



Concept Of Upadhatu: A Review Study

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ABSTRACT : Food get digested after action of *Agni* and results in formation & nourishment of *dhatu* along with *upadhatu* by *tridhaparigaman* in their respective *Srotasas*. *Upadhatu* are obtained from *Dhatus* and resembles *dhatu* in terms of structure, function and nature. *Upadhatus* are important connecting element between *Dosha*, *Dhatu* and *Mala* which are responsible for all physiological functions in human body. *Upadhatus* are sub tissues or secondary tissues in the body which serve as important components and are important physiological units that perform specific functions. Such important topic of *Upadhatu* explained in various *Samhitas*, but their references are scattered and very less. While studying about *upadhatu*, it's been really very difficult to come to the certain opinion of all *Acharayas*. Thus, it's honest effort to gather all data about *Upadhatu*. Various *Samhitas*, textbooks, journals, etc. were reviewed for this study. In this article, detailed concept of described in various texts of *Ayurveda*.

Keywords : *Upadhatu*, *Dhatu*, *Agni*, *Srotas*, *Tridhaparigaman*, *Dosha*, *Dhatu*, *Mala*.

INTRODUCTION: *Ayurveda* is the traditional science of medicine practiced in India since centuries. It is the science for long life which cures not only the diseases but also teaches how to live healthy life & prevent diseases. A living body constituted with three basic elements namely *Dosha*, *Dhatu* and *Mala*. Out of them, *Dhatus* formed the basic structural architecture of the body. *Dharan* and *poshan* of body is the important function of the *dhatu*. That's why, it is called that *Dhatus* are the most stable constituents of the body and form the substratum of the body. Apart from the *dhatus*, there are certain elements that are resembles to the *dhatus* in terms of structure, function and nature. Therefore, they termed as *Upadhatu* by ancient *Ayurvedacharyas*. The word '*Upadhatu*' consist of two parts i.e. prefix '*upa*' and word '*dhatu*'. The prefix '*upa*' means close resemblance to *dhatu* element. Unlike *dhatu*, *upadhatu* perform only *dharan* function of the body, not *poshan* of the body. *Dhatu* form the basic architecture of the body, but they are unable to execute functions of body without the support of *Upadhatu*. So, *Upadhatus* are the important connecting element between *dosha*, *dhatu*, *mala* of those fundamental entities which are also known as secondary element or sub tissues.

MATERIAL AND METHODS: The literature collected from various *samhitas*, textbooks, journals. Data taken from ancient period *samhitas* till date published journals.

REVIEW ON UPADHATU:

Etymology (vyutpatti): close resemblance to word *dhatu*.

Definition (Nirukti): Those who are derived from *dhatu*s, produced as complementary, subsidiary level are called *Upadhatus*.

Upadhatu Formation: Secondary tissue (*Upadhatu*) is formed as a byproduct of tissues during metabolism of the tissue. At the end of food digestion, it divides into two forms i.e. *Prasadaja* and *kitta*. *Upadhatus* are nourished from *Sukshma bhaga* of *Prasadaja* part. *Upadhatus* get nourishment by the process of *poshana karma* of *dhatu*.

Upadhatu Nourishment (Poshan): *Dhatu* gets nourished by *aahar rasa* formed within body and nourishment of *upadhatu* completely depends upon *poshan karma* of their respective *dhatu*. When there is *vridhhi-kshay* of *dhatu*, in that case, it affects also on respective *upadhatu*. e.g. if there is *vridhhi* in *rasa dhatu*, then *stanya vridhhi* happens also. Vice Versa.

Emergence of upadhatu: Acharya Vagbhat has explained ‘*nitya bhawa*’ and ‘*anitya bhawa*’. *Nitya bhawa* are like their presence since birth upto death e.g. *dhatu*. *Upadhatu* includes *snayu*, *sira*, *twak* are also *nitya bhawa*. But, *Upadhatu stanya* and *raja* are exceptional elements. As they emerges few years after birth, also not continue throughout life are called as *anitya bhawa*.

Upadhatus quoted by various Acharyas:

Dhatu (7)	Upadhatu			
	Charak Chakrapani (7)	Sharangdhar, Bhawamishra, Trimalla Bhatta (7)	Bhoja (5)	Vridhha Vagbhat, Dalhan (8)
1. Rasadhatu	Stanya, Raja	Stanya	Stanya, Raja	Stanya, Raja
2. Raktadhatu	Kandara, Sira	Raja	Sira	Kandara, Sira
3. Mansadhatu	Vasa, twak	Vasa	twak	Vasa, twak
4. Medadhatu	Snayu	Sweda	Snayu	Snayu, Sandhi
5. Asthidhatu	-	Danta		
6. Majjadhatu	-	Kesha		
7. Shukradhatu	-	Oaj		

Acharya Sushrut has not explained *upadhatu*, but Sushrut Samhita commentator Dalhan acharya quoted Sandhi as *upadhatu* of *medadhatu*.

Clinical importance of Upadhatu : Proper knowledge about *upadhatu* gives direction to diagnose the cause of the disease. Physician can identify the *vikruti* wheather in *dhatu* or *upadhatu*. According to that physician can treat the disease and also find out the *Sadhyasadhyatwa* of that disease. Because *dhatu vikruti* causes chronic diseases/disorders, meanwhile *upadhatu vikruti* causes acute diseases/ disorders. Whenever there is *vikruti* in *dhatu*, at that time there is presence of *vikruti* in *upadhatu* also. *Upadhatu vikar* gets cure on treatment of route *dhatu*. Therefore, significant knowledge about *upadhatu* gives proper direction to physician for diagnosis and treatment of disease. To know these *dhatu-upadhatu* terms better, there is significant difference between them as explained below:

<i>Dhatu</i>	<i>Upadhatu</i>
1. <i>Dhatu</i> performs function of <i>Dharan</i> and <i>Poshan</i> within the body.	1. <i>Upadhatu</i> performs function of <i>dharan</i> , but not <i>Poshan</i> within the body.
2. <i>Dhatu</i> are <i>nitya bhawa</i> , as their presence since birth and performs <i>Dharan</i> function.	2. <i>Upadhatu</i> emerges few years after birth, also not continue throughout life are called as <i>anitya bhawa</i> .
3. <i>Dhatu</i> always stays within the body while performs their function.	3. In most of the cases, <i>Upadhatu</i> performs their function out of the body e.g. <i>stanya</i> , <i>raja</i> .
4. Each and every <i>dhatu</i> have their own <i>Agni</i> .	4. <i>Upadhatu</i> don't have their own <i>Agni</i> .
5. Formation of <i>Dhatu</i> happened from consequent <i>dhatu</i> . e.g. <i>Rakta dhatu</i> formed from <i>Rasa dhatu</i> .	5. No any element formed from <i>upadhatu</i> .
6. Formation of <i>Mala</i> takes place from <i>Dhatu</i> .	6. There is no formation of <i>Mala</i> from <i>Upadhatu</i> .
7. Formation of <i>Dhatu</i> takes place since birth upto death.	7. Formation of <i>Upadhatu</i> takes place upto certain age or period. e.g. <i>stanya</i> , <i>raja</i> , <i>danta</i> .
8. <i>Upadhatu vikruti</i> is directly depends upon <i>Dhatu vikruti</i> .	8. <i>Dhatu vikruti</i> is independant upon <i>updhatu vikruti</i> .
9. <i>Dhatu vikruti</i> shows results as <i>Sarvadehik</i> .	9. <i>Upadhatu vikruti</i> shows results as <i>Sthanik</i> .
10. Immunity and strength of that person depends upon <i>dhatu</i> .	10. Immunity and strength of that person do not depend upon <i>updhatu</i> .
11. <i>Dhatu</i> are unidirectional (<i>Gatiman</i>).	11. <i>Upadhatu</i> don't have their own direction.
12. <i>Dhatu vikruti</i> causes chronic diseases.	12. <i>Upadhatu vikruti</i> causes acute diseases.
13. But <i>dhatu vikruti</i> is easily treatable.	13. <i>Upadhatu vikruti</i> takes time to treat as compare to <i>dhatu vikruti</i> .
14. <i>Dhatu</i> never causes any <i>shalya</i> to body.	14. Few of <i>upadhatu</i> may act as <i>shalya</i> to body e.g. <i>danta</i> , <i>kesh</i> .

DISCUSSION: Discussion is the logical reasoning of the study which helps to summarise the conclusion of the study. It is very essential to discuss about the finding obtained during study which helps to improve knowledge. *Upadhatus* are byproduct of the *dhatu* metabolism but they cannot be considered as *Malas*. But they are nourished by the *prasada* part of *Dhatu*. But this term '*Upadhatu*' was not available in *samhita kala*. *Charakacharya* mentioned '*Upadhatu*' collectively as a unit. In 11th century, *Bhoja acharya* and *Gayadasa acharya* might have introduced term '*Upadhatu*'. In 11th and 12th century, *acharya dalhan* and *chakrapani* also contribute study to elaborate the concept of *upadhatu*. In *Sharangdhar samhita*, there is also brief explanation about *Updhatus* which is accepted by *acharya Bhawamishra* of 16th century. *Acharya Sharangadhara* added *Sweda*, *Danta*, *Kesha*, *Oja* to the list of *upadhatu* and deduct *sira*, *kandara*, *twak*, *snayu* from the list. Because these three are *mala poshaka* components of the body. So, it cannot be included under *upadhatu*, as *upadhatus* are nourished by *prasada* part of *dhatu*. *Vridhha Vagbhat* of *Ashtang Sangraha* adds *Sandhi* as a *Prasada* entity, which is accepted by *Dalhana*. *Dhatu*s are dissimilar from *upadhatus* in some manner which are mention below:

1. *Upadhatus* are byproduct formed during metabolism of *dhatu*.
2. *Updhatus* do not get transformed into another component.
3. *Upadhatus* do not nourish *Dhatu*s or any other body component.
4. Some of *upadhatus* in function for specific time only e.g. *raja*, *stanya*.
5. Some *upadhatus* act as *mala bhawa* in the body e.g. *kasha*, *nakha*.

Agni present at *upadhatu* level is a type of *Bhutagni* which is essential for any type of transformation. *Dhatvagni* of each *dhatu* is closely related with *upadhatu* because it resides at *srotasa*, which is responsible for *parinamana* of *dhatu* from one state to another state. Deteriorated status of *dhatwagni*

affects the normal function of *upadhatu*. *Srotasa* is necessary to convey the nourishment to the abodes of *upadhatu*. So, it can be say that *upadhatu* have their own *srotasa* through which they receive their own nutrients. Hence it is stated that *dhatvagni*, *srotasa*, *vayu* plays an important role in the process of nourishment of *dhatu* and *upadhatu*.

CONCLUSION: Various *acharyas* at different period of time explained the concept of *upadhatu* in their own way. At first, *Charakacharya* has introduced the term *Upadhatu*. Later on many commentators have contributed significantly to elaborate the concept. *Upadhatus* are closely resemblance to *dhatu*. *Upadhatus* are byproduct of *dhatu* metabolism. They are nourished from *Sukshma prasada* portion of *dhatu*, which also nourishes successive *dhatu*. Because of that they show close resemblance to successive *dhatu*. *dhatvagni*, *srotasa*, *vayu* plays an important role in the process of nourishment of *upadhatu*. Status of *dhatvagni* is directly related to the normal functioning of *upadhatu*. *Upadhatu* have their concern *srotasa* through which they receive their own nutrients. *Vayu* is responsible for transportation of specific amount of nutrients to *upadhatu*. Widely *upadhatus* are classified under two categories i.e. structural entities and functional entities. *Kandara*, *Sira*, *Snayu*, *Sandhi*, *Twak* are basically involved to design the structural architecture of the body. *Kandara* is *upadhatu* of *rakta*, while *snayu* is *upadhatu* of *meda*. Both show anatomical and functional resemblance. *Vasa* is *upadhatu* of *mamsa* which is lubricating in nature placed for smooth functioning of muscles. *Twak* provides physical barrier to the whole body against external environment which also provides platform for various functions of *doshas* and *vayu*. *Sandhis* are *upadhatu* of *meda* which are articulating joints of the body. All the movements of the body can occur due to presence of this entity. Significant knowledge about *upadhatu* gives proper direction to physician for diagnosis and treatment of disease. *Upadhatus* contribute important role in pathogenesis of diseases, because *Kandara*, *Sira*, *Snayu*, *Sandhi* are part of *Madhyama roga marga*, which are intricate for treatment.

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