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## STUDY OF DHATU SARATA WITH SPECIAL REFERENCE TO RAJONIVRITTI

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### ABSTRACT

*Dharan* of *Shariris* is dependent on seven *Dhatu*s. Out of the seven *Dhatu*s, Prime function of *Shukra Dhatu* is *Garbhotpadana* which is an age bound function. According to Ayurved, age i.e; *Vaya* is classified into three phases which are *Balya*, *Yuwa* and *Vridhdha Awastha*. *Dhatu*s are in *Aparipurna*, *Vivardhaman* and *Kshiyamana* stage depending upon phases of *Vaya*. The fertility age of the women is marked by *Rajopravrutti* and *Rajonivrutti*. *Rajopravrutti* is the beginning of menstruation while *Rajonivrutti* is permanent cessation of menstruation. The possible causes for *Rajonivrutti* are *Swabhava*, *Kala*, *Vayu*. *Sarata Parikshan* after *Rajonivrutti* will give new path for deciding the measures to be taken for graceful ageing. This is also in line with principle of Ayurveda stating *Swasthasya Swastha Rakshanam*.

In this study, *Sarata Parikshan* of 50 female volunteers, who has attained menopause since one year was carried out. Most of the volunteers in this study showed *Asthi Heena Sarata*. *Madhyam Sarata* was found in remaining other *Dhatu*s and *Satva*. Psychological symptoms like irritability, anger, mood swings etc were also noted in this study. Appropriate *Ahara- Vihar* and *Rasayana* would be beneficial for post-menopausal women

**KEYWORDS:** *Dhatu Sarata*, *Rajonivrutti*, *Vaya*, *Artav*, Menopause

## INTRODUCTION

*Ayurveda* is a science of life that aims to maintain the health of a healthy individual and to cure the diseased ones. According to *Ayurveda*, *Dosha*, *Dhatu* & *Mala* are the root factors of human body. Among these, *Dhatu*s are the one which gives support to the living body. There are seven *Dhatu*s explained by Ayurvedic classics i.e. *Rasa*, *Rakta*, *Mamsa*, *Meda*, *Asthi*, *Majja*, *Shukra*. These *Dhatu*s are present in human body since birth. *Dhatu*s are in *Vruddhi Awastha* in childhood and adolescence and in *Kshaya Awastha* in old age due to wear and tear of the body tissues.

The purest form of *Dhatu* is called as *Sara*. *Sarata* is a factor which gives knowledge about the *Bala* (strength) of a *Dhatu*. Prevention from diseases is dependent on the strength of *Dhatu*. There are eight types of *Sarata*, out of which seven are of seven *Dhatu*s and eighth one is *Satva* i.e. mind. In some classical texts, *Rasa Sarata* is also called as *Twak Sarata*.

*Rajonivritti* is a feature of *Jara Awastha* in females. It is a significant event in woman's life which represents the end of the reproductive era. All the *Acharyas* have mentioned fifty years as the age of *Rajonivritti*<sup>1</sup>. *Rajonivritti* is a permanent cessation of *Aartva Pravrutii* as a natural stage of inclining towards *Jara Awastha*.

Examination of *Dhatu Sarata* is done at physical, social and psychological level.<sup>2</sup> *Sarata Parikshan* is very essential from both aspects prevention and treatment.

In *Jara Awastha*, there is *Vata Dosha* predominance leading to *Dhatu Kshaya* (*Kshiyamana Dhatu*). Therefore, *Dhatu Sarata Parikshan* is necessary to assess the strength of *Dhatu*s during *Rajonivritti*, so that awareness about proper precaution and treatment can be created to avoid any hazardous conditions. It will also be helpful for graceful ageing in women especially after menopause.

### AIM:-

To assess *Dhatu Sarata* after *Rajonivritti*

### OBJECTIVES:-

Compilation of all the references about *Sarata* and *Rajonivritti* from Classical Ayurvedic text

### REVIEW OF LITERATURE:-

#### *Dhatu Sarata:*

The *Vishudhatar Dhatu* is called as “*Sara*” or “*Prasad*” *Dhatu*.<sup>3</sup>

*Sarata* of a person depends upon the predominant *Lakshanas* of a particular *Dhatu*. If a *Dhatu* shows predominant *Sarata Lakshanas* than other *Dhatu*s, then the individual can be called as *Sarawan* of that particular *Dhatu*.

The *Sarata Lakshanas* are of two types-

***Murta: Pratyakshadarshi Lakshanas:*** the *Lakshanas* can be determined by seeing the *Sharir Avayava Stithi*, body structure, *Praman* etc.

***Amurta: Anumangyeya Lakshanas:*** the *Lakshanas* can be determined by individual's nature, mental status etc.

**Rajonivritti:*****Nirukti:***

It is derived from 2 words: *Rajah* and *Nivritti*

***Rajah:*** the meaning of *Rajah* is to give colour to the substance. *Rajah* is taken as *Artava* i.e. menstrual blood<sup>4</sup>. *Artava & Stanya* are mentioned as *Upadhatu* of *Rasa Dhatu*.<sup>5</sup>

***Nivritti:*** the meaning of *Nivritti* is *Apravritti, Uparati, Virati*. Meaning of all this word is summarized as completion, end, and cessation.

***Rajonivrittikala:***

According to *Ayurveda*, the age of menopause is 50 years. This menopause occurs due to the *Pakwa Awastha* of the body.<sup>6</sup>

The functions of *Rasadhatu* are better in *Taruna awastha* and gradually decrease during the *Prauda awastha*. This age of *Rajonivritti* is classified between *Prauda awastha* and *Vridhdha awastha* in the division of life span of women.<sup>7</sup>

***Nidana of Rajonivritti:***

There is no detailed description of menopause in *Ayurvedic* classics. Only few scattered references are available in *Ayurvedic* literature. *Jaravastha* (old age) is found as a causative factor of *Rajonivritti* in classics.<sup>8</sup>

The factors responsible for *Rajopravritti* like *Swabhava, Kala, Vayu* are mentioned in classical texts. The *Swabhava* or nature has been assumed as the main causative factors for *Rajopravritti as well as Rajonivritti*.<sup>9</sup>

***Samprapti (Pathogenesis):***

The cessation of *Artav pravritti* at 50 years of age is due to *Jara Awastha*. *Annarasa* is responsible for the *Rasadi dhatu pushiti* by its *Prinana karma*. In *Jara* stage, *Annarasa* is not so efficient for *Poshan* of *Dhatu*s due to *Vata vridhhi in Vardhakya*. *Vata* due to its *Ruksha, Laghu Guna* acts against *Snigdha Guna* and causes the reduction of *Rasadhatu*. Due to decrease in functions of *Rasadi Dhatu*s, nourishment of every cell gets hampered. Hence, the cells become *Shoshita* and become senile resulting in *Rajonivritti*.<sup>10</sup>

*Rajonivritti* can also be divided into 2 types i.e. *Kalaj Rajonivritti* and *Akalaja rajonivritti*.

- ***Kalajrajonivritti:*** If *Rajonivritti* occurs at its probable age (i.e. around 50 years of age), it is called as *Kalaja Rajonivritti*. According to *Acharya Sushruta*, the timely *Rajonivritti* (i.e. natural diseases like aging) occurs only when the protective measurements of healthcare are being practiced.
- ***Akalajarajonivritti:*** If *Rajonivritti* occurs before or after its probable age (i.e. around 50 years), it is termed as *Akalaja Rajonivritti*. *Akalaja Rajonivritti* takes place due to absence of the protective measurements of health care.

**DHATU AWASTHA DURING RAJONIVRITTI:**

Sr. No.	Dhatu	Lakshana
1	Rasa	Irregular menses, dry/rough skin, palpitation, drowsiness
2	Rakta	Heavy menses (during peri-menopausal state), weakness, pallor, hot flushes
3	Mamsa	Weight gain, urinary incontinence, atrophy of genital organs
4	Meda	Lethargy, drowsiness
5	Asthi	Osteoporosis, constipation, frequent fractures
6	Majja	Joint pain, body ache
7	Shukra	Weakness, general debility
8	Oja	Loss of concentration, anger, irritability

**Mansika Lakshanas during Rajonivritti:**

Psychological symptoms are also commonly observed due to vitiation of *Manovaha Stortas*. These symptoms can be grouped under the heading of *Manasika Lakshanas*. They include *Krodha, Bhaya, Chinta, Dhairya Hani, Alpa harsha and Priti, Shoka, Dwesha, Utsaha Hani* etc.

**MATERIALS:**

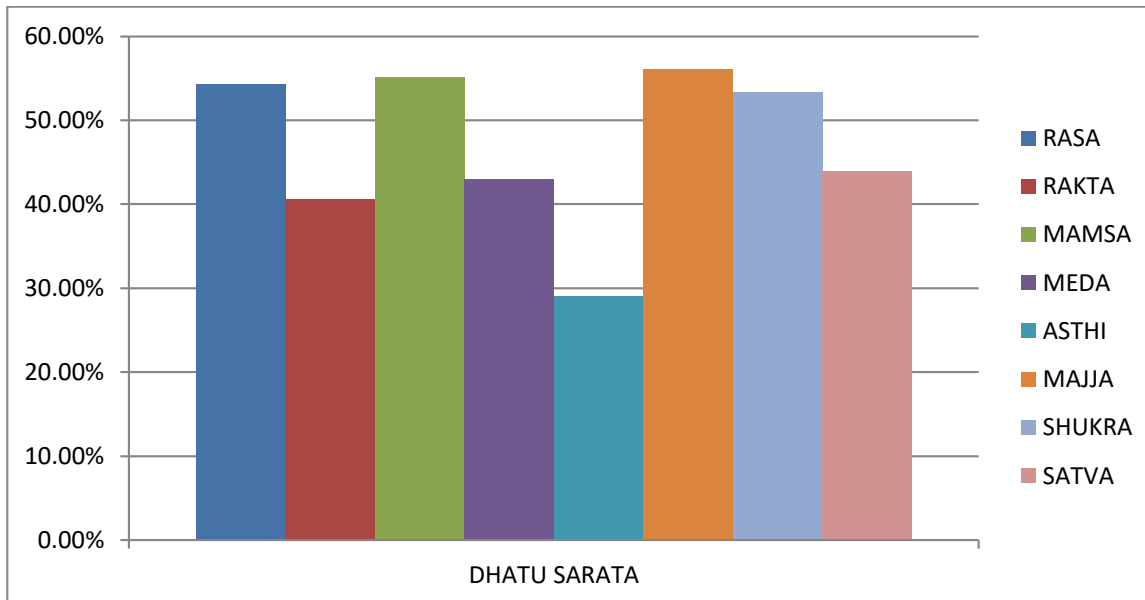
- Classical *Ayurvedic* textbooks regarding the subject.
- *Sarata Parikshan* questionnaire from Ayusoft CDAC.

**METHODOLOGY:****SELECTION CRITERIA:-****INCLUSION CRITERIA:-**

- 50 female subjects were included for this study
- Female subjects included for the study were between 45 – 55 years age group
- Only those subjects was included who had not got menstrual periods since 1 year.
- Female subjects included for this study were healthy and free from any major illness.

**EXCLUSION CRITERIA:-**

- Subjects who were not willing were excluded.
- Females below 45 and above 55 were excluded from this study.
- Females having major illness were excluded from this study

**OBSERVATION:**

*Heena Sarata* is considered when the percentage of *SarataLakshanas* below 33%.

*Madhyam Sarata* is considered when the percentage of *SarataLakshanas* between 33% - 66%.

*Uttam Sarata* is considered when the percentage of *SarataLakshanas* above 66%.

In this study, average percentage of *Asthi Sarata Lakshanas* was 29%, indicating *Heena Asthi Sarata*. This shows that *Asthi Dhātu* is majorly affected in this age.

Average percentage of *Rasa, Rakta, Mamsa, Meda, Majja, Shukra and Satva Sarata* was found to be between 33% - 66%, indicating *Madhyam Sarata* of these *Dhātus* and mind. Out of these, the average percentage of *Majja Dhātu Sarata Lakshanas* was 56.05%, indicating that *Majja Dhātu* is least affected as per this study.

In post-menopausal women, no *Dhātu* was found to be *Uttam Sara*.

**RESULT:**

<b>DHATU</b>	<b>LAKSHANAS (IN %)</b>	<b>REMARK</b>
<i>Rasa</i>	54.25%	<i>Madhyamsarata</i>
<i>Rakta</i>	40.53%	<i>Madhyamsarata</i>
<i>Mamsa</i>	55.08%	<i>Madhyamsarata</i>
<i>Meda</i>	43%	<i>Madhyamsarata</i>
<i>Asthi</i>	29%	<i>Hinasarata</i>
<i>Majja</i>	56.05%	<i>Madhyamsarata</i>
<i>Shukra</i>	53.28%	<i>Madhyamsarata</i>
<i>Satva</i>	44%	<i>Madhyamsarata</i>

## DISCUSSION:

Health is not just merely a disease free condition of the body but one also need to have a healthy positive mind with it, which is collectively called as Positive health. The strength of a person depends on *Dhatu Sarata*. As it is known that, *Raja* is *Updhatu* of *Rasa Dhatu*, so assessment of *Rasa Dhatu Sarata* will indirectly help in assessing *Raja*. Also, *Rajopravritti* and *Rajonivritti* are age bound phenomena. So, these two aspects are taken out of the tenfold examination (*Dashavidha Pariksha*). To measure this strength, *Sarata Parikshan* proforma by Ayusoft C-DAC which is reliable, valid, standard and widely accepted parameter for *Dhatu Sarata* examination has been taken.

Assumption can be done that the cessation of the factors for *Rajapravritti* may lead to *Rajonivritti*. Those factors can be as follows:

- **Swabhava:** The natural phenomenon is responsible for *Rajanivritti* as it is responsible for *Rajapravritti*. Moreover as there is continuous process of wear and tear in the body, similarly, *Raja* which is also a physiological entity subjected to degradation and ultimately gets manifested to *Rajanivritti*.
- **Kala:** Here, *Kala* refers to *Vaya*. *Paripurna Dhatu* is found in *Yuwa Awastha* and *Kshiyaman Dhatu* is found in *Jara Awastha*, thereby *Kshiyaman Dhatu* plays a crucial role in cessation of menstrual cycle at the age of 45 to 50 years.
- **Vayu:** As the *Nirukti* of *Vayu* suggests that it is the promoter of all the functions taking place in our body. The role of *Vayu* in females can be explained by functions of *Vyana Vayu* and *Apana Vayu*. Normal functions of *Yoni* and *Garbhashaya* are carried out by *Vyana Vayu*. As *Artava* is related to "*Artavavaha srotas*", it comes under the activity field of *Apana Vayu*. *Apana Vayu* helps in excretory activity of *Artava* and *Garbhaniskramana*, and also, helps to control these activities during the conditions of stress. So, it can be said that combined effect of these two *Vayus* are responsible for *Rajah Utpatti* as well as its cyclic expulsion every month. Hence, it can be considered as a causative factor for *Rajah Nivritti* also, and any vitiation of these factors may alter this process.

In *Rajanivritti*, the following symptoms are more susceptible in Post-menopausal women - dry/rough skin, palpitation, drowsiness, weakness, pallor, weight gain, urinary incontinence, atrophy of genital organs, lethargy, osteoporosis, constipation, frequent fractures, Joint pain, body ache, Weakness, general debility, Loss of concentration, anger, irritability.

The study was carried out in 50 female subjects who has got menopause since 1 year between the age group 45-55 years. The study was carried out by taking the consent of the subjects and was given a simple and valid *Dhatu Sarata* questionnaire prepared by Ayusoft C-DAC.

According to observation, *Heena Sarata* of *Asthi Dhatu* is remarkably seen. It leads to *Asthi Kshaya*. This can be due to *Vata* dominance in *Jara Awastha*. *Asthi* and *Vata* have *Ashraya-Ashrayi Sambandha* i.e., when *Vata* increases, *Asthi Kshaya* is seen. According to modern physiology, the drop in the oestrone levels in post-menopausal women makes them more vulnerable to osteoporosis, joint fracture etc.

*Madhyam Sarata* of *Rasa*, *Rakta*, *Mamsa*, *Meda*, and *Shukra* was seen. This can be due to the transitional phase from *Parihani Awastha* to *Vridhdha Awastha*. These *Vaya Awastha* are mentioned in *Sushrut Samhita*. *Madhyam Sarata* of these *Dhatu*s shows following *Lakshanas*: *Rasa Sarata* is also known as



*Twak Sarata*. When the *Poshan* of *Rasa Dhatu* decreases gradually, its effect on *Twak* in terms of dry skin, loss of lusture etc will be seen. Also, other symptoms like palpitations, drowsiness are seen due to *Kshaya* of *Rasa Dhatu*. As *Raja* is *Updhatu* of *Rasa Dhatu*, direct effect of *Rasa Kshaya* will be seen on *Rajanivritti*.

Hot flushes are seen in women due to the *Ushna Asahishnuta* feature of *Rakta Sarata*.

*Sthira, Guru, Shubha, Mamsopachita Avayava* are the *Lakshanas* of *Mamsa Sarata*. The *Lepan Karma* of *Mamsa Dhatu* gradually decreases due to *Jara* resulting in *Avayava Shushkata*. This *Shuskata* of *Avayava* will also be seen in female reproductive organs like ovary, uterus, and vagina.

The main *Lakshana* of *Meda Dhatu Sarata* is *Snigdhatata* of different body entities. This function may get hampered in post-menopausal stage contributing to features like dry-rough skin.

Effect of *Majja Sarata* is seen on joints and it is also responsible for the *Bala* of a person. One of the *Moola Sthan* of *Majjavaha Srotas* is *Sandhi*. Therefore, effects of *Madhyam Majja Sarata* can be seen in the form of joint pain in post-menopausal women.

*Praharshbahula, Garbhaotpadan, Bahukama* are the features of *Shukra Sarata*. These features may get affected in post-menopausal women leading to decrease in libido.

*Tyaktavishada, Samarvikrantiyodha, Smritimanta, Bhakatimanta, Dheeraetc* are the features of *Satva Sarata*. These features may get affected in post-menopausal women leading to irritability, mood swings, anger, fatigue, stress. These *Lakshanas* were observed in this study indicating *Madhyam Satva Sarata*.

Assessment of *Dhatu Sarata* in post-menopausal age will help in selecting proper *Rasayana Chikitsa* for maintaining the physical and psychological health of a woman. Lifestyle and dietary regimen can be suggested in women who have *Asaraor Madhyam Sara Dhatu*s. These two will help in graceful ageing.

To maintain *Uttam Sarata* of particular *Dhatu* with proper *Ahar* and *Vihar*: Vaidya must advice *Ahara-Vihara* accordingly to increase the *Sarata* of *Dhatu* during treatment. *Rasayana Chikitsa* must be considered for *Dhatu* which is in *Asara* to increase the *Sarata*. *Aahar* is the best medicine for nourishment of *Dhatu*s. *Aahar Dravyas* like cow milk, cow ghee, coconut water, pomegranate, figs, dates etc. medicines like *Shatavari, Ashwagandha, Amalaki, Yashtimadhu* etc can be used by post-menopausal women.

Meditation, *Yoga Asanas like Prasarita Padottanasana* (Wide Stance Forward Bend), *Adho Mukha Svanasana* (Downward Dog Pose), *Pascimottanasana* (Seated Forward Bend Pose).

*Pranayama* strengthens mental concentration, induces relaxation.<sup>11</sup> Psychological stress is a general trigger of hot flushes. Practices with relaxation and deep abdominal breathing are effective for mitigating mild to moderate hot flushes.<sup>12</sup> Hence, *pranayama* will be beneficial in post-menopausal women.

As *Basti Upakrama* is best *Chikitsa* for *Vata Dosha*, therefore, it will also be beneficial for post-menopausal women.

**CONCLUSION:**

- *Rajonivritti* is a natural phenomenon occurring due to reasons like *Swabhav, Vayu, and Kala*.
- *AsthiDhatuis* mainly affected leading to *Hina Asthi Sarata*.
- Assessment of *DhatuSaratais* beneficial in post-menopausal women for proper selection of diet, lifestyle and *Rasayan Chikitsa*.

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