



Synthetic Aspect of Metabolism in view of Panch Bhutagni

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Abstract:

In various chapters of *Ayurvedic samhita* an almost process of the digestion and metabolism of food was understood & explained by *Acharyas*. A careful and critical study of the original texts and the commentary of *chakrapani- data* shows that the knowledge of the physiology of digestion and already reached a high degree of development. According to the physiology of the *Ayurveda Bhutagnis* are the essential factors for the digestion and metabolism of five elemental (*Panchbhutic*) food stuffs. This study was done to ensure a proper understanding & appreciation of contribution made by *Ayurveda* in the field of intermediate, synthesis and maintenance of metabolism and the bearing they have on the practice of *Kayachikitsa* (Internal medicine) Those who are devoted to research in nutrition and metabolism must know the significant contribution made in this particular field by Ayurvedia.

Keywords: Metabolism, Butagnis, Panchabhutic, Ayurveda, Kayachikitsa.

Introduction:

An almost process of the digestion and metabolism of food as understood and explained by *Ayurveda* in various chapters of *Ayurvedic Sambita's*. A careful and critical study of the original texts in these chapters and the commentary of the *Chakrapani Datta* there on is revealing and shows that the knowledge of the physiology of digestion had already reached a high degree of development. Conceptually speaking, ideas basic to the concept of digestion and metabolism as *Acharya Charak* and explained by *Acharya Chakrapani* are reminiscent of some of the more recent views advanced, in allied field of physiology and biochemistry in modern text. In other words modern development in these field furnish corroboratory evidence to the earlier observation, as recorded in *Ayurveda* knowledge of the physiology of digestion and metabolism and its practical importance in the study and the practice of Internal Medicine (The branch of Modern Medicine) which corresponds to the *Kayachikitsa of Ayurvea Punarvasu Atreya* was perhaps the

first, in the world, to have furnished a fairly precise and accurate description of the processes of digestion and metabolism.

According to the physiology of the Ayurved *Bhutagnis* are the essential factors for the digestion and metabolism of five elemental (*Panchbhutic*) food stuffs as mentioned by *maharshi Sushruta*. The animated organism is composed of five *bhutas* and the food of a living organic being is of constituent principles goes to augment its own similar tissues in the human organism. The food, which is *panchabhautic* digested by *Jatharagni* and the digested portion is again dealt with, in further process of digestion, by *bhutagnis*. Then each one of its primary Principle proceeds to augment its homologue in the human body².

Commenting on the above *shloka Acharya Dalhana* has clearly stated that *Panchbhutic* food stuffs are digested by five *bhutagnis* and each *bhutagni* thus increases its constituent tissue similar to its own character. *Acharya Vagbhata* also made observation similar to those of *Charaka* and *Sustruta*, has stated that each of the five kinds of *dravyas* – the outcome of *bhutagnipaka* proceeds to augment the corresponding *bhautic* elements that compose the human body³.

Maharshi Charaka in alike manner described five types of *bhutagnis* which are responsible for the digestion and metabolism of five distinct groups of food stuff⁴.

Acharya Chakrapani on commenting on *ch.chi 15/13 shloka* described that “the *Pathivagni. Apyagni* etc, five *bhutagnis* which are made potent in action after the action of *Jatharagni* digest the different food stuffs, and after the completion of digestion, the digested material takes the form of its own similar character.

According to *Chakrapani* on *charak* related to events which are stated to occur after the food ingested has been dealt with *jathragni paka*. The outcome of this *paka* is the reduction of the basic food stuffs to elemental substances, which from the point of view of their physico-chemical properties are classified under the five *bhautic* groups viz. *parthiva, apya, agneya, vayavya* and *nabhsa*.

According to the physiology of *Ayurveda*, *bhutagni-paka* follows *Jatharagnipaka* and it completes the process of intestinal digestion. It is only after the completion of *bhutagnipaka* that the formation of *aharasa* is completed and *rasa shoshana* or the absorption of *rasa* is possible. The outcome of *Jatharagnipaka* are two (1) The splitting of the complex food substances into their ultimate elemental units or molecules. These elemental units are of five groups i.e. the *parthiva, apya, tejasa (agneya) vayavya* and *akashiya* the criterion for such a grouping being the dominance of the particular *bhuta* over others of the *bhuta pentad*, as could be judged from its characteristic qualities². The activation of the nascent *agni-bhuta*

which forms part of the *panchbhautic* structure of each one of the five groups of molecules. The nascent *agnibhuta*, presentation each *panch bhutic* group, is known after the generic name of the particular group i.e. *agnipresent* in the *parthiva* group is known as *parthivagni*, the *agni* in the *apya* group as known as *apyagni*, the *agni* in the *tejasa* group as *tejo- agni*, the *agni* of the *vayvya* group as *vayavyagni* and the *agni* of the *akashiya* group as *Akashagni or nabhasagni*. The classification of the end- products of *Jatharagnipaka* as of five *bhautic* groups is based on the criterion of the *samanya gunas* or generic characteristics of the more dominant of the five species of *bhutas* essentially qualitative and physico chemical. The classification of the end products of intestinal digestion as above, is important for the study in *bhutagnipaka*.

In the course of *bhutagnipaka* the *agni moeity* present in the molecules of each group viz. The *parthivagni* in *parthiva* group, the *apyagni* in the *apya* group and so forth is stated to digest the entire qualities. In order words the final products of *Jatharagni paka* are suitably processed by *bhutagnipaka* and are rendered fit to be acted upon by the specific *agni* present in each one of the seven *dhatu*⁽⁵⁾ before they are assimilated into the latter as mentioned by *Acharya Chakrapani*.

The curious way in which the phenomenon associated with *bhutagnis* has been described in the ancient Indian Medical classics is important and needs a careful study. In view of observational and experinetal facts made available to day. For we learn from modern physiology and biochemistry that the main purpose of digestion of food in the alimentary canal is to render its different basic components viz starches, fats and proteins which are entirely foregin to the body i.e. (*vijatiya*) fit for being converted into and utilides by the body as *sajatiya* (Organism specific) i.e. (*sajatiya*). Thus the vegetable starch or cellulose is first broken down to its elemental form the glucose towards. The end of intestinal digestion, before the same is rebuilt in the body as organism specific animal starch or glycogen. In the same way fats derived from various plants and animal sources viz, oils, ghee etc. are first broken down into their elemental forms viz. fatty acids and glycerol before they are resynthesised as a organism specific lipids. Likewise, animal and vegetable proteins derived from external sources are also broken down into their elemental form viz. The amino acids before they are rebuild in the body as organism specific proteins viz albumin fibrinogen and most of the globulins.

Conclusion:

These concepts are important to ensure a proper understanding and appreciation of the contributions made by *Ayurveda* in the field of intermediate, synthesis and maintenance of metabolism and the bearing they have on the practice of *kayachikitsa* (Internal medicine). The need to secure a proper understanding of the concept of *dhatwagni paka* or *kayagni vyapara* become very much emphasized and bio- chemistry and specially, those who are devoted to researches in nutrion and meta bolism are not aware of the earlier and

significant contributions made, in this particular field by *Ayurveda*. Broadly speaking, modern advances in these and related field appear, as will be seen from the present study, to overlap the old *Ayurvedic* doctrines relating to these subjects⁶. In fact the *Ayurvedic* concept, in the above regard, are generalizations embodying precise and definite conclusions which can well serve as the basis for further researches and advances.

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