A CONCEPTUAL ANALYSIS OF RASADHATU
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INTRODUCTION
Tridosha, Saptadhatu and Trimala are the basic concepts of Ayurveda. Vata, Pitta and Kapha are the Tridosha. Rasa, Rakta, Mamsa, Medas, Asthi, Majja and Shukra are the Saptadhatu, Mutra, Purushe and Sweda are the Trimala. The word ‘Dhatu’ comes from a verb ‘Dha’ which is having the meaning ‘to support (Dharana) and to nourish (Poshana)’. It is the one which supports body, mind and life. They are seven in number (Rasa, Rakta etc.) Rasadhatu, first among the Saptadhatu and it is having prime importance of all Dhatu, as it is formed out of Ahararasa (essence of food) after Saarakitta Vibhajana (metabolic transformation). It is supposed to nourish the all other Dhatu. Rasadhatu and Ahararasa are different entities. Rasadhatu is the more transformed form of Ahararasa with an ability to nourish all other six Dhatu. The proper conceptual understanding of these concepts is very essential. So here an attempt is being made to analyse the concept of Rasadhatu for its better understanding.

MATERIALS AND METHODS
The Charaka Samhita, Sushruta Samhita and Ashtanga Hridaya were scrutinized regarding the references for the concept of Rasadhatu. Conceptual analysis was done for the proper understanding.

AIMS AND OBJECTIVES
To understand broad concept of Rasadhatu and analyse the same

Rasadhatu
‘Dhatu’ which is being continuously circulated in the body is called as Rasa Dhatu. Ahaara Prasada/Tejaa (essence portion of Ahaara Rasa), Asrikkara (blood former), Agni Sambhava (formed out of Agni), Dhatu Sara (fundamental Dhatu),

ABSTRACT
Body is made up of tissues i.e. termed as Dhatu in Ayurveda. Rasadhatu is the first formed Dhatu from essence of food at the level of its metabolic transformation. As it is the Dhatu that can provide precursor material for the formation of all other Dhatu, it is of prime importance in nourishment, development and maintenance of the body. Any pathological status of Rasadhatu can affect the all other Dhatu and finally may deteriorate the health of an individual. As this is the only Dhatu which is having circulating nature all over the body, taking Rakta along with it, it can act as a medium for healthy maintenance of the body and if vitiated causes diseases. It is the most superficial Dhatu which can be easily accessed. So, proper understanding of Rasadhatu is very essential for knowing the healthy and diseased status, as well as to plan and get success in treatment.

Keywords: Rasa, Rasadhatu, Dhatu, Ahararasa, Sthayee Dhatu, Asthayee Dhatu.
Sowmya Dhatu (Ap Mahabhuta Pradhan-ya Dhatu) are the other names of Rasadhatu.

From Rasa body takes birth. Formation and development of foetus, its maintenance (continuance of life activity), growth and non-attachment from sensual activities are done by Rasadhatu. Shukra and Artava combine to form embryo (Garbha). Artava is produced verily from Rasadhatu. Its composition in the formation of embryo plays an important role in the sex determination also. It is the Dhatu which can nourish, develop and maintain all other Dhatu. So, one should protect Rasadhatu by taking nutritious food & with proper regimen.

**Physiological Aspects**

Ahararasa is a pure and minutest essence of well digested food. It is the nutrient and precursor for all the other Dhatu. It is formed from 4 types of food composed (Ashita, Peeta, Khadita and Lehya) of Five Mahabhutas, 6 tastes, 2/8 Vryas (Sheeta- Ushna or Snigdha- Ruksha; Vishada- Pichhila/ Guru- Laghu; Mridu-Teekshna) and many other properties. Rasadhatu is formed from this Ahaararasa.

The consumed Ahara gets digested under the action of Jatharagni (digestive fire) and Bhutagni in Annavaha Srotas (channel for transportation of food) and it will be differentiated into Sara (Annarasa/ useful portion) and Kitta Bhaga (discardable portion). Under the action of Rasadhatwagni and Bhutagni in Rasavaha Srotas Annarasa will be differentiated into Stuhlamsa (Poshya or major) and Sukshmansha (Poshaka/ minor). Stuhlamsa will nourish the Rasadhatu proper, whereas Sukshmansha will further lead to the manifestation of Raktadhatu under the action of Raktadhatwagni, Rasa Upadhatu (Stanya and Artava) and Mala (Kapha).

Rasadhatu predominantly composed of Jala Mahabhuta. Hridaya is considered as the main Sthana. Time taken for the formation of Rasadhatu from Ahararasa is 24 hours. Its quantity is 9 Anjali (1764 ml). It is of 2 types:

a. Sthayee (Poshya) it is stationary one, make up the structural architecture of the body and exist in material form. Continuously undergo construction and destruction maintaining a state of dynamic equilibrium (Swasthyam).

b. Asthayee (Poshaka) It is the circulating Dhatu, comprise the nutrient substanc-
es, which form the precursors of *Poshya Dhatu.*\(^{15}\)

The formed *Rasadhatu* from *Rasavahasrotas* will be taken to *Hridaya* by *Samana Vata*, from there it enters 24 *Dhamani*, which passes 10 upward, 10 downward and 4 laterally.\(^{16,17}\) It circulates all over the body simultaneously and continuously with the help of *Vyana Vayu*, which stimulates the process of circulation by its nature. This can be compared with waves of sound, like Fire and water.\(^{18}\) Gratification, satisfying and nourishment of *Raktadhatu* are the function of *Rasadhatu*.\(^{19,20,21}\)

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<tr>
<th>Rasadhatu functions(^{22})</th>
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<td><strong>Tarpana</strong></td>
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<td><strong>Vardhana</strong></td>
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<td><strong>Dharana &amp; Jivana</strong></td>
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<td><strong>Yapana</strong></td>
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<tr>
<th>Upadhatu(^{23})</th>
<th><em>Stanya</em> (breast milk) &amp; <em>Arthava</em> (menstrual blood)</th>
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<tr>
<td><strong>Mala</strong>(^{24,25})</td>
<td><em>Kapha</em></td>
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**Ashraya Ashrayeebhava Sam-bandha of Rasadhatu with Kapha Dosha**

Individuals with excellence of *Twak* are characterised by unctuous, smooth, soft, clear, fine, less numerous, deep rooted and tender hair and lustrous skin. They are also endowed with happiness, good fortunes, power, enjoyment, intellect, knowledge, health, excitement and longevity.\(^{27}\)

**Rasavaha Srotas** are the channels of circulation of *Rasadhatu*. *Hridaya*, *Dasha Dhamani* and *Rasavahini Dhamani* are said to be the *Moola Sthana* for these Channels.\(^{28,29}\)

*Avalambaka Kapha* is one of the fluid entities in the body and is considered as important among all *Kapha* types. It
supports Hridaya, Trika and all other Kapha.30, 31, 32

Pathological Aspects: Rasavriddh Lakshana is similar to Sleshma Vridhdi Lakshana. They are as follows, Agnisadana, Praseka (Increased salivation) Aalasya (Laziness), Gaurava (Heaviness), Svaitya (Pallorness), Saitya (Coldness), Slathangata (Laxity of organs), Svasa (Dyspnoea), Kasa (Cough) and Atinidrata (Excessive sleep).33 Rasadhatu in its decreased state produces Raukshya (Dryness), Shrama (Tiredness), Shosha (Emaciation), Glaani (Weakness) and intolerability towards sound (Shabda Asahishnuta) (Rasakshaya Lakshana). 34 Rasavaha Srotas get vitiated due to excessive intake of heavy, cold, excessive unctuous food and over worry (Rasavaha Srotodushti Karana). 35 Ashraddha (Loss of desire for food, no difficulty in taking food), Aruchi (Disapproval of food even after it has been taken in), Asyavairasya (Manifestation of abnormal taste in mouth), Arasajnata (Absence of perception of food), disinclination for food, anorexia, disgeusia, ageusia, nausea, heaviness, drowsiness, fever with malaise, fainting, anaemia, obstruction of channels of circulation, impotency, asthnia, emaciation, loss of power of digestion and premature appearance of wrinkles and grey hairs are the Rasapradoshaja Vikara.36 Injury to Rasavaha Srotas & its Moo-la lead to depletion of Rasadhatu which is followed by Shosha (Emaciation), Vata Dushti, Akroshana (Loud Grooming), Vinamana (Bending), Moha (Loss of consciousness), Bhrama (Illusion), Vepana (Tremors) and Marana (Death) (Rasavahasroto Viddha Lakshana). 37 For the cure of diseases caused by vitiation of Rasa, all types of Langhana (reducing therapy) should be advised (Rasavaha Srotodushti Chikitsa).38 Ten types of Langhana includes four types of elimination therapies, control of thirst, exposure to wind and sun, intake of substance that stimulates digestion, fast and physical exercise.39

DISCUSSION

A. Rasadhatu- Udaka40 Rasadhatu is nourishing in nature and Udaka is not so. Quantity of Rasadhatu (9 Anjali) and Udaka (10 Anjali) are also different. Udaka is found in association with other body fluids and can be seen mixed with faeces in diarrhoea whereas Rasadhatu cannot be seen outside.

B. Rasadhatu- Ahaararasa

Ahara Rasa when acted by Rasa Dhatwagni converted in to Rasa Dhatu. Even though Ahaararasa after its complete transformation only called as Rasadhatu, structural or functional differentiation of these two entities not so easy and it is almost impossible. Hence differentiation of Ahaararasa, Sthayee and Asthayee Rasadhatu from one another is not possible. This is the reason, Rasa in general considered as Rasadhatu and vice versa.

C. Parinati Kaala41,42

Time taken for the formation of Rasadhatu from Ahaararasa is not fixed and it depends on individual Agnibala so it is individualistic. Rasadhatu is said to be staying for a period of 3015 Kalaa (5 days) in each Dhatu. Formation of all Dhatu takes approximately 1 month (30days) time i.e. 18090 Kalaa. This period also cannot be said as fixed as the formation of Dhatu from Ahaararasa is a continuous, uninterrupted process like moving wheel and depending on Agnibala.

D. Artava Agni Pradhanatwam

Even though Artava (Agneya Dravya) is formed from Rasadhatu (Sowmya Dhatu) it is predominant of Agni Mahabhuta. This is may be because of involvement of Agni at the level of transformation.
of Rasadhatu into Artava (i.e. Artavagni/ Rasadhatwagni itself) and permutation and combination of Panchamahabhuta in the transformation process (Agnipaka). It can also be understood by considering the formation of foetus (Garbha) by the union of Shukra and Shonita. Predominance of Shonita at the time of conception, which is Agneya in nature leads to the formation of female child so, female are supposed to be Agneya naturally. May be because of this reason Artava being formed from Rasadhatu in the body (Shareera) of female (Formed because of dominance of Agneya Dravya i.e. Shonita) is also Agneya in nature.

E. Rasa Upadhatu in Male

Body will prepare everything that is needed from time to time. As there is no need or necessity for Male to have Artava or Sthanya, there will be no formation of Upadhatu from Rasadhatu in males.

F. Twaksaraa versus Rasasaaraa

All the skin layers are formed from the Ashrik (blood) like layers of scum on boiling milk. As the quality and quantity of blood depends on quality and quantity of Rasadhatu it can be inferentially understood that features of Twak represents the Rasasaaraa. As skin can be a tool for clinical examination, importance was being given to Twak for the assessment of Rasadhatu in an individual.

G. Hridaya- Rasadhatu Sthana- Rasavaha Srotas

Even though Rasadhatu circulates throughout the body, only Hridaya is considered as its location, this is may be because of the reason that the force of circulation is from Hridaya only. Hridaya is essential for the transportation of Poshakamsa of other Dhatu also, but it is considered as the Moola Sthana for Rasavaha Srotas only, why because the Ahar Ahar Gachhati function i.e. the continuous movement function of Rasadhatu can be taken over and satisfied by the only organ of the body i.e. Hridaya, which never stops from birth to death. Rasadhatu which reaches the Hridaya with the help of Samana Vata will be circulated throughout the body by Vyana Vata.

H. Dasha Dhamani- Rasavahini Dhamani

These are the Moola Sthana of Rasavaha Srotas as per different Acharya. Dhamani means the structure which is having pulsation. a. Right Coronary Artery, b. Left Coronary Artery, c. Superior Vena Cava, d. Inferior Vena Cava, e. Pulmonary Trunk, f. Aorta and g. - j. Four Pulmonary Veins can be considered as Da-sha Dhamani. All the vessels near to heart show pulsation because of transmission of pressure from heart. All these vessels also may be considered as Rasavahini Dhamani only because of functional similarity. This difference in the Moola Sthana may be because of the individual speciality of the Acharyas (Charaka- Physiopathological and Sushruta- Anatopathological).

I. Rasadhatu Vriddhi- Kshaya

Vriddhi and Kshaya of Rasadhatu will affect the successive Dhatu and can deteriorate the health of the individual very badly.

J. Rasapradoshaja Vikara- Rasavaha SrotoViddha

Rasadhatus/ Rasavaha Srotas vitiation may lead to simple to complicated disorders. Its vitiation may not only show its effect at its own level, it may extend to the level of Shukradhatu also. For example like Klaibya. Its vitiation may lead to simple disorder like Ashraddha and even Marana.

K. Rasadhatu- Medium of circulation
As a medium of circulation Rasadhatu is clinically useful. Any medicine after its metabolic transformation will enter into Rasadhatu and can circulate throughout the body and can easily reach even minute target areas/channels of the body including all other Dhatu.

L. Rasadhatu-Avalambaka Kapha

One is Dhatu and the other is Dosha. Rasadhatu Sthana is Hridaya whereas Avalambaka Kapha function is to nourish Hridaya. Rasadhatu circulates throughout the body through Hridaya and nourishes all other Dhatu whereas Avalambaka Kapha stays near to Hridaya (Urah) and nourishes it.

CONCLUSION

Rasadhatu is the first Dhatu among Saptadhatu. It is having prime importance as it is the precursor material for all the other Dhatu formation. Its Vriddi and Kshaya will reflect its effect on all the Dhatu. Its vitiation may show simple to very complicated effects on health. It is the Dhatu essential for the new creation (Embryo formation) and also maintenance of life (Recreation), so it’s understanding and reviewing have its own importance in present era.

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