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Review Article

INTRODUCTION TO *UPDHATU* AND FORMATION OF *STANYA* FROM *RASADHATU*

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ABSTRACT

Ayurved is a healing science based on the studies and keen observations. Ayurved gives priority to maintain the healthy state of a normal human being and treat the disease of patient. Success of any science depends on its fundamental principles. Fundamentals of Ayurved are very important body elements such as *Dosha*, *Dhatu*, *Mala* and *Agni*. Ayurved explained about quantities assessment of various biological elements like normal height of a person, normal values of different body tissues (*Dhatu*) like *Rasa* (plasma), *Rakta* (blood) etc. *Updhatu* is subsidiary tissue arises from *Dhatus*. *Stanya (*breast feeding*)* is one of them which is derived from *Rasa Dhatu*. World Health Organization recommends that exclusive breastfeeding for the first six months of life, after which "infants should receive nutritionally adequate and safe complementary foods. So in this article an attempt has been made to understand the concept of *Updhatu* and formation of *Stanya* from *Rasa Dhatu*. For this study, the basic materials have been collected from the Ayurved classics as well as textbook of contemporary modern medical science have been referred for better understanding of the concept and its comparison with contemporary science.

INTRODUCTION

Stability of the chemical and physical composition and physio-chemical properties of the internal environment is known as homeostasis. Homeostasis expressed by a number of biological constants, which are maintained by *Dosha*, *Dhatu* and *Mala*.[1] Roots of tree are very important for maintenance, stablity and growth of a tree, similarly *Dosha*, *Dhatu* and *Mala* are very important for maintaining human body.[2] There are seven *Dhatu* which is derived from *Ahara Rasa* that is *Rasa, Rakta, Mamsa, Meda, Asthi, Majja and Shukra*. All the seven *Dhatus* of the body contains their own fire (*Agni*) in order to metabolize the nutrients (micro as well as macro) supplied through *Srotas* (channels of circulation). Substances that are present in the body which only perform *Dharana Karma* is *Updhatu*.

Meaning of Up is Sub, sub ordinate, subsidiary, secondary and *Dhatu* means tissue. *Updhatu* is subsidiary tissue which provides base to the body but they do not nurture it like *Dhatu*. *Updhatu* helps to sustain body. The main difference between *Dhatu* and *Updhatu* is that any changes or vitiation in *Dhatu* results in the effect in *Uttar Dhatu* but this can't happen in case of *Updhatu*.[3] Each of seven *Dhatu* nourishes and supports *Updhatu* which is subsidiary tissue or secondary tissue product and produce *Malas* (waste products). The *Updhatu* neither nourish each other nor any other tissue for the matter.

Table showing *Dhatu* and its *Updhatu*

S.No.	*Dhatu*	*Updhatu*
1.	*Rasa*	*Stanya* (Breast milk), *Artava* (menstrual Blood)
2.	*Rakta*	*Kandara* (Tendon), *Sira* (blood vessels mainly vein)
3.	*Mamsa*	*Vasa* (Fat), *Twacha* (skin)
4.	*Meda*	*Snayu* (Ligaments)
5.	*Asthi*	_____
6.	*Majja*	_____
7.	*Shukra*	_____

Ahara is most essential part for the existence of all living beings. Good nutrition and proper food eating habit is an important part of leading a healthy lifestyle. It is the main factor for the formation of *Rasa*, *Tridosha* and *Dhatus*. Function of *Rasa Dhatu* is to provide freshness to each body cell which is known as rehydration (*Prinana*).

Breast milk or *Stanya* is produced by the mammary glands or breasts of a human female for infant. *Paryaya* (Synonyms) of *Stanya* (Breast milk) are *Dugdha, Kshira, Payas*, *Balajivana*[4] *Stanya* produced in women is similar to that of *Shukra* originating from food extracts and induced due to touching, remembering or taking the child into lap. It is *Vatsalya* (love of baby) that is subjected to motherhood. Milk is the primary source for supplying nutrition for the newborn before they are able to ingest or digest the food stuffs. Due to its origin from breast and *Rasa Dhatu*, it has been kept as *Updhatu*. It contains many immunologic agents which is so much essential for infant.

MATERIALS AND METHODS

- Relevant Ayurved and modern classic texts.
- Previous research papers.
- Various National or International journals or magazines.
- Internet surfing.

RESULTS AND DISCUSSION

Dhatus and organs get developed in the embryological stage (*Garbha*) and after birth these *Dhatus* gradually grow. For growth and development *Dhatu* needs nourishment. These *Dhatus* are nourished by *Ahara-Rasa*.

Ahara → Formation of New *Dhatu*

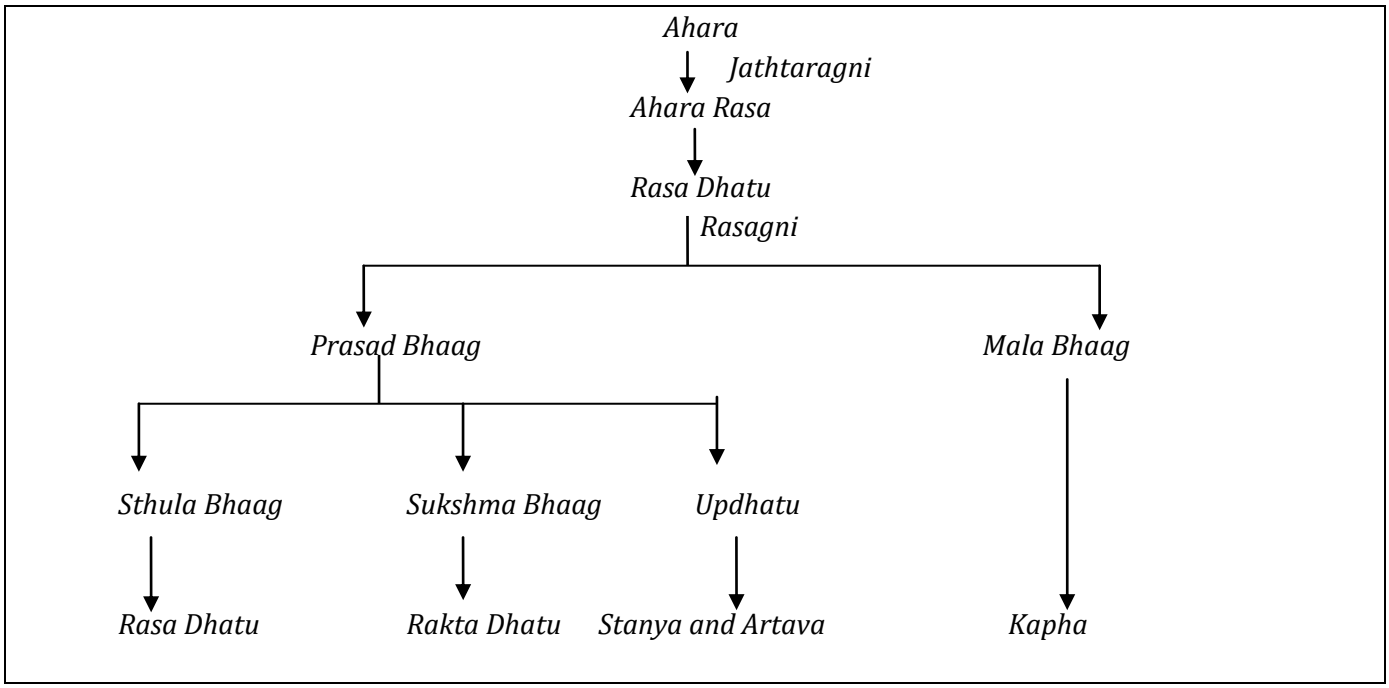
Ahara → Repair Damaged *Dhatu*

Every elements in this universe is composed of *Panchmahabhuta* i.e., *Akash, Vaayu, Agni, Jala*, *Prithvi*. *Ahara* is the main factor for formation of *Rasa*. *Ahara* is also made of *Panchmahabhuta*, having six tastes (*Madhur*, *Amla*, *Lavana*, *Katu*, *Tikta* and *Kashaya*) possess many properties when indigested undergoes digestion. After being digested properly, *Ahara* with the help of *Kosthagni* present in stomach (Gastric juice- Hydrochloric acid) and small intestine arise its vital essence known as *Ahara Rasa*.

Updhatu are generated from *Dhatus*. They are nourished from *Sara* portion produced in digestion of nutrient fluid in *Dhatuvahasrotas*. It means they are produced directly from *Ahararasa*. It is needed for *Ahararasa* to undergo more digestion for giving rise to *Dhatu* as well as *Updhatu*.

According to *Ayurved*, *Stanya* is derived from *Rasa Dhatu*. *Ahara Rasa* is transported from breast region into breast milk. From this, Breast secretes the milk through the passage. The sweet part of the juice produced from the *Ahara* is sweet. Milk is produced in women after the delivery of child, originating from the food extracts and induced due to touching, seeing, remembering or taking the child into laps.[5] Girls before adolescence do have breasts but they are under developed. When they become adult, these mammary glands develop and in pregnancy they get fully developed.[6] The cause of continuous lactation is the love of the mother towards her child.

Table chart showing formation of *Stanya* and *Artava* from *Rasa Dhatu*



Characterstics of Vitiation of Milk By Different *Dosha*[7]

Milk vitiated by *Vata* - Astringent in taste and floats in water.

Milk vitiated by *Pitta* - Pungent, sour or salty in taste and appears having yellowish threads.

Milk vitiated by *Kapha* - Thick, sinks in water and sticky.

Disorders produced due to specific taste

a. *Kashaya rasa* - Retention of urine and feces.

b. *Madhura rasa* - Excessive excretion of urine and feces.[8]

Similarity and dissimilarity between *Dhatu* and *Updhatu*[9]-

- **Similarity**
  1) *Updhatu* bears the body as like *Dhatu*.
  2) *Dhatu* have their own *Agni*.
  3) *Dhatu* are inter-related hence they affect each other.
  4) Both are formed from *Panchmahabhuta*.
  5) Unlike *Dhatus*, *Updhatu* are also get vitiated.
- **Dissimilarity**
  1) *Updhatu* doesn't nourish the body as it only performs *Dharana karma*.
  2) *Updhatu* doesn't have their own Agni.
  3) *Updhatu* are not affected by each other.

As per modern, breasts or mammary glands are accessory glands of the female reproductive system. They also exist in the male but only in a rudimentary form. Each breast is a hemispheric projection of variable size anterior to the pectoralis major and serratus anterior muscles and attached to them by a layer of fascia composed of dense irregular connective tissue. Each breast has one pigmented projection, the nipple that has a series of closely spaced opening of ducts called lactiferous ducts where milk emerges. A mammary gland consists of 15 to 20 lobes or compartments separated by a variable amount of adipose tissue. In each lobe, there are several compartments called lobules which is composed of grape like clusters of milk secreting glands termed alveoli. Contraction of myo-epithelial cells surrounding the alveoli helps propel milk towards the nipples. When milk is being produced, it passes from the alveoli into a series of secondary tubules and then into the mammary ducts[10]. Lobules open into tiny lactiferous ducts, which drain milk towards the nipple. In the lactating breast, glandular tissue proliferates to support milk production and recedes again after lactation stops.[11] Breast arises from the surface epithelium as solid column of cells which gradually is hollowed out to become ducts.

Breast Condition in Different Stages[12]

At birth- Breast is rudimentary and consists of a tiny nipple.

At puberty: Proliferative changes with the recurrence of each menstrual cycle followed by regression and there is increase in interalveolar.

During Pregnancy: 1st half of pregnancy, duct development accompanied by appearance of many alveoli which form lobules. In this stage, no milk secretion takes place.

In 2nd half of pregnancy, epithelial cells swell with gradual initiation of secretory activity and slow accumulation of milk in the alveolar lumen.

Hormonal Control of Breast Development

Hormone	Action
Oestrogen	Duct development which causes thickening of nipple.
Progesterone	Act in the presence of oestrogen, glandular development occurs which promotes the growth of the lobules and alveolar tissues in the breast.
Prolactin	Acts directly on mammary epithelial cells to produce localized alveolar hyperplasia.

Lactation includes two processes that is milk secretion and milk ejection. Milk secretion is the synthesis of milk by the alveolar epithelium and its passage into the lumen of the gland while milk ejection is the discharge of milk from the breast. Although lactation normally does not occur until the end of pregnancy, cyclical changes take place in the breasts during the menstrual cycle. Estrogens cause proliferation of mammary ducts, whereas progesterone causes growth of lobules and alveoli. The breast swelling, tenderness and pain experienced by many women during the ten days preceding menstruation are probably due to distension of the ducts, hyperemia and edema of the interstitial tissue of the breast.[13]

CONCLUSION

In modern medical science, the presence of breast and menstruation is considered only in women. The effect of breast milk on the health of women is when they feed their baby. Generally, during the pregnancy women do not get nutrition or lack of nutritious elements in their diet due to physical infirmity of women, due to lack of *Vatsalya*. Hence an attempt has been done here to elaborate physiological importance of *Stanya* in female and its relation with female breast and breast milk so that we can use this concept and understand the present day pathology which is seen in post partum female and hence an effective treatment plan can be made.

REFERENCES

1. Prof.Dr.M.Srinivasulu, Fundaments of Kaya Chikitsa edition 1st 2009 Chaukhambha sanskrit series office Varanasi chapter 13 pg no. 381.
2. Prof.Dr.Subhash Ranade, Prof.Dr.R.R. Deshpande and Prof. Dr.Swati Chobhe, A Textbook of Kriya Sharira by part 1 2018 Chaukhambha Sanskrit Pratisthan Delhi ch.1 pg.no.23.
3. Dr.Sunil verma, Prof.Jayaram Yadav, Sharir Kriya Vigyan by Chaukhambha Orientalia, Varanasi Ch.27 pg.307.
4. Bhela - Bhela-Samhita. Text with English Translation, commentary, and critical notes by Dr.K.H. Krishna Murthy- Chaukhambha Vishvabharati. Oriental Publishers and Distributors. Varanasi. Reprint, 2003.
5. Prof.G.D.Singhal & colleagues, Sushruta-samhita Ancient Indian surgery edition 2nd 2007, vol.1 Chaukhamba sanskrit Pratisthan Delhi chapter 10 verse 18, pg. no. 574.
6. Vd.Pratibha V.kulkarni and Vd.S.M.Vaidya forwarded by Prof. Kishore Patwardhan, A textbook of human physiology edition first 2018, publication by Chaukhambha Orientalia Varanasi ch 22 pg. no. 389.
7. Prof.K.R.Srikantha Murthy, Roga vinischay of madhavkar, publication by Chaukhambha orientalia Varanasi Ch.67.
8. Dr.Ankit Agrawal, Dr.Deepika Mehra, Dr.Sujit Kumar, Dr.Mariya Husain, Dr.Vaidehi V Raole and Dr.Sunil P Nikhate A conceptual study on Stanya: An Ayurvedic review, The Pharma Innovation Journal 2019; 8(5): 118-122.
9. Dr.Basant Kumar Shrimal, Doshadhatuvijnana, publication- Chaukhambha Surbharti Prakashan Varanasi Pg. no. 105.
10. Gerard J.Tortora and Bryan derrickson, Principles of anatomy and physiology, edition 13th vol 2 international student version chapter 28.2 pg no. 1158-1159.
11. Ross and Wilson, Anatomy and physiology in health and illness by Elsevier Edition 13 Ch 18 pg no. 497.
12. A.K.Jain, Textbook of physiology Avichal publishing company edition-5th vol.2 Pg no.869-871.
13. Kim E. Barrett, Susan M. barman, Heddwen L. Brooks and Jason X.-J. Yuan, Ganong's review of medical physiology by by Mc Graw Hill education (India) private limited Ch 22 pg no 395.

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