

## THE STUDY OF CO-RELATION BETWEEN RASASARTA AND RAJAPRAVRITTI

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### ABSTRACT

Sara is super excellent state of the Dhatus. 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( breast milk) and Raja(menstrual flow) being the Updhatus of Rasa Dhatu; their quality, quantity excellence depends on metabolic and functional status of Rasa Dhatu. Thus present study aims towards establishment of relation between Rasa Dhatu Saarta and its Updhatu Raja. For this, healthy females were selected as subjects and there Rasa Dhatu Saarta was determined using a format based on Ayurvedic contexts. After that menstrual history was collected. All the data collected was then divided into 3groups as-Uttam, Madhyam and Heena RasaDhatusara. The collected data was then analysed and result was concluded using suitable statistical test, which shown subjects having Uttam and Madhyam Rasasarta shows proper and normal Rajapravritti while in Heena Rasasarata there was bad Raja Pravritti along with significant symptoms as Katishoola, Paadshoola, Udarshoola, Angamarda and many more. This study is efficient to establish a relation between Dhatu Saarta and status of Updhatu and there functioning inside body. For proper monthly Rajapravritti and hygiene concerned with the same is essential for healthy reproductive life in female individuals.

**Key words:** Rasasarata, Upadhatu Raja, Katishoola, Udarshoola, Angamarda.

### INTRODUCTION:

Ayurveda have mentioned the three fundamental components *Dosha*, *Dhatu* and *Mala*<sup>1</sup> which are meant for support, and governing entities of body. The factors which do the functions of *Dharana*<sup>2</sup> (sustenance) of *Sharira*, *Mana* and *Prana* are called as *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, function and nature. They are important physiological units and radically engaged to design structural architecture of the mortal. *Dhatu* metabolism is a nourished pool of all the body constituents. Through this pool all

elements including *Upadhatus* derive their nourishment. But these are not meant to provide nourishment to other components as like *Dhatus*<sup>3</sup>, instead it means only for sustenance.

*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 Sarata*'. *Sara* is *Bala*(strength). *Sara* is excellence of their *Dhatus*. The supreme quality and superb functional aspect of *Dhatu* is *Sara*. *Dhatu Sarata* is the novel concept described exclusively by Ayurved. In *Vimana Sthana*, Chakrapani<sup>4</sup> commented on the term '*Sara*', as "*Vishuddhatara Dhatu*", this means the finest, purest and excellent state of these *Dhatu*. It has been included among *Dasha Vidha Atura Pareeksha* (tenfold patient investigation process)<sup>5</sup> *Dhatu Sarata* is described with respect to *Sapta Dhatu* and *Sattva* that is *Ashtavidhasarata*<sup>6</sup> *Dhatu Sarata* or tissue excellence is quality assessment of *Sapta Dhatu* and *Sattva*(psyche). Examination of *Dhatu Sarata* is done at physical and psychological level. It used to assess physical and mental strength. One cannot work and can't resist without "*Bala*". For both aims of Ayurved science, namely, safeguarding of health and if diseased, to cure the disease and come back to homeostatic condition, one needs to know his *Bala*. Thus one should examine the individual with reference to the excellence of his *Dhatus* i.e. *Sara*.

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* have excellent quality then its functional quality in body increases. If any *Dhatu* is weak qualitatively

in a person then by treating it we can improve its quality. As the *Dhatu* nourishes the *Upadhatu*<sup>7</sup>, thus the excellent and functional state of any *Updhatu* depends ultimately on the same status of its respective *Dhatu*.

*Rasa Dhatu* has *Stanya* (breast milk) and *Raja* (menstrual flow) as two *Upadhatu*<sup>8</sup>. *Raja* and *Stanya* are specifically feminine *Upadhatus*. From all above review it is clear that the sarta of *Rasa Dhatu* has to play a role with the functional, active and excellent state of its *Updhatu* viz. *Raja*. So, in the present study an attempt is made to study and establish a relationship between *Rasa Dhatu Sarata* and *Rajapravritti*.

*Rasa Dhatu* is the first *Dhatu* in the body being nourished from *Ahara-Rasa*. As per Acharya *Sushruta*, the word *Rasa* derived from the root '*Ras*' and it means 'Movement'. Since it is circulating constantly it is called as *Rasa*<sup>9</sup>. The *Rasa Dhatu* nourishes the entire body constantly. While narrating important functions of all seven *Dhatus*, *Vagbhata* Stated that the principal function of *Rasa Dhatu* is mainly for freshening individual it is called *Preenana Karma*<sup>10</sup>. *Rasa Dhatu* satisfies metabolic urges of an individual. It also helps to sustain the water and moisture content of body.

During the description of *Dhatu Sara* types, the term "*Rasa Sara*" is not used in any of the *Samhita*. It is described as *Twak-Sara*. *Dalhana*<sup>11</sup> clarified that in the term "*Twak-Sara*" the word '*Twak*' means the *Rasa* underneath the *Twacha*. Probably it is due to the fact that the functions of the *Rasa Dhatu* i.e. the *Preenana*, is to be best manifested on *Twak*. It makes the skin healthy and maintains nutritional state of the body. It suggests the quantitative and functional state of *Rasa Dhatu*. It can be assessed by

the minute *Twak* Pariksha. A healthy skin reflects the healthy physiological state of the body which in turn depends on excellence state of *Dhatu*. Hence it is also said that skin is the mirror of your healthy status. Any disturbance in *Rasa Sanvahana*, circulation; its unusual, impaired metabolism leads to abnormal changes over *Twak*. Hence *Rasasara* and *Twaksara* are used as synonyms of each other. Individuals having excellence of *Twak*<sup>12</sup> or skin are characterised by *Snigdha Twacha* (unctuous, oily), *Shlakshna Twacha* (smooth), *Mridu Twacha* (soft), *Prasanna* (fresh in appearance), *Sukshma*, *Alpa*, *Gambhir*, *Sukumar Loma* (having very fine clear, less numerous, deep rooted and tender body hairs) and *Saprabha Twak* (having natural glow over it). Such individuals are endowed with *Sukh* (happiness), *Saubhagya* (good fortune), *Aishwarya* (prosperity), *Upbhoga* (enjoyment), *Buddhi* (good intellect), *Vidhya* (knowledge/wisdom), *Arogya* (health), *Praharsha* (cheerfulness and happiness seen on face) and *Ayush-atvam* (Longevity of life). *Rasa saarta* can be easily determined using a subjective criterion, a questionnaire based on the features available in *ayurvedic* contexts.

*Raja* the feminine *updhatu* is formed from the essence part of *Rasa Dhatu*. Charaka<sup>13</sup>, *Sushruta*<sup>14</sup>, *Vagbhata* – II<sup>15</sup>, *Dalhana*<sup>16</sup> and *Chakrapani*<sup>17</sup> opine that *Raja* is formed from *Rasa Dhatu*.

God has gifted woman with rare and unique phenomenon of giving rise to offspring. To fulfill the above aim, nature has conferred special anatomical and physiological characteristics in the woman which are collectively referred to as “*Streekarbhavas*”. One among them is the concept of “*Raja Pravritti*”. *Raja* term for a substance of the body which flows out at a specific time or period this is monthly menstrual flow. The “*Raja*” is the secre-

tion from female genital route during their reproductive life. Normal and proper *Rajapravritti* is one of the indications of *Swasthavastha*. It is one of the most essential factors for the healthy progeny. In other words, the *Rajodharma* is one type of purification process for a lady and by this the genital tract of a female gets cleaned<sup>18</sup>. *Rajjpravritti* is a monthly biological cycle. The time period between two successive starts of menstrual cycles is called as- *Rutu Chakra*.

#### AIM AND OBJECTIVES:

- 1) To study the status of *Rasadhatu* Sarta in healthy subjects.
- 2) To study *Raja* as the *Updhatu* in detail and its manifestation during a menstrual cycle.
- 3) To assess correlation between the *Rasasarta* and *Rajapravritti*.

#### MATERIALS AND METHODS:

##### A. Material:

- 1) Healthy unmarried female individuals.
- 2) *Dhatu sarata* evaluation questionnaire.
- 3) Questionnaire for taking monthly *Rajapravritti* history.

##### Criteria of Inclusion:-

1. Healthy unmarried female Individuals of age group 16 – 30 yrs were selected for study.
2. Individuals who fully co-operate during the study were selected for study.

##### Criteria of Exclusion:-

1. Female Individuals below 16yrs and above 30 yrs.
2. The individuals of any infectious disease, diabetes, anemia, structural defects in the female genital tract.

##### B. Methods:

- Healthy female Individuals of age group 16 – 30 yrs were selected for study.
- Total 102 females were selected for study.

- Firstly the detail proforma was prepared for *Rasa Dhatusarata* Parikshana. This format contains features of *Rasa Dhatusarata* in the form of simple questionnaire, as described in Ayurvedic classics.
- Then selected individuals were provided with the above said format.
- The data thus collected was then categorized into *Uttam*, *Madhyam* and *Heena RasaDhatusara*.
- Score was then obtained, analyzed and the individuals were classified as per the same. It was based on number of features present-
  1. *Uttam* - 13-18 features
  2. *Madhyam*- 7-12 features
  3. *Heena* - 1-6 features
- Menstrual history was then collected and the data was collected on the basis of following criteria-
  - Interval between two cycles
  - Duration of Menstrual bleeding
  - Quantity of menstrual blood
  - Other symptoms during Rajapravritti
- The overall data collected was then analyzed and result was then concluded by application of suitable statistical test.

**OBSERVATIONS AND RESULTS:**

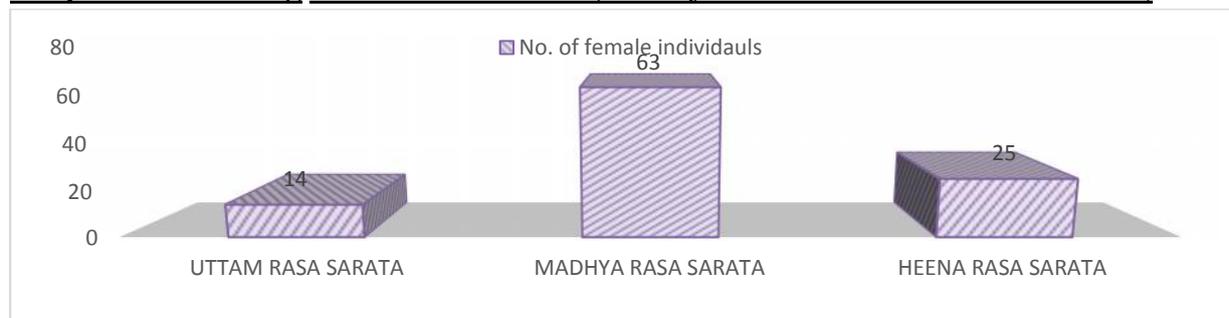
The observations of the study were recorded carefully. In this proposed study following results were found.

**Table No 1: showing distribution of *Uttam*, *Madhyam* and *Heena RasaDhatu Sarta*:**

<i>Rasa Saratva</i>	No. of female individuals
<i>Uttam Sarta</i>	14
<i>Madhyam Sarta</i>	63
<i>Heena Sarta</i>	25

Total 102 female individuals were assessed for this study. *Uttam Rasa Sarata* was found in 14(13.72%) female individuals. *Madhyam Rasa Sarata* was found in 63(61.76%) female individuals. *Heena Rasa Sarata* was found in 25(24.50%) female individuals

**Graph No:1 Showing distribution of *Uttam*, *Madhyam* and *Heena RasaDhatu Sarta*;**



**Table No2: showing menarche age in different *Rasa Sarta* females-**

		<i>Uttam Rasa Sarta</i>	<i>Madhyamrasa Sarta</i>	<i>Heenarasa Sarta</i>
1	Population	14	63	25
2	Minimum	12	12	12
3	Maximum	15	17	16
4	Mean	13.71	14.22	14.64
5	SD	1.069	1.156	0.995

Out of 14, on an average the menarche age of subjects of *Uttam Rasa Dhatu Sarta* individuals was 13.71. Out of 63, on an average the menarche age of subjects of

*Madhyam Rasa Dhatu Sarta* individuals was 14.22. Out of 25, on an average the menarche age of subjects of *Heena Rasa Dhatu Sarta* individuals was 14.64.

**Table No3:showing interval between 2cycles in different Rasa sarta females-**

		Uttam Rasa Sarta	Madhyamrasa Sarta	Heenarasa Sarta
1	Population	14	63	25
2	Minimum	26	21	22
3	Maximum	30	60	120
4	Mean	28.857	32.556	42.917
5	SD	1.292	5.651	23.374

Out of 14, on an average the interval between 2cycles of subjects of Uttam Rasa Dhatu Sarta individuals was 28days. Out of 63, on an average the interval between 2cycles of subjects of Madhyam Rasa Dhatu Sarta individuals was 32days. Out of 25, on an average the interval between 2cycles of subjects of Heena Rasa Dhatu Sarta individuals was 42day

**Table No4: showing duration of bleeding in different Rasa Sarta females-**

		Uttam Rasa Sarta	Madhyamrasa Sarta	Heenarasa Sarta
1	Population	14	63	25
2	Minimum	3	2	2
3	Maximum	5	6	8
4	Mean	3.643	4.175	5.440
5	SD	0.7449	0.8527	1.356

Out of 14, on an average, duration of bleeding in subjects of Uttam Rasa Dhatu Sarta individuals was 3days. Out of 63, on an average, duration of bleeding in subjects of Madhyam Rasa Dhatu Sarta indi-

viduals was 4days. Out of 25, on an average, duration of bleeding in subjects of Heena Rasa Dhatu Sarta individuals was 5days.

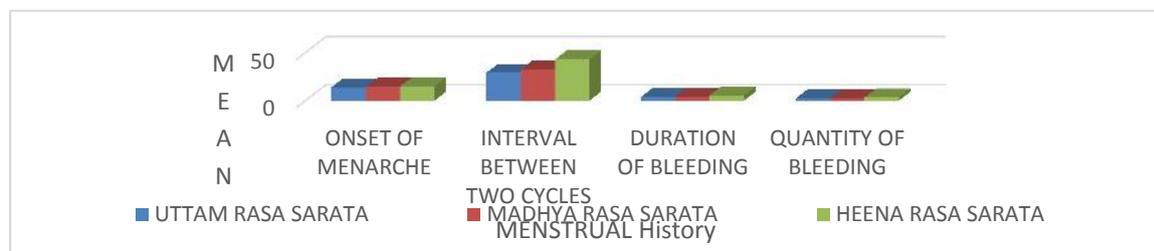
**Table No:5showing quantity of bleeding in different Rasa Sarta females-**

		Uttam Rasa Sarta	Madhyamrasa Sarta	Heenarasa Sarta
1	Population	14	63	25
2	Minimum	2	1	2
3	Maximum	3	3	6
4	Mean	2.21	2.23	3.12
5	SD	0.4258	0.6404	1.201

Out of 14, on an average the quantity of bleeding in subjects of Uttam Rasa Dhatu Sarta individuals was 2pads/day. Out of 63, on an average the quantity of bleeding in subjects of Madhyam Rasa Dhatu Sarta

individuals was 2pads/day. Out of 25, on an average the quantity of bleeding in subjects of Heena Rasa Dhatu Sarta individuals was 3pads/day.

**GraphNo2: Showing Menstrual History In Different Rasa Sarta Females:**



**Table No:6 showing multiple comparisons of quantity of bleeding between Uttam, Madhyam and Heena Sarta:**

	Mean Difference	Q	p Value
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Uttam Vs Madhyam	-0.02381	0.1435	$p > 0.05$
Uttam Vs Heena	-0.9057	4.832	$P < 0.01$
Madhyam Vs Heena	-0.8819	6.645	$P < 0.001$

$p < 0.0001$  is extremely significant

This shows that quantity wise bleeding was found to be more in Heena Rasa Sara subjects as compared to Uttam and Madhyam Sara subjects. The same

was found more in Madhyam Rasa Sara subjects as compared to Uttam Rasa Sara subjects.

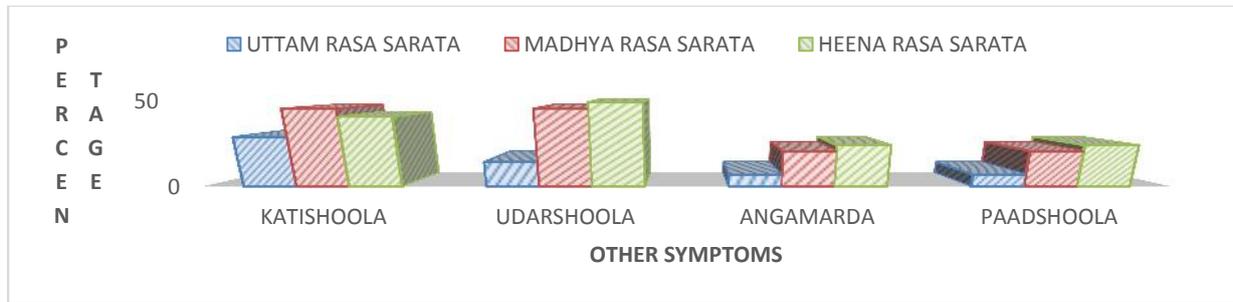
**Tables No:7 showing sarta wise other clinical symptoms -**

		UTTAM	MADHYAM	HEENA
1	Katishoola	4 (28.57%)	28 (44.44%)	10 (40%)
2	Udarshoola	2 (14.28%)	28 (44.44%)	12 (48%)
3	Paadshoola	1	13	6
4	Shirashoola	-	-	2
5	Angamarda	1 (7.14%)	13 (20.63%)	6 (24%)
6	Alasya	2	4	2
7	Hrullas	-	3	8
8	Kandu	1	-	1
9	Jvara	-	2	2
10	Malabaddhata	-	1	1
11	Adhman	-	3	1
12	Murcha	-	1	2
13	Bhrama	-	6	4
14	Timira	-	1	-
15	Agnimandya	1	1	1
16	Amlapitta	-	-	1
17	Urodaha	-	-	1
18	Shirodaha	-	-	1
		14	63	25

A Total of 18 different types of clinical symptoms were observed during this study. Out of which Katishoola, Udarshoola, Paadshoola and Angamarda contributes to its major share. It is seen that Katishoola is the most occurring symptom in majority of the subjects contributing upto 44% and 40% population from Madhyam and Heena sarta individuals. Udarshoola comprises upto 44% and 48% in Madhyam and Heena sarta individuals. Whereas the Uttam Sarta individuals has a

very little share to contribute to the symptoms manifested. Out of which Katishoola and Udarshoola comprises about 28% and 14% respectively. This overall shows the impact of status of Sarta of Rasa Dhatu over individual showing the presentation of clinical symptoms. Good status of Rasa Dhatu manifests a small amount of clinical symptoms whereas the Madhyam and Heena Sarta of Rasa Dhatu shows a significant number and severity of clinical symptoms.

**GraphNo:3 showing sarta wise other main clinical symptoms -**



## DISCUSSION AND CONCLUSION:

Ayurveda has aimed to maintain health of healthy individuals and to cure diseased person. The basic elements of the body *Dosha, Dhātu, Mala*, maintain homogeneous state (*Samya*), of our body that is important for *Arogya*. Among these *Dhātus* is nothing but the pillars of the body on which whole body grown up above. To check their state *Dhashavidha Parikshana* has been mentioned. Particularly for *Dhātus Sarata Parikshana* was explained. For better health *Sharira* (body) these *Dhātu* should also be their finest state and which is said to as “*Vishudhatara Avastha*” of these *Dhātu*. The excellent state of *Dhātu* is recognized by *Ayurvedic* term as “*Sarata*”. *Sarata* leads to the physical, mental and social capabilities in an individual. The *Sarata* of a *Dhātu* indicates its present form and is manifested by special characteristics.

*Updhātu* is derivative of *Dhātu*. The *Dhātu* nourishes the *Updhātu*, if *Dhātu* is in excellent state then its *Updhātu* production and nourishment will also be in excellent state. *Rasa Dhātu* has *Stanya* (breast milk) and *Raja* (menstrual flow) as two *Updhātus*. *Stanya* (breast milk) and *Raja* (menstrual flow) being the *Updhātus* of *Rasa Dhātu*; their quality, quantity excellence depends on metabolic and functional status of *Rasa Dhātu*. *Raja* and *Stanya* is *Streevishishta Updhātu*. *Raja* is a substance of the body which flows out at a specific time or period that is monthly menstrual flow. The “*Raja*” is the secre-

tion from the genital tract of female body throughout their reproductive life. Normal and proper *Rajapravritti* is one of the indications of *Swasthavastha*. It is one of the most essential factors for the healthy progeny.

In high tech era, Woman have successfully taken leap from kitchen to the corporate world, but at the same time added their health risk due to that they forget all about reproductive cycle or biological clock, changing life style, eating habit, over mental and physical stress, Improper sleep ultimately all these disturbs body physiology influence proper nourishment of the body, causing wide range of medical ailments especially regarding female reproductive health. Among them menstrual disorder is very common problem. So, taking all these points into consideration present study was carried out correlation between status of *Rasa Dhātu* and *Rajapravritti*.

## CONCLUSIONS

1. *Sarata Parikshana* is one of the most important tools to measure quality state of *Dhātu* or excellence of *Dhātu*.
2. Normal and proper nourishment of *Updhātu* depends on their Status of their respective *Dhātu*.
3. *Raja* and *Stanya* are functional entities restricted to *Stree Sharira*. Proper *Rajapravritti* is one of the essential factors for female reproductive health.

4. The statistical analysis showed that there is a Positive co -relation between *Rasa Dhatu Sarata* and *Rajapravritti*. *Raja*(menstrual flow) being the *Updhatu* of *Rasa Dhatu*; their quality, quantity excellence depends on metabolic and functional status of *Rasa*
5. After classification of *Rasa Dhatu Sara* the *Prathama Rajodarshana*(menarche) was seen to be tend to starts in late pubertal age specially in *Heena Rasa Sara* individuals than *Uttam* and *Madhyam Rasa Sara*.
6. In *Alpa Rasa Sarata*, individuals show Interval between two cycles was larger than the same in case of *Uttam* and *Madhyam Rasa Sara* individuals.
7. The Duration of menstrual bleeding was found to be prolonged in *Alpa Rasa Sara* individuals rather than *Madhyam* and *Uttam Rasa Sara* individuals.
8. While assessing the Quantity of bleeding, it was found that *Alpa Rasa Sara* individuals were prone to use more number of pads while menstruation than the same in case of *Uttam* and *Madhyam Rasa Sara* individuals.
9. Good status of *Rasa Dhatu* manifests a small amount of other clinical symptoms whereas the *Madhyam* and *Heena sarta* of *Rasa Dhatu* shows a significant number and severity of other clinical symptoms. A Total of 18 different types of other clinical symptoms were observed during this study. Out of which *Katishoola*, *Udarshoola*, *Paadshoola* and *Angamarda* contributes to its major share.
10. Presence of these pathological symptoms shows that impaired status of *Rasa Dhatu* has its bad effect on the other *Dhatu* thus creating *Dosha* and *Dhatu* oriented symptoms in body.
11. Thus this small scale study accounts to state that a healthy status of *Rasa Sara* has its relevant impact over its respective *Updhatu Raja* and subsequently on the other *Dhatu* also.

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