

## PHYSIOLOGICAL UNDERSTANDING OF ROLE OF DOSHAS IN ARTHAVA CHAKRA

Priya SR Nair\*

Assistant Professor, Dept. of Kriya Sharira, Yenepoya Ayurveda Medical College & Hospital, Naringana, Mangalore, Karnataka, India.

Received: 11-05-2020; Revised: 23-05-2020; Accepted: 28-05-2020

### Abstract

Sleep, bowel activity etc are the normal physiological processes, in the same way Rajopravruthi (menstruation) is also one of the important physiological process in women for maintaining health. Menstruation is a cyclical discharge of blood, mucus and certain other substance from the uterus in the reproductive life of the female, at an average interval of 28 days. This indicates the importance of maintaining menstrual health for a healthy progeny, other than this it also helps in cleansing or removal of toxins from the body. The nature and pattern of all the physiological and psychological process depends on Prakruthi (body constitution). All the stages of Rajopravruthi (menstruation) will show certain dominance of the Dosha in our body, like Rajasrava kala (menstrual phase) will have Vata, with Rithu kala (proliferative phase); Kapha with Rithuvyatheetha kala (secretory phase) with Pitta Dosha. So Doshas will influence all the physiological process of our body. The proper balanced state of these three Doshas causes normal menstrual cycle while imbalance causes abnormality.

**Key word:** Rajopravruthi; Dosha; Menstruation; Rajasrava kala; Rithu kala; Rithuvyatheetha kala.

### \*Address for correspondence:

Dr. Priya SR Nair, M.D. (Ayu)  
Assistant Professor,  
Dept. of Kriya Sharira,  
Yenepoya Ayurveda Medical College & Hospital,  
Naringana, Mangalore, Karnataka, India-575018  
E-mail: [priyarsreekumari@gmail.com](mailto:priyarsreekumari@gmail.com)

### Cite This Article

Priya SR Nair. Physiological understanding of role of doshas in Arthava chakra. Ayurpharm Int J Ayur Alli Sci. 2020;9(6):73-79.

## INTRODUCTION

Rajopravruthi (menstruation) is a normal physiological process indicating womanhood. Like all other physiological process, Rajopravruthi is also governed by three Doshas like Vata, Pitta, Kapha. From the essence part of Rasa, the Raktha (menstrual blood) named as Raja is formed. Raktha reaching interior of Garbhashaya (uterus) is expelled periodically through a cyclical process called Arthava chakra (menstrual cycle).

## LITERATURE REVIEW

Nirukthi of word Arthava means – a substance that flows out of the body at a particular period or specific time. Synonyms of Arthava are Raja, Asrik, Rudhira, Raktha, Shonitha, Lohitha, Puspa, Bija etc. Arthava is considered as the Upadhathu of the first and foremost Dhathu i.e. the Rasa dhathu. According to our science in females, blackish colour and no specific odour of Raktha(blood) which is discharged periodically from Apathyamarga (yoni marga-vaginal route) by Vayu is known as Arthava (menstrual blood).<sup>[1]</sup> Some other opines that, in females the Raktha (blood) which is produced from Rasa and flows every month for three days.<sup>[2]</sup> According to some Acharya, 'Malarupa Rudhira' which makes its appearance through vagina every month i.e. menstrual blood, is called as Rajah.<sup>[3]</sup> And he opines that presence of regular menstruation indicates the starting of reproductive life of a women, as 'Stridharma'. Arthava produced through the help of Arthavaha srothas (channels) like Garbhashaya (uterus) and Arthavaha dhamanis (uterine blood vessels).<sup>[4]</sup> Age of first appearance of Arthava (menarche) has accepted by all the acharyas as twelve years and Arthavanivruthi kala (menopause) as fifty years.<sup>[5]</sup>

In modern science, Menstruation is a cyclical discharge of blood, mucus and certain other

substance from the uterus in the reproductive life of the female, at an average interval of 28 days.<sup>[6]</sup> First menstruation in the life of a female is termed as menarche. It may occur anywhere between 12-16 years.<sup>[7]</sup> Menstruation occurs every month from puberty to menopause. It is absent in before puberty, during pregnancy and after menopause (45-55 years). Duration of menstrual flow last for 4-6 days without any appreciable pain. Composition of menstrual blood are blood (30-40ml), stripped of endometrium, mucus, leukocyte, and an unfertilized ovu.<sup>[8]</sup>

### Factors responsible for the formation of Arthava

#### Kaala (time)<sup>[9]</sup>

Kaala (time) can be considered in two aspects Nityaga and Avasthika. Nityaga depends on seasonal variations i.e., Shishiradi ritu kala. While Avasthika depends on the age phenomena of Jataka that means Vayavastha i.e. Balya (childhood), Yauvana (youth) and Vriddha (old age). In Ayurvedic classics, there are descriptions about Artava darshana (menarche) and Artava nivritti kala (menopause).

#### Dhatuparipurnatha (maturation of body tissue)<sup>[10]</sup>

As Rajah is an Upadhatu of Rasa, Dhatuparipurnata is considered by many Acharyas as an Utpatti hetu for Rajah

#### Karma (function)<sup>[11]</sup>

Karma is also considered as etiological factor for Rajah utpatti, Acharya has categorically mentioned importance of Karma in manifestation of Shukra (sperm) in male and Shonita (ovum) i.e. Artava in female body. As per Acharya, as the fire located within the wood cannot be noticed without specific efforts, similarly Artava requires specific

efforts (just like fire of wood) for their gross appearance.

### Swabhava (nature)<sup>[12]</sup>

Swabhava or the nature is responsible for the phenomenon which has been accounted with Dhatuparipurnata

### Vayu<sup>[13]</sup>

Prakrita Karma of Apana Vayu includes performing all excretory activities like Mala (faeces), Mutra (urine), Shukra (sperm), Artava (ovum) and Garbhanishkramana (expulsion of foetus). Prakrita Vata carries out all Anulomana kriyas (downward function). Artava get exhibited every month cyclically in woman, it depends on the ability of the prakrita ApanaVayu. Prakrita karma of VyanaVayu - It is stated that all the body function are under the control of Vyana Vayu. Prakrita functions of Yoni (vagina) & Garbhashaya (uterus) are also done by Vyana Vayu.

### The Qualities of Sudha Arthava are

Varna (colour) - It is just like Gunjaphala, Padma (red lotus), Alaktaka, Indragopa<sup>[14]</sup> and also Shashasrik (blood of rabbit), Laksha rasa (lac juice) and it do not stain the cloth.<sup>[15]</sup> In modern science also mentioned as bright red in colour.

Gandha (odour) - Due to the predominance of Prithvi mahabootha in Raktha it has Visragandha, so it is called Visra Gandhi (foul smell).<sup>[16]</sup> It has same property of pitta, so it smells like foul smell called Puthigandha. Some other opines that it is Madhugandhi (smell of honey).<sup>[17]</sup> In modern science also mentioned as characteristic odour.

Matra (amount) - Amount of Arthava is four Anjali pramana.<sup>[18]</sup> Other Acharya opines that there is no fixed quantity of Arthava.<sup>[19]</sup> But due to the variation in Desha (place), Kala

(time), Ahara (food), Vihara (activities), Prakruthi etc may change the quantity of Arthava.

Arthavasrava kala (duration of menstrual bleeding) - It varies from individual to individual and it could be a period of five<sup>[20]</sup> to seven days.<sup>[21]</sup>

Swaroop (property) - Arthava is Agneya in property.<sup>[22]</sup> Arthava has the property of Raktha.

Karya (function) - It helps to form garbha in Garbhashaya.<sup>[23]</sup> In contemporary science also describes it prepare the uterus for fertilization process as well as growth and development of foetus.

### Arthava chakra (Phases of menstruation)

Menstruation occurs in a cyclical way repeating itself every month periodically, so it is called Arthava chakra or Rithuchakra. According to physiological changes occurring during the Arthava chakra in our body, it can be divided into three phases –

Rajasrava kala (menstrual phase) - It is the Srava kala of raja or elimination period where the Raja accumulated in the uterus is eliminated from the body. Different opinion about the days of Rajasrava as five nights,<sup>[24]</sup> three days<sup>[25]</sup> or seven days.

Rithu kala (proliferative phase) - This Kala is like that of the seeds deposited during this period are likely to bear fruit (conception). In some concept duration of this Kala is twelve days<sup>[26]</sup> or sixteen days. In this phase the physiological changes happened in our body are Avyapannatva of Yoni - Garbhashaya is seen.<sup>[27]</sup> Also there is Pina (bright), Prasanna (happy) on face and teeth, Klinnatha (wetness). A typical sensation called Sphurana over the thighs, buttocks, arms, umbilical region.<sup>[28]</sup>

Rithuvyateetha kala (secretory phase) - The period between Rithukala and Rajasrava kala is called Rithuvyateetha kala. In this period regression changes takes place in Yoni (yoni sankocha).<sup>[29]</sup> The yoni does not allow the entry of Shukra. The raja which is accumulated in the Garbhashaya in this period is called Puranarajas. Thus Arthava chakra ends with the evacuation of this Puranaraja.

According to modern science the changes of menstrual cycle in uterus has been divided into three phases - Menstrual phase, Proliferative phase, Secretory phase.<sup>[30]</sup>

### Menstrual phase (bleeding phase)

After ovulation, if pregnancy does not occur, the thickened endometrium is shed or desquamated. This desquamated endometrium is expelled out through vagina along with blood and tissue fluid. The process of shedding and exit of uterine lining along with blood and fluid is called menstruation or menstrual bleeding. It lasts for about 4 to 5 days. This period is called menstrual phase or menstrual period. It is also called menses, emmenia or catamenia. The day when bleeding starts is considered as the first day of the menstrual cycle. Menstruation stops between 3<sup>rd</sup> and 7<sup>th</sup> day of menstrual cycle. At the end of menstrual phase, the thickness of endometrium is only about 1 mm. This is followed by proliferative phase.

### Proliferative (follicular phase)

Proliferative phase extends usually from 5<sup>th</sup> to 14<sup>th</sup> day of menstruation, i.e. between the day when menstruation stops and the day of ovulation. It corresponds to the follicular phase of ovarian cycle. Endometrial cells proliferate rapidly, epithelium reappears on the surface of endometrium within the first 4 to 7 days, uterine glands start developing within the endometrial stroma and blood vessels appear in the stroma. Proliferation of endometrial cells occurs continuously, so that

the endometrium reaches the thickness of 3 to 4 mm at the end of proliferative phase. On 14<sup>th</sup> day, ovulation occurs under the influence of LH. This is followed by secretory phase.

### Secretory (luteal phase)

Secretory phase extends between 15<sup>th</sup> and 28<sup>th</sup> day of the menstrual cycle, i.e. between the day of ovulation and the day when menstruation of next cycle commences. After ovulation, corpus luteum is developed in the ovary. It secretes a large quantity of progesterone along with a small amount of estrogen. Estrogen causes further proliferation of cells in uterus, so that the endometrium becomes thicker. Progesterone causes further enlargement of endometrial stroma and further growth of glands. Endometrial glands become more tortuous. Because of increase in size, the glands become tortuous to get accommodated within the endometrium, cytoplasm of stromal cells increases because of the deposition of glycogen and lipids, blood vessels also become tortuous and thickness of endometrium increases up to 6 mm.

### DISCUSSION

Factors influencing the menstrual cycle are Rasa, Raktha, Dhamanis, Dosha.

Rasa is the main source which supplies nourishment to various Dhatus and Upadhatus of the body. Arthava is considered as the Upadhatu of Rasadhathu.

The blood discharged through the vagina during menstruation is the same blood which circulates our body.

With the help of Dhamanis, the process of discharging menstrual fluid occurs.

Menstruation is one among the physiological process of the body, so Tridoshas are also involved in this process.

## Doshic influence of arthava chakra

### Raja srava kala (Menstrual phase 1 - 7 days)

In this phase intense vasoconstriction causes release of blood into the uterus and causes menstrual flow. This process can be correlated the effect of Chala (movement) Guna of Vatadosha helps in the movement of Arthava. If we consider Chala Guna of Vata we can say that the influence of Apanavata through Dhamanis for the discharge of menstrual fluid and also nervous control over the uterine walls.

Visada (lucid) Guna of Vata helps to clean by reducing stickiness by voiding the menstrual fluid.

Sukshma (subtle) Guna helps to diffuse menstrual blood through very thin pores of ruptured endometrial lining.

Ruksha (dryness) produce dehydration and thus dryness in the body. It leads to reduction in the thickness of endometrium upto 65 % of original thickness.

Laghu (lightness) and Sheetha (cold) guna of vata helps to give lightness and cooling effect of the body respectively by discharging the menstrual fluid.

Thus we can substantiate that Vata is more predominant in this phase of menstruation.

### Rithukala (Proliferative phase 8-16 days)

Snigdha (lubricant) Guna of Kapha helps in the increase water content of the tissue, promotes nourishment and provides strength to the proliferation of endometrial cells.

Guru (heavy) Guna helps in the densely packed by increasing the endometrial thickness up to 3-4 mm and appearance of blood vessels in the stroma.

Manda (slow) Guna helps in the property of healing and nourishing too by the process of regeneration of endometrium.

Slakshna (smooth) Guna attributes which provides smoothness on touch and promote easy passage through tissues for the easy passage of sperm.

If fertilization happens then Mritsna (sticky) Guna helps in proper implantation of foetus.

Sthira (stable) Guna provides firmness and provide strength to the foetus.

Because of Madhura rasa of Kapha it gives proper nutrients to the uterus and foetus to grown up.

Hence we can correlate the dominance of Kapha dosha in this stage of menstrual cycle.

### Rithuvyathitha kala (Secretory phase 17-28 days)

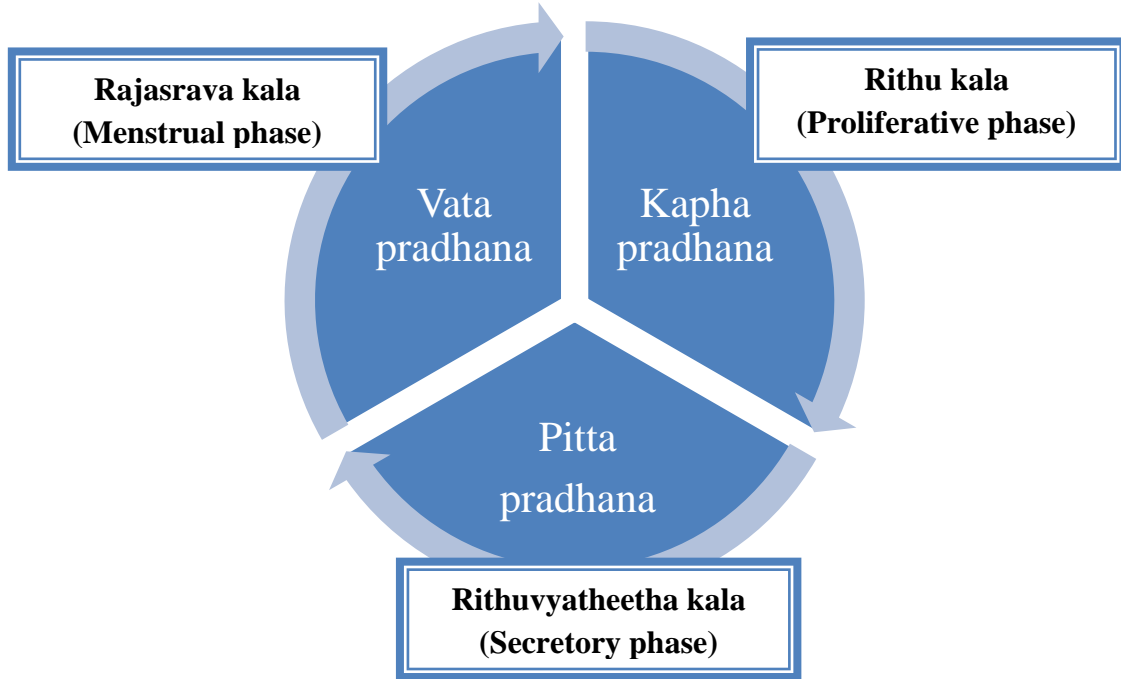
Sasneha (unctuous) Guna of Pitta helps to brings about increase water content of the tissue by increasing the cytoplasm of stromal cells due to the deposition of glycogen and lipids.

Sara (liquid) Guna helps in the formation of many new blood vessels appear within endometrial stroma. Blood vessels also become tortuous.

Drava (liquid) Guna helps to increase blood supply to endometrium.

In this stage the Gunas of Pitta dosha is more dominant. Hence we can say that in all physiological process of body is maintained by Tridoshas. (Graph 1)

**Graph No. 1: Presentation of dosha according to the arthava chakra (menstrual cycle)**



## CONCLUSION

Thus the rithu chakra (menstrual cycle) is governed by three doshas. The doshas play a role of governing factors while rasa, raktha, dhamaanee of respective medium for the action of doshas on rajovaha and arthavavahasrothas. The proper balanced state of these three doshas causes normal menstrual cycle while any sort of imbalance causes abnormality.

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Source of Support: Nil

Conflict of Interest: None Declared