

BIOCHEMICAL ANALYSIS OF STANYA & ITS CORRELATION WITH RASA-SARATA

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ABSTRACT

Sara is super excellent state of the *Dhatu*. The supreme quality and superb functional aspect of *Dhatu* is *Sara*. *Dhatu* form the basic architecture of the body, they are meant to accomplish the support and nourishment role inside the body. This is completed with the support of *Upadhatu*. *Upadhatu* are derived from metabolism of *Dhatu*. *Stanya* and *Raja* being the *Upadhatu* of *Rasa Dhatu*, their quality, quantity excellence depends on metabolic and functional status of *Rasa Dhatu*. Thus present research aims towards establishment of relation between *Rasa Dhatu Sarata* and its *Upadhatu Stanya*. For this, healthy lactating mothers were selected as subjects and their *Rasa Dhatu Sarata* i.e. *Uttam*, *Madhyam*, and *Heena* and also percentage of *Rasa Dhatu*

Sarata was determined using a format based on *Ayurvedic* contexts. After that thirty breast milk samples of lactating mothers were assessed for the level of triglycerides, cholesterol and protein and were compared depending on their percentage of *Rasa Sarata*. The collected data related to percentage of *Rasa Dhatu Sarata* and level of triglycerides, cholesterol, and protein in breast milk, was then analysed and result was concluded using suitable statistical test. Which shown that, there is significant positive correlation between *Rasa Sarata* and triglycerides, significant negative correlation between *Rasa Sarata* and cholesterol and significant positive correlation between *Rasa Sarata* and total protein. This study is efficient to establish a relation between *Dhatu Sarata* and status of *Upadhatu* and there functioning inside body.

KEYWORDS: *Rasa-Sarata, Upadhatu, Stanya.*

INTRODUCTION

Ayurveda is traditional and natural system of medicine in India. *Ayurveda* is a *Sanskrit* word which means “Science of life”, *Ayurveda* emphasizes prevention of disease, rejuvenation of our body systems and extension of life span. The aim of *Ayurveda* Science is twofold, first maintain health of a healthy individual and second cure disease of a patient.

Our body consists of *Dosha*, *Dhatu* and *Mala* which are the root factors of living body. They are important for origin of human body, sustenance of life and responsible for death. *Dosha*, *Dhatu* and *Mala* are compared to roots because as roots starts life of plant, these three factors starts life of human.

Dosha which is responsible for create diseases in living body, *Malas* are those constituents of the body which are regularly eliminated from the body and thus keep body clean. The factors which perform the functions of *Dharana* (sustenance) of *Sharira*, *Mana* and *Prana* are called *Dhatu*. The basic constructive framework of body is formed by *Dhatu*. Entity that sustains, grows and nourishes the body is called as *Dhatu*.

Upadhatu is derivative of *Dhatu* and has some resemblance in terms of structure, some functions and nature. They are important physiological units and radically engaged to design structural architecture of the mortals. *Dhatu* metabolism is a nourished pool of all the body constituents. Through this pool all elements including *Upadhatu* derive their nourishment. But these are not meant to provide nourishment to other components as like *Dhatus*, instead it means only for sustenance.

Everybody should pay attention to maintain equilibrium of root factors of body (*Dosha*, *Dhatu*, and *Mala*) if we are willing for good health, happiness and longevity.

In present era irregular food and sleep habits, lack of exercise, excessive medication, excessive stress all these becoming a contributory factors for unhealthy life. Psychological causes affect on physical health of an individual. Good immunity is needed for prevention from disease, which is achieved by good quality *Dhatu*, the *Dhatu* give support and strength to living body. There are seven *Dhatu* explained by *Acharya*, *Rasa*, *Rakta*, *Mamsa*, *Meda*, *Asthi*, *Majja* and *Shukra*.

It is always better to prevent the disease than treating it. But first we should know the condition of *Dhatu* weather they are strong or weak. If *Dhatu* is weak then it is necessary to

increase the *Bala* of *Dhatu* before it leads to *Vikriti*, and to know the *Bala* of *Dhatu* our *Acharya* mentioned the *Sarata Pariksha*.

Dhatus have same set of functions in every individual but quality and richness of these functions may vary from person to person, which is decided by excellent state of these *Dhatus* which is nothing but the “*Dhatu Srata*”. *Shudha*, *Vishudha* and *Vishudhatar* are three conditions of *Dhatu* in body. *Vishudhatar Dhatu* is called as “*Sara*” *Dhatu*.

Chakrapani also commented on the term *Sara* as a *Vishuddhatara Dhatu* which is finest, purest and excellent state of their *Dhatu*. The supreme quality and functional aspect of *Dhatu* is *Sara*. *Sara* is *Bala* (strength). If *Dhatu Bala* is good then it will provide the shield against the lodging of *Dosha* as *Dhatu* are *Dushya* and protect the body against diseases.

To assess this *Dhatu Bala*, *Acharyas* have mentioned tool to examine *Dhatu-Sarata*. In *Vimana Sthana Acharya Charaka* has described *Atura Bala Pariksha* with the help of *Dasavidha Pariksha*. In this *Parikshana* he includes *Sara Parikshana* as one of the important investigation for strength. *Sarata Pariksha* is very essential from both the aspects prevention and treatment.

Dhatu-Sarata is described with respect to *Sapta Dhatu* and *Sattva* that is *Ashtavidha-sarata*. The *Sarata* of *Dhatu* indicates its present form and is manifested by special characteristics. From above said factor *Dhatu Sarata* is specific measures of strength, if any *Dhatu* has excellent quality then its functional quality in body increases. As *Dhatu* nourishes the *Upadhatu*, thus the excellent and functional state of any *Upadhatu* depends ultimately on the same status of its respective *Dhatu*.

Updhatu of Rasa Dhatu is *Stanya* (breast milk) and *Raja* (menstrual flow). *Stanya* and *Raja* are specifically feminine *Upadhatu*s. Assessment of *Sarata* is one of the most important examinations which give an idea about a qualitative state of *Dhatu*. So from the above review it is clear that if the *Rasa Dhatu* is in its good quality, *Sarata* of *Rasa Dhatu* is also good, *Sarata* of *Rasa Dhatu* has to play a role with the functional, active and excellent state of its *Upadhatu* viz. *Stanya* and it will definitely affect quality of *Stanya* (human milk).

So, in the present study an attempt is made to study and establish a relationship between *Rasa Dhatu-Sarata* and biochemical composition of human milk.

AIM AND OBJECTIVES

Biochemical analysis of *Stanya* and its association with *Rasa-Sarata*.

OBJECTIVES

- To evaluate the *Rasa-Sarata* of females according to *Rasa-Sarata* Performa based on CCIM.
- To study about *Stanya* as the *Upadhatu* in detail from different *Ayurvedic Samhita*, commentaries, modern literature, handbook, dictionaries.
- Assessment of biochemical composition of *Stanya* (in laboratory).

MATERIAL AND METHODS

Material

- 1) Only healthy lactating mothers.
- 2) Samples of their breast-milk
- 3) *Rasa-Sarata* evaluation questionnaire.

➤ Inclusion Criteria

- Only healthy lactating mother with history of full term gestation.
- Only transitional milk and mature milk of mother.
- Mothers who are free from physical and mental illness.
- Females who fully co-operate during the study.

➤ Exclusion Criteria

- Non lactating mothers.
- Suffering from any physical and mental illness.
- Any kind of milk other than transitional and mature milk.
- Mothers who are taking medicine for improving her lactation or any other disease.

Methods

- Only healthy lactating mother (H/O full term gestation) with the mean age of 20-35years selected for the study.
- Total 30 lactating mothers were selected for study.
- Firstly the detail performa was prepared for *Rasa-Sarata Parikshana*. This format contains features of *Rasa-Sarata* in the form of simple questionnaire as described in *Ayurvedic* classics.

- Then selected individuals were provided with above said format.
- Then % Of *Rasa-Sarata* of mothers were calculated.
- Level of Proteins, triglycerides and cholesterol were detected in collected breast milk with the help of laboratory method.
- The overall data collected was then analyzed and result was then concluded by application of suitable statistical test.

OBSERVATION AND RESULT

Table No 1: Showing the Age wise distribution of 30 subjects.

Age Group	Frequency	Percentage
21-25 Years	13	43.33
26-30 Years	17	56.67
TOTAL	30	100.00

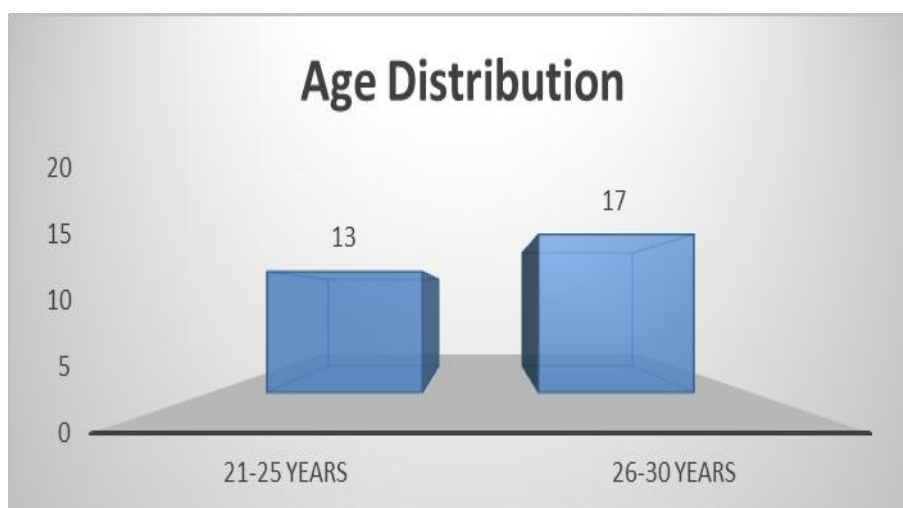
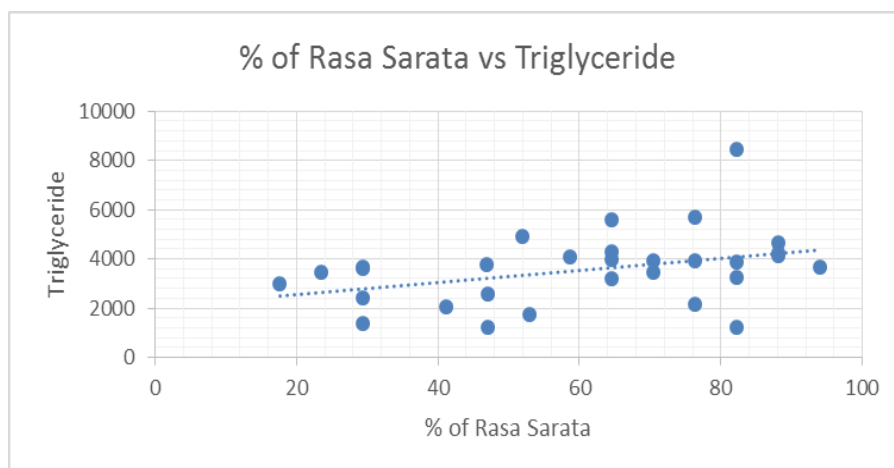
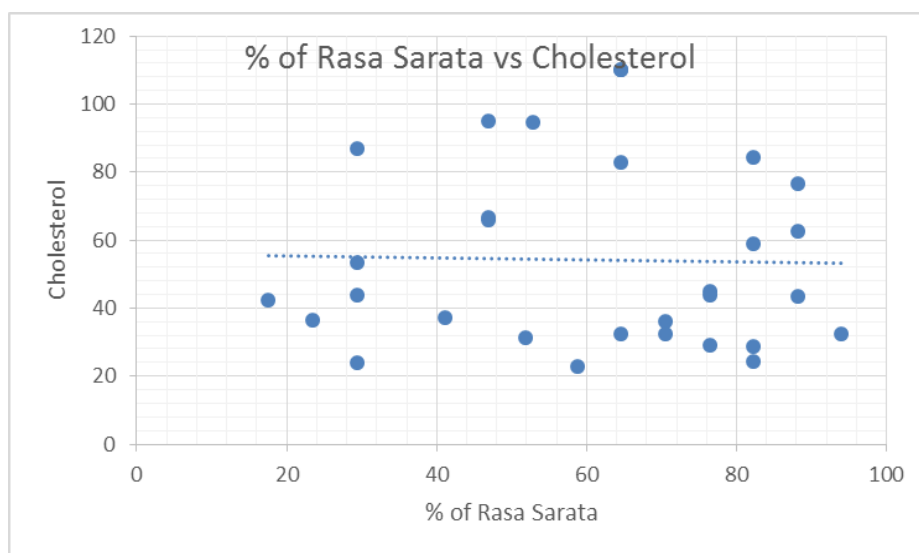


Table No. 2: Showing correlation between *Rasa-Sarata* and level of triglycerides, cholesterol and protein.

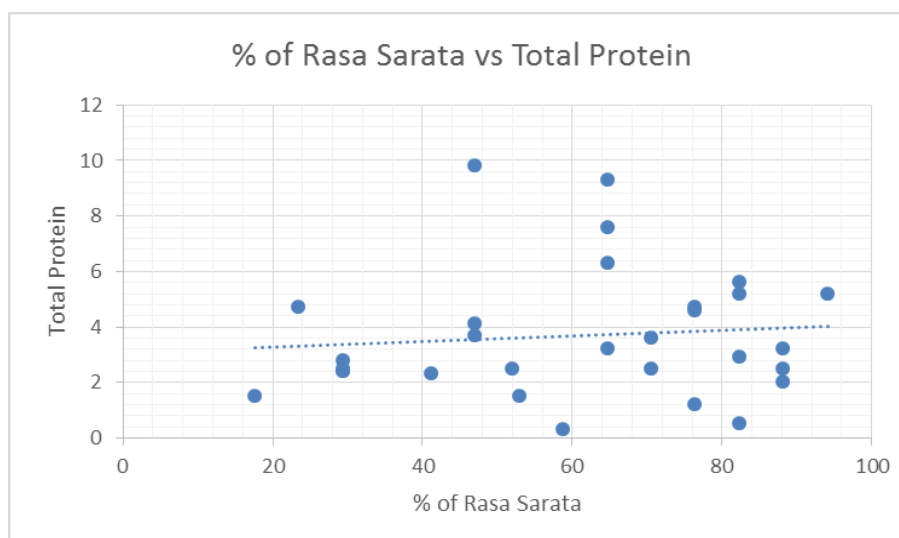
		Triglyceride	Cholesterol	Total Protein
Percentage <i>Rasa Sarata</i>	Pearson Correlation	0.370	-0.231	0.252
	P-Value	0.044	0.045	0.046
	N	30	30	30



Graph between % OF *Rasa-Sarata* vs triglycerides.



Graph between % of *Rasa-Sarata* vs cholesterol.



Graph between % of *Rasa-Sarata* vs Total protein.

Karl Pearson's Correlation coefficient is calculated to test the correlation of *Rasa-Sarata* with triglyceride, cholesterol and total protein. From above table we can observe that, there is significant positive correlation between *Rasa- Sarata* and triglyceride ($r=0.370$), Significant Negative correlation between *Rasa-Sarata* and cholesterol ($r=-0.231$) and Significant Positive Correlation between *Rasa- Sarata* and total protein.

RESULT

After studying all the observation and statistical data, we can say that there is a significant association found between the choosen variable i.e. *Rasa-Sarata* as per classic and level of triglycerides, cholesterol and protein of human breast milk. Positive correlation present between *Rasa Sarata* and triglycerides, negative correlation between *Rasa Sarata* and cholesterol, and again positive correlation between *Rasa Sarata* and total Protein.

This proves our Alternate Hypothesis.

DISCUSSION AND CONCLUSION

Ayurveda has aimed to maintain health of healthy individuals and to cure diseased person. We have to remember that the basic element of the body *Dosha*, *Dhatu* and *Mala* maintain *Samyata*, of our body that is important for *Arogya*. *Doshas* predominantly contribute towards various functions, *Malas* get eliminated from the body to keep the body healthy, *Dhatus* are the pillars of our body on which whole body grown up above. To check their state *Dashavidha Parikshana* has been mentioned by *Acharya Charaka* in *Vimana Sthana*. Particularly for *Dhatus*, *Sarata* was explained. For better health these *Dhatus* should also be their finest state and which is said to as "*Vishudhatara Avastha*" of these *Dhatu*. *Vishudhatara Avastha* is recognoized by *Ayurvedic* term as "*Sarata*". *Sarata* leads to the physical, mental and social capabilities in an individual.

The *Sarata* of a *Dhatu* indicates its present forms and is manifested by special characterstics. *Upadhatu* is derivative of *Dhatu*. The *Dhatu* nourishes the *Upadhatu*, if *Dhatu* is in excellent state then its *Upadhatu* production and nourishment will also be in excellent state. *Rasa-Dhatu* has *Stanya* (breast milk) and *Raja* (menstrual flow) as two *Upadhatu*s. *Stanya* and *Raja* is *Streevishishta Upadhatu*. *Stanya* being the *Upadhatu* of *Rasa Dhatu*, its quality, quantity excellence depends on metabolic and functional status of *Rasa Dhatu*. After delivery on third or fourth day the *Dhamnis* or *Siras* situated in *Hridaya Sthana* of mother get dialated and initiates *Stanya Pravritti* from *Stana*. Normal and proper *Shuddha Stanya pravritti* is one

of the indications of *Swasthavastha*. It is one of the most essential factor for the healthy progeny.

According to *Ashraya-Ashrayi Bhava Doshas* have their abode in *Dhatu* and operate from therein. *Kapha* is located in *Rasa-Dhatu* so *Kapha* is *Ashryai* and *Rasa-Dhatu* is *Ashraya*. If the *Ashrayi* is normal, the health of *Ashraya* is also normal. So, Vitiating of *Kapha* causes vitiation of *Rasa-Dhatu*. *Stanya* is made up of *Rasa-Dhatu* so *Kapha Dosha* is also present in *Stanya*.

According to *Panchbhautika Sangathana*, *Kapha* is made up of *Jala* and *Prithvi Mahabhuta*, *Rasa-Dhatu* is made up of *Jala Mahabhuta*, *Jala Mahabhuta* is also abundant in *Stanya* so according to *Samanya-Vishesha Sidhhanta* the causes which will increase or decrease *Kapha-Dosha*, will also increase or decrease *Rasa-Dhatu* and *Stanya*. If *Kapha Dosha* is in *Samyavastha*, then *Rasa-Dhatu* will be in finest state, so *Rasa-Sarata* will also be in excellent state and good quality *Stanya* will be produced.

If mother is taking proper *Ahara-Vihara* which maintain *Kapha Dosha* in *Samyavastha*, then quality of *Rasa-Dhatu* will increase and her *Rasa-Sarata* will also increase and *Shuddha Stanya* will produce.

So, taking all these points into consideration present study was carried out correlation between status of *Rasa-Sarata* and Quality of *Stanya*.

CONCLUSIONS

- *Sarata Parikshana* is one of the most important tools to measure quality state of *Dhatu* or excellence of *Dhatu*
- Normal and proper nourishment of *Upadhatu* depends on their status of their respective *Dhatu*.
- *Rasa* and *Stanya* are functional entities restricted to *Stree Sharira*. *Shuddha Stanya Pravritti* is important for both mother and child health. In mother's milk if macronutrient in good quantity, then it provides better nourishment and good health to the baby.
- After applying Karl Pearson's Correlation coefficient to collected data, showed that there is positive correlation between *Rasa-Sarata* and level of triglycerides in mother's milk. Negative correlation between *Rasa-Sarata* and level of cholesterol in mother's milk, again positive correlation between *Rasa-Sarata* and total protein in mother's milk.

- Thus this small scale study accounts to state that a healthy status of *Rasa-Sara* has relevant impact over its respective *Upadhatu Stanya*.

REFERENCES

1. Vaidya Jadvji Trikamji Acharya, Sushruta Samhita Dalhana Tika, reprint edition, Varanasi, Chaukhambha Sanskrit Sansthana, 2010; Sharirasthana 5/37: 368.
2. Vaidya Jadvji Trikamji Acharya, Sushruta Samhita Dalhana Tika reprint edition Varanasi, Chaukhambha Sanskrit Sansthana, 2010; Sharirasthana 9/5: 384.
3. Vaidya Jadvji Trikamji Acharya, Sushruta Samhita Dalhana Tika, reprint edition Varanasi, Chaukhambha Sanskrit Sansthana, 2010; Sharirasthana 6/6: 370-371.
4. Vd. Harish Chandra Singh Kushwaha, Charaka-Samhita with commentary of Chakrapanidatta, reprint edition, Varanasi, Chaukhambha Orientalia, 2009; Vimanasthana 8/117: 694.
5. Brahmasankara Misra, Bhava Prakash Nighantu Bhaga, reprint edition Chaukhambha Sanskrit Bhavan, 2016; Shloka 1: 906.
6. Pt. Kashinatha Shastri and Dr. Gorakha Natha Chaturvedi, Charaka Samhita,, reprint edition Varanasi, Chaukhambha Bharati Academy, 2015; Chikitsasthana 15/17: 456.
7. Shri Pandit Lalchand Shashtri Vaidya, Astangasamgraha, Arunadatta's commentary, reprint edition, Nagpura, Shri Vaidyanatha Ayurveda Bhawan Private Limmited, Sharirasthana, 2/9-12; 38.
8. Kaviraj Atrideva gupta, Astanga Hridaya, Vidyotini commentary, reprint edition, Varanasi, Chaukhambha Prakashan, 2011; Uttarantra 1/11-12: 615.
9. Vaidya Jaymini Pandey, Harita Samhita, Nirmala Hindi commentary, reprint edition Varanasi, Chaukhambha Visvabharati, Prathamasthana, 8/11-12: 62.
10. Dr. Nandini Dilip Dhargalkar, Sharira- Kriya Vigyana, Reprint edition, Varanasi, Chaukhambha Sanskrit Series office, 2015; 290.
11. Jadvji Trikamji Acharya, Charaka Samhita, reprint edition Varanasi, Chaukhambha Publishers, Vimanasthana, 2004; 8/94: 276.
12. Jadvji Trikamji Acharya, Charaka Samhita, reprint edition Varanasi, Chaukhambha Publishers, Vimanasthana, 2004; 8/102: 278.
13. Vaidya Jadvji Trikamji Acharya, Sushruta Samhita Dalhana Tika reprint edition, Varanasi, Chaukhambha Orientalia, Sutrasthana, 2016; 14/10: 144.
14. BD Chaurasia's, Human Anatomy Volume 1, 7th edition, CBS Publishers and distributors Pvt Ltd, 2016; 2: 36.

15. K. Sembulingam and Prema Sembulingam, Essential of Medical Physiology, 7th edition, Jaypee Brothers Medical Publishers (P) Ltd, 2016; 534-535.
16. O P Ghai, Vinod K Paul and Arvind Bagga, Essential Pediatrics, 7th edition 2009, Chapter 7, CBS Publishers and Distributors Pvt Ltd, 124.