerned with tissue synthesis and others with tissue breakdown what are termed as anabolism and catabolism respectively. The same explanation is elaborated in Ayurveda classics by various Acharyas giving their own point of view and which is termed as Dhatu Poshana Nyaya. The examination of the subject with proper evidence and logic is the Nyaya. In the case of Dhatu Poshan also a number of theories have been proposed. Regarding the procedure of the nutrition of various nutrients which takes place in the body, various theories have been established. One should take all these Nyayas are equivalent to each other. They do not interfere with each other nor do they oppose each other, it is therefore needed to accept all laws together and interpret replenishment of seven Dhatus in a fashion where all laws become applicable.

KEYWORDS: Ayurveda, Dhatu Poshan, Dhatu Poshan Nyaya, Metabolism.**INTRODUCTION**

The term Dhatu is derived from the Sanskrit verb root (Du-Dhan) which means Dharana or to support, said to make the structural architecture of the body and Poshana means to nourish. Sapta Dhatu exist, as concrete formed entities e.g. the circulating Rasa and Rakta (plasma & blood) etc. The Sapta Dhatus are being continuously formed with necessary materials derived from Ahara and these process only happen in human beings to maintain a state of equilibrium. These Dhatu is of two kinds – Sthayee or Poshya (stable or to be nourished) and Asthayee or Poshaka (unstable or which nourishes). Sapta Dhatu already existing as stable Dhatu and equal number of metabolically transformed precursor nutrient, substances obtained from Ahara and is meant to be utilized for nourishment, synthesis and maintenance of Sthayee Dhatus respectively. Sthayee Dhatu support the body by providing it with basic tissues and the Asthayee or Poshaka Dhatu are responsible for supporting, nourishing and maintaining the Sthayee Dhatu. Nutrient substances undergo transformation under the influence of their own Ushma (heat) and thereafter transported to the Dhatus through their specific transporting channels. The seven Dhatus that support the body undergo two kinds of

transformation (Paka) i.e. Prasada and Kitta, under the influence of its own Agni (heat) Prasada Bhaga of Ahara rasa (digested diet) nourishes seven Dhatus including Ojas. Kitta Bhaga nourishes Sweda (sweat), Mutra (urine), Purisha (stool), Vata, Pitta, Kapha and Malas of eye, ear, nose, throat, mouth, hair follicle and external genitals. Thus essential Rasas and Malas nourishing the body in a balanced way and responsible for Dhatu-Samya (homeostasis). Due to the above mentioned points Sushruta has mentioned the Dosha, Dhatu and Malas are the root or base or pillar of the body on which the body is supported and maintained.^[1]

The examination of the subject with proper evidence and logic is the Nyaya. Nyaya is ones view and is the way a person sees a process happening which varies from person to person. In the case of Dhatu Poshan also a number of theories have been proposed. Regarding the procedure of the nutrition of various nutrients which takes place in the body, various theories have been established. The scholars had tried to describe the fact of physiology; the main Nyayas about Dhatu Paka (digestive and metabolic process) are as follows.^[2]

Ksheera Dadhi Nyaya (Metabolic law of transformation)

Also known as Sravatma Parinama Paksha Nyaya, it indicates the total change of the particular tissue into the next. According to this law as the milk entirely converts into curd in the same manner the Rasa Dhatu entirely converts into Rakta similarly Rakta into Mamsa and so on Shukra Dhatu are formed by virtue of the progressive stages of transformation, this law is also known as karma Parinama Paksha Nyaya.

Khale Kapot Nayaya (Theory of Selectivity)

Khale is the term used for the place where grains are kept when they are recovered from the field and the term Kapot means pigeon. Just as pigeon from the far and near come to the heap of corn which is stored at one place, pick up their requirements and go back to their dwellings, in the same way each Dhatu picks up its requirements from the pool of Rasa Dhatu, the Ahara Rasa contains the nutrient factor for all the Dhatu in the body just as pigeon coming from different direction and distances to the heap of the grain and fly away to their native places, dwelling either late or early depending upon the distance and direction they need to travel. This Nyaya means the selection of individual requirements by the individual Dhatwagni from the same Anna rasa which contains all Dhatus nutrient part. Because of different distances of Dhatuashaya, the length of the respective Srotas also varies. Nearer the Ashaya smaller the length of Srotas and further the Ashaya longer the length of Srotas and time taken by the rasa to reach that Ashaya will also be longer. From Rasa Dhatu directly all the Dhatu Poshana takes place none of the Dhatu are inter connected for the Poshana from Poshaka Ansha of previous Dhatu.

Kedara Kulya Nyaya (The Law Of Transmission / Transportation Process)

Meaning of Kedara Kulya is paddy field and Kulya means canal. This Nyaya says that the nourishment of the Dhatu by transportation process as different fields are irrigated by the same channel, but the field which are nearer to channel are nourished first and distant fields are later. Explaining this theory of Dhatu Poshana, Chakrapani has stated that Ahara through the process of digestion get changed into Rasa Dhatu and nourishes it, the remaining part of the Anna Rasa now present in the circulation proceeds to nourish the Rakat Dhatu while passing through the places of Yakrit, Pleeha in the body and attains the Gandha Varna of Rakta Dhatu. Likewise Ahara rasa does Uttara Uttara Dhatu karma Poshana.

DISCUSSION

The Anna Rasa or Ahara rasa i.e. the nutrient fraction of the food, the final outcome of the food, the final outcome of the Jatharagni Paka, which is absorbed from the Amapakwashaya represents the basic nutrients required for the nourishment and building up of the seven dhatus. These substances should be homologous to the Sthayi dhatu because they cannot be utilized as such for the

nourishment of the Dhatu in view of their Vijatiyata to the body. These Vijatiya or foreign substances to the body should be modified or rebuilt as swajtiya or organism specific substances before they are utilized by Dhatwagni. The required transformation of Vijatiya nutrients into Swajatiya Dravyas is the function of Bhutagni. Therefore Dhatwagni Paka begins only after the completion of the Bhutagni-paka. The poshaka dhatu, which are capable of nourishing the Sthayi Dhatu, are produced in the Prasada Paka of the Dhatwagnis. Both the Dhatu Parinama and Dhatu Poshana are conducted through the Poshaka Dhatu only and these two functions begin with Rasa Dhatu.^[1]

The different food materials (mostly complex and unsuitable for absorption) are transformed into their simple and soluble form by digestion prior to the entry from the lumen of the intestine into the body through its gateway (absorption). After their entry into the body, they undergo a series of biochemical reactions in different organs catalysed by enzymes, co-enzymes, catalyst and governed by hormones and vitamins to serve the purpose of anabolism (synthesis) and catabolism (analysis).

The term metabolism of a food substance is meant by a series of specific biochemical reactions occurring within the living organism from the time of its incorporation into the cell or tissue till its excretion, of which some are concerned with tissue synthesis and others with tissue breakdown what are termed as anabolism and catabolism respectively. Although both anabolism, and catabolism are reversible.^[3]

Ekakala Dhatu Poshana Nyaya

By administration of Vrishya, Balya and Bhedna dravyas, the Dhatu Poshana occurs by crossing the above nyayas. With Vrishya Dravyas time will not be taken much and it increases Shukra quickly.^[4] The quick nourishment occurs because of Prabhav and Ashukaritwa of Dravyas. Arundatta narrates 4th Nyaya for Dhatu Poshana named Ekakala Dhatu Poshana Nyaya by keeping it in Poorvapaksha and explained that Ahararasa enters Sapta Dhatus and at a stretch Rasaraktadi Dhatus get originated.^[6] Acharya Charaka narrates the same with the word Yugpat and explains that the Rasa Dhatu circulates to other parts and nourishes them by getting propelled by Vyana Vata.^[4,5] Acharya Sushruta too justifies it saying three modes of circulation of rasa in formation and nourishment of other Dhatus as Shabdavat, Jalavat, Archivat.^[7,8,9]

Through Jala Drishtanta with passage of 1 month rasa converts to Shukra is shown (Chira Poshana).

Through Shabda Drishtanta not too slow nor too quick (na atisheeghra na ati chira) conversion of rasa to shukra is shown.

Through Archi Drishtanta very quickly (ati sheeghra) conversion of rasa to shukra is shown.^[10]

Ksheera Dadhi Nyaya

Theory of sequence of replenishment of Dhatus. Commentator Chakrapanidatta explains how this sequence is managed in his commentary he states about sequence and time factor of replenishment of seven Dhatus[4]. Rasa is digested by Swagni and is bioconverted into Rakta, due to Swagni Rakta is bioconverted into mamsa, in such fashion previous dhatu generates next dhatu due to bioconversion by swagni. This is comparable to milk bioconverted into curd and curd into butter where butter into ghee. This is complete conversion of one entity into another. When milk is bioconverted, entire butter is turned into ghee. This is also called Sarvatma Parinama Paksha. This hypothesis was neither rejected nor accepted universally by scholars in that era. Few reasons for acceptance are, time factor should be taken as directed by Sushruta. It should be taken as twenty four hours for replenishment of Rasa Dhatu and five days each for next Dhatu. It even explains event in diseases Rajyakshama, where due to obstruction in Rakta causes waning of Mamsa Dhatu. And the reasons for rejection are, Milk is supposed to replenish Shukra Dhatu immediately after consumption. This cannot be explained if this law is totally accepted. It will take one month to do this work. In practice result is observed immediately even in increased Meda, Asthi should increase in response to this law but in practical it is not observed so. This is the reason this law is not accepted hundred percent by scholars of that era.^[10]

Kedara Kulya Nyaya

Same is explained by Chakrapani,^[4] says this is one way of thinking about verse. He suggests there is another way to think. This opinion is in context to sequence and time taken for replenishment of seven Dhatus. Nourishing fluid Rasa replenish Rakta in the beginning. Whatever part of Rasa is necessary for Rakta is offered to Rakta Dhatu in Rakta Vaha Srotas when Rakta takes out its own replenishment, Rasa replenishes Mamsa. In Mamsavaha Srotas it lets Mamsa Dhatu take out its necessary portion and after replenishment of Mamsa, Rasa replenishes Meda and it goes on till shukra dhatu. Again this law was neither rejected nor accepted universally by scholars in that era.^[9]

Reasons for acceptance can be, as it explains uniform sequence of replenishment of Dhatu is stated, this law is able to explain immediate action of milk on Shukra Dhatu and it explains that it is not necessary that increased Meda should increase Asthi as well. The reasons for rejection can be due to circulation and direct replenishment of Dhatus, sequence to replenish Rakta after rasa, Mamsa after Rakta cannot be demonstrated well. Yet in commentary this is explained that it runs through each channel of Dhatu hence action of Agni in each channel should be taken.^[10]

Khale Kapot Nayaya

Same is explained by Chakrapani, his opinion is in context to sequence of replenishment of seven Dhatus and time factor. It is hypothesized that Ahararasa is like storage. Sequence of replenishment of Dhatus is same. Ahara rasa travels through all channels nourishing Dhatus. Nearest Dhatu gets replenishes immediately, the farther the Dhatu, lengthier is the channel. It takes more and more times for Ahararasa to reach sequentially all Dhatus till last Dhatu Shukra.^[4,7]

This opinion is capable of explaining immediate replenishment of Shukra Dhatu with milk. It also explains healthy condition of rest of Dhatu when previous Dhatu due to some reason undergoes disease condition. Again this law was neither rejected nor accepted universally by scholars in that era.

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CONCLUSION

One should take all these Nyayas are equivalent to each other. They do not interfere with each other nor do they oppose each other, it is therefore needed to accept all laws together and interpret replenishment of seven Dhatus in a fashion where all laws become applicable. Dhatu indicates sustenance of body and nourishment from only and only Sara portion of Ahara rasa, food has to undergo digestion by Pachakagni, Dhatwagni, along with Bhutagni. Dhatu also gets nourished from Dhatu and nourishes other Dhatu and this is the basic concept which each Nyaya has tried to portrait.

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