



REVIEW ARTICLE

PRAKRUTI, KALA- MODIFYING FACTORS OF RUTUCHAKRA (MENSTRUAL CYCLE)

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ABSTRACT

The women health is greatly dependent on normal cyclic *menstrual pattern (Rutusrava)*. The proper *Artava utpatti* (formation)& its *Nishkramana* (expulsion) is necessary to regulate the women health. But this is influenced by many factors like *Prakruti, Kala*, etc. The *Doshas* which have impact on *Prakruti*, varies the pattern of *Rutusrava* according to *Prakruti*. Due to influence of *Rutu* (seasonal variation), the *Doshas* attain variations which have impact on *Rutusrava*. Thus the present study enlightens the relationship between *Rutu, Prakruti & Rutusrava*

Keywords: *Rutu (seasonal variation), Prakruti, Rutusrava (Menstrual discharge).*

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INTRODUCTION:

Kala (season) has its influence from the time of conception until death¹. Human body is greatly influenced by external environment. Many of the exogenous rhythm and endogenous rhythm have specific phase relationship with each other; which means that they interact and synchronize with each other. Any change in the external environment causes change in one's body. Physiological effects could be stimulated by seasonally-influenced parameters such as day length, which influences hormone secretions.

Rajapravriti is a normal physiological process in women as sleep, bowel activity etc. As the nature and pattern of all the physiological and psychological processes are dependent on the inherent constitution of *Doshas* i.e. the *Prakruthi*, the pattern and nature of *Rajapravriti* should also show some relation to the *Prakruthi* of the individual. Women of Particular *Doshaja Prakruti* are prone to diseases of their respective *Doshaja Vyadhis*. *Doshas* are influenced & undergo physiological changes according to seasons. Each *Dosha* attains the state of *Chaya, Prakopa, Prashama* in particular season which is inevitable². The nature of menstrual pattern varies according to season predominant *Doshas* in the respective *Doshaja Prakruti*. So by understanding the menstrual pattern, the women health can be maintained by administering diet and regimens accordingly.

Relation of Agni & season in respect to

females: *Agni bala* depends upon *Rutu (season)*, *Vaya (age)*, *Ahara (food)* etc. Proper quantity of intake of food results in *Bala (strength)*, *Varna (complexion)* *Upachaya (nourishment)* etc in *Shareera (body)*^[3]. As *Shareera Agni* directly influenced by *Rutu*, the *Bala (strength)* of individual also varies accordingly. Hence to get knowledge about variations in strength of an individual, *Rutus* classified as *Adanakala & Visargakala*. So strength acquired in according to season is considered as *Kalaja Bala*. This suggests that *Agni & Shareera Bala* are directly proportional. How this *Agni* changes according to season is explained with example of three seasons^[4].

- *Hemanta* for *Prabalagni*.
- *Vasanta* for *Madhymagni*
- *Varsa* for *Mandagni*.

Females by nature are unsteady, sensitive, having weak strength^[5]. Hence females should be examined with proper care before administering therapies^[6]. By *Vyakhyana Tantrayukti*, this reference suggests that *Agni & Bala* have intimate relation to act on physiological changes occurring in females.

Effect of season on females in respect to

Prakruti: *Artava* considered as *upadhatu of rasa*^[7]. Various references are found in many of *Samhitas* regarding the formation of *artava* where there is wide description about this giving the knowledge about importance of its formation & expulsion. On compiling each and

every description clears the concept of *Artava Utpatti*, & its expulsion.

Various factors like *Prakruti*, *Rutucharya*, *Dinacharya* & even *Sadvrutta* plays important role in *Artava* formation since from menarche up to menopause. This is evident from a woman's menstrual pattern which is an important indicator of her health. The disorders of *Artava* are responsible for cause of each & every diseases in females [8]. Hence, the disorders of *Artava* has been mentioned as major *Lakshanas* (subjective criteria) in every *Samhitas* under *Yonivyapad*. Characteristics of menstrual cycle are known by its length, duration, amount, and regularity. Many environmental factors may affect characteristics of menstrual cycle including occupation, physical activity, diet, age, weight and lifestyle factors, immunity etc. Any variations in these factors make women susceptible to diseases. As seasonal variation, one of common factor for variation of immunity in all women influences the menstrual cycle characteristics. The *Artava Utpatti* (formation) is influenced from *Rakta* due to similar *Agneya Guna* (quality) [9]. In cloudy, cold weather *Rakta* becomes thick. Thus *Rakta* does not come out or comes in small quantity on *Siravedha* [10]. Blood plays an important role in homeostasis of body. During *Sharad ritu*, it becomes impure naturally due to *Teekshna*, *Ushna Guna* [11]. In *Gangadhara Tika* of *charaka samhitha*, it is mentioned that defect of blood means

abnormality in its composition, diminution or aggravation [12]. Thus it is evident from above references that *Artava* which is influenced by *Agneya Guna* of *Rakta* is also affected due to seasonal effect. This clears the aspect of influence of season on *Artava*, which decides the pattern of menstrual bleeding & thus the regulation of menstrual cycle is influenced by seasons.

Relation of season with diseases in respect to

Prakruti: Even if a person is healthy otherwise, but if by nature dominated by *Vata*, will be susceptible to *Vataja diseases* like cracking of different parts of body (like *Pada Sphutana*) etc especially in *Varsha Ritu* due to *Vata Prakopa*. This happens because the very normal condition of health of such individuals is dominated by one or other *Doshas* [13]

When a *Dosha* is joined with homologous seasons, *Dhatu*, & *Prakruti* it becomes too powerful to cause diseases [14]. There is description of different diseases raised in respect to seasons. For ex: *Vataja* diseases, in *Varsha ritu* etc. *Sadhya* & *Asadhyata* of *Vyadhi* depends upon season due to *Tulya* (homologous) *Ritu* & *Dosha* [15]. This suggests that there is influence of season on diseases. Individuals are more prone to Diseases of their respective *Doshaja Prakruti* [16]. When *Prakruti* is cited then *Vikruti* related to it must be revealed. As it is stated *Vatala* constitution body, has dominance of getting *Vataja* type of diseases etc. Hence *Chaya*, *Prakopa*, *Prashamana* of *Doshas* in season have

influence on particular type of predominant *Doshaja Prakruti* manifesting *Kalacruta Vyapanna Vyadhis*(diseases influenced by season).

Most of the discomforts during menstruation are because of the imbalance of *Doshas*. Present generation females are facing many problems related to their menstruation like painful menstruation, irregular cycles, and irregularity in bleeding patterns etc. in their adolescent age without any specific pathology in their reproductive system. As long as the *Doshas* function in their normal state and are not affected or overshadowed by another *Dosha*, the menstrual cycle happens optimally. In a specific *Prakruthi* person there will be predominance of that particular *Dosha* which may interfere with the normal or optimal functions of the other *Doshas*. So according to the *Prakruthi* there are chances that there will be variations in the characteristics of *Rajapravruthi*.

DISCUSSION:

Climate–health relationships pose increasing health risk where the action of immunity plays very important role. To regulate or balance the body temperature with variation in climate, Thermoregulatory system plays major role^[17].

Human are homeotherms as well as endotherms. In hot or cold regions thermoregulation is an evident in the form of sweating and shivering. Females differ from males in thermal responses to exogenous heat load and heat loss as well as to endogenous

heat load. The changing rate of sex hormone release during the menstrual cycle and ovulation periods modifies thermo-regulation in females. The complex regulation of temperature is modulated further in women by hormone status .So variations in hormone level to maintain body temperature on exposure to cold or heat influences the physiological processes of overall health of women immune response, Menstrual cycle, vaginal discharge etc. Thus ,the change in physiological aspect of women is evident from hormonal variations during the menstrual cycle due to seasonal variation influenced by thermoregulation mechanism .

Keeping in mind about variations taking in body , Ayurvedic classics, explained the proper mode & regimen to be followed in specific seasons in way to maintain thermoregulatory changes. Variations at the level of *Doshas*, from seasonal changes have both physiological & pathological aspect on human body If proper mode of regimen is not followed during season it leads to pathological condition.

Physiological variation in *Doshas* is observed for regulation & process of menstruation. Hence imbalance in *Doshas* at particular season have impact on *Rutuchakra* (menstrual cycle) & *Rutusrava*(menstrual bleeding pattern) in following ways : in *Hemanta &shishishira rutu*, due to *Prabala Agni* ,increases the *Ushnata* of body^[18] .This is because at low temperature the blood vessels constrict, which

in turn decrease heat carried by the blood to the surface, causing increase the metabolic heat effect to keep the body core temperature constant. As this is season of *Vata Chaya*(accumulation), its *Sheeta*(cold) and *Khara*(roughness)qualities causes the blood vessels to constrict, decreased nourishment to the endometrial lining of uterus the overall flow and menstrual discharge will be less. Even *kapha Chaya* during this season, *Sheeta*, *Manda* (*slow movememt*) *Guna* in environment also hinders the flow of *Artava*. Hence in this season females of *Vataja Prakuti* have chances of suffering from scanty menstrual bleeding. As this type of constitution are dominant with *Vishamagni*, this may influence the formation of *Artava* & are prone to suffering from oligomenorrhoea, associated with dysmenorrhea. The *Sheeta Guna* of both *Vata* & *Kapha Doshas* influences the *Artava*, results in irregular menstruation, prolonged secretory phase.

The similar physiology may be observed in *Varsha Rutu* (Rainy season) due to *Vata Prakopa* (aggravation). *Vatala Prakruti* females should be aware of *Prakopa* of *Vata* as this may lead to *Vataja Yonivyapad* due to consumption of *Ruksha Ahara Vihara*. The *Chala Guna* is main during the *Rajah Srava Kala*. This is evident from analyzing the *Samprapti* of *Pradara* i.e due to *Vata Prakopa* results in increase in amount of *Rakta* in *Garbhashaya Gata Siras*^[19]. So regulation of dilation & constriction of *Siras* (blood vessels)

depends on *Vata* status. So increased movement of *Artava* makes it *Tanu*(thin),*Ruksha* (*rough*)due to excessive movement. But due to *Pitta Chaya* in this season, results in easy flow of *Artava* due to *Ushna Guna*. Hence there would be lesser experience of dysmenorrhea in *Vataja Prakruti* females. But in *Pittaja Prakruti*, the menstruation associated with *Daha*, increased basal body temperature as premenstrual symptom.

Vasanta rutu: So in *Vasanta ritu*, *Kapha Prakopa* is prominent causing various *Kaphaja* diseases.

As there would be increased *Agnimandya* in this *Rutu*, & due to predominance of *Snighdha* (*unctuousness*)*Guna* causes *Kapha Prakopa* resulting in increased thickness of *Artava* manifesting various clot like formations due to accumulation of *Artava* without proper expulsion .So *Kaphaja Prakruti* persons are more prone towards menstruation associated with clots , irregular menstruation due to delay in ovulation, Anovulatory cycles .

Greeshma rutu: This is the hottest season, as the Sun is nearer to the *Prithvi*, and so the rays are short and sharp, giving more heat. There is tremendous loss of sweat, as well as energy and power. The person gets easily exhausted after a light work also. The *Kapha Dosha* decreases and the *Vata Dosha* gets *Sanchaya*. The *Pitta Prakruti* persons are more affected with excessive bleeding as due to similar nature of *Agneyatva* of *Artava* due to

Ushna, Tikshna, Ruksha Guna of Pitta .The Artava attains more liquefaction due to Teekshanata . So due to increased Sara Guna of Pitta does individual more prone to menorrhagia, intermenstrual spotting. The kaphaja Prakruti women are relieved from bleeding with clots as due to liquefaction or

reduced thickness of Artava making easy flow. In Sarad Ritu due to Agneya Guna influences excess flow of Artava, in Pittaja Prakruti persons.

The following table showing the relation of season, Prakruti, menstrual disorders:

Table no.: showing the relation of season, Prakruti, menstrual disorders

| Season | Prakruti | Menstrual disorders |
|--------------------------|-------------------|--|
| Hemanta, shishira rutu : | Vataja prakruti | Scanty menstrual bleeding, Oligomenorrhea, Dysmenorrhea as associated symptom |
| Varsha rutu | Pittaja prakruti | Increased basal body temperature as premenstrual symptom. |
| Vasanta rutu | Kaphaja prakruti | Bleeding with increased clots, irregular menstruation, Delay in ovulation process. |
| Greeshma rutu | Pittaja prakruthi | Menorrhagia with ovulatory or anovulatory cycles, intermenstrual spotting |
| Sarad ritu | Pittaja prakruti | Increased flow with regular cycles. |

Ritu chakra (menstrual cycle) is under the control of three doshas. Physiological changes in doshas due to influence of particular season & prakruti also influences the phases of menstruation.. Hormones which regulates the menstruation also controls the mechanism of thermoregulatory changes in body. Hence Variation in hormonal level on exposure to climatic variations influences the menstrual

pattern. However there is lacuna in substantiating the effect of prakruti on menstrual cycle as per contemporary science, where the subject gives scope for further study. But it is proved evidence in classics that Prakruti has its effect on menstruation when the chapter of Yonivyapad is analyzed. With the help of classical Tantrayuktis , the relation between Kala, Prakruti , Rutuchakra

can be established. As *Tantrayukti*s are keys to provide better understanding of classics & are the basic principles in understanding the *Samhitas*. Thus the entire impact of *Prakruti, Kala* on *Rutusrava* can be understood by applying *Yoga Tantrayukti*

Components of Yoga Tantrayukti:

- *Pratignya*(proposition) – to establish the relationship between *Rutu, Prakruti & Rutusrava*
- *Upanaya*-On applying the *Atidesha Tantrayukti*, it can be inferred that seasonal variation which influences the *Doshas*, also have impact on *Rutuchakra, RutuSrava* which is regulated by *Tridoshas*.
- *Hetu* (logical reasoning) –As *Prakruti* has influence on *Rutusrava*, the *Doshas* influencing *Prakruti* have impact on *Rutusrava* due to *Kala*.
- *Udaharana* – to understand the concept in better way, the examples related to contemporary view as in changes taking place in menstrual cycle process due to hormonal variation influenced by thermoregulation, immune system.
- *Nigamana* – Thus there is relation between *Rutu, Prakruti, Rutusrava &* hence impact of *Kala* (season)on *Rutusrava* (*menstrual pattern of bleeding*) is evident.

CONCLUSION:

Seasonal variations and its effect on *Dosha* are well evident. The menstrual cycle is regulated by the variations in *Doshas*. *Prakruti* also has influence on the pattern on bleeding by virtue

of *Dosha* dominance. Hence both *Kala* and *Prakruti* have effect on Menstruation and Menstrual cycle. Further clinical research needed to study the effect of *Prakruti* and seasonal variations on menstrual cycle for substantiating the classical concepts.

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