ABSTRACT

In the modern world the sedentary life style associated with stress increased menstrual disorders. Among menstrual disorders oligomenorrhea or hypomenorrhea is the most common gynaecological problems. Ratio of menstrual disorder is rising in gynaecological practice which is a precursor of infertility associated with various metabolic disorders, so it requires more attention. Menstrual disorder affects mental state of women. Modern medical science gives Hormonal therapy for menstrual disorders which have many side effects if continued for long time. So, in contemporary era it is very important to provide a particular etiopathology and treatment for “Aartavakshaya”. Present article aims at elaborating details of Aartavakshaya mentioned in Ayurveda classics.

Keywords: Aartava, Aartavakshaya, Hypomenorrhea, Menstrual disorders, Oligomenorrhea.

Aim and Objectives: -

1. To review and compare literary data available on Aartavakshaya in different Ayurvedic

Introduction

Mother is the most blessed and beautiful word in the world; in this universe only females have been bestowed the power of creation next to the enormous God. This is why women are considered as reflection of the God in this world. But the root of the importance of women lies in their capacity of creation. This is the reason why the question of fertility is most important for women. In Ayurveda Aartavadushti is one of the cause behind it. The word Aartava denotes two meanings one of them is Antah Pushpa and another one is Bahir Pushpa. Both Antah and Bahir Pushpa are interrelated. Bahir Pushpa is outward manifestation of appropriate work of Antah Pushpa which is necessary for conception. Here, the present studies deal with Bahir Pushpa that is Menstrual Blood.

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and modern classical texts.

Materials & Methods:

Only literary material from available Ayurvedic classical texts and commentaries were reviewed, compared and analysed on classical background to find similarities, dissimilarities and clinical approach in accordance to modern science.

Literary Review:-

There are no direct references regarding ‘Aartavakshaya’ in Veda. Shri Keshava Dutta Shastri, the author of ‘Atharvediya Karmaja Vyadhi Nirodha’ has mentioned the etiopathogenesis of Anartava and its management. In ‘Vandhya Kalpadruma’ the author has mentioned the etiopathogenesis of ‘Nyunartava’ and its management.

Here, in Nyunartava word ‘Nyun’ means less quantity. In ‘Aartavakshaya’ word ‘Kshaya’ means less quantity.

Acharya Sushruta described Lakshanas and Chikitsa of ‘Aartavakshaya’ in brief.1 While describing the ‘Aartavadosha’ he has mentioned ‘Kshinartava’. Kshinartava is one of the symptom of ‘Aartavakshaya’.2

In both Vagabhata – I, II, The word ‘Aartavakshaya’ is not clearly used but the word ‘Kshinartava’ has been used which is actually a synonym of ‘Aartavakshaya’.3

Bhel – Acharya Bhel has described ‘Alpartava’ and ‘Vikritaartava’ but here also they are synonymous of ‘Aartava-kshaya’.4

Sharangadhara – He has mentioned ‘Kshinartava’ as synonyms of ‘Aartavakshaya’.5

Defination of Aartava:

Ruturbhavamaartavam...5

Aartava means monthly vaginal bleeding. Here word ‘Rutubhavam’ indicates the particular time. That is monthly menstrual blood flow.

The word ‘Menstruation’ has its origin from the Greek word ‘men’ meaning month. It’s literally meaning is the periodic discharge of a bloody fluid from the uterus. Thus, both words ‘Aartava’ and ‘Menstruation’ convey same meaning i.e. belonging or confirming to seasons or periods of time.

Synonyms:

Our ancient Acharyas have described certain words for menstrual blood.

(i) Aartava (2) Shonita (3) Asrik (4) Raja (5) Rakta (6) Lohita (7) Rudhir (8) Pushpa

These words are used to indicate menstrual blood as well as ovum.

It is therefore necessary to consider reference to context before interpreting them exactly for menstrual blood or ovum or even ovarian hormones.

In modern texts, period, menses or catamenical flow are the words used as synonyms of menstrual blood.

Properties of Aartava:

First we have to consider physiology of Aartava before coming to conclusion of ‘Aartavakshaya’.

Physiology of Aartava is described in Ayurvedic classics under the heading of ‘Shuddha Aartava Swarupa’.

(i) Varna

According to Acharya Charaka normal colour of menstrual blood is like Gunjaphala, Lal Kamala (Red lotus flower), Indragopa (An Insect) and Alaktaka.6

Acharya Sushruta explained that the colour of Shuddhartava should resembles with the Shasha Asrik (Rabbit blood) and Laksha Rasa.7

According to modern text menstrual blood is bright red in colour.

(2) Gandha

Menstrual blood has specific odour. According to Madhukosha Vyakya; Aartava is Madhu Gandhi.
Acharya Sushruta says ‘Rakta’ has Vistrata (Amagandhitva) due to Prithvi Mahabhuta same can be consider for Aartava.  

The menstrual blood has a characteristic odour caused partly by bacterial action degeneration; partly by the accompanying secretion of sebaceous and apocrine gland on vulva.

(3) Matra

Acharya Vagabhata denotes Aartava Pramana measuring to four Anjali.

According to modern medical science measurement of Menstrual blood loss is also varies from individual to individual. The amount of blood loss is estimated to be 20ml to 80 ml with an average of 50ml.

(4) Aartava Srava Kala

Aartava Srava Kala means duration of menstrual bleeding. Aartava Srava Kala varies with individuals. Ayurvedic classics have different opinion regarding duration of menstruation. It describes three (Vagbhata & Bhavamishra) to five (Charaka) days and rarely up to seven (Harita&Bhela) days.

(5) Aartavapravritti Chakra Kala

Aartava Prawritti Chakra Kala means interval between two menstrual cycles.

According to modern science, once the menstruation starts, it continues cyclically at intervals of 21 to 35 days with a mean of 28 days (Text book of gynecology by D.C. Dutta)

If inter menstrual period is exceed up 35 days, it is known oligomenorrhea.

Aartava Vaha Srotas:

Aartavahasrotas is one of the part of the Anatomy of female genital tract and since Aartavakshayais also connected with Aartava Vaha Srotas, it is very important to discuss about Aartavahasrotas.

“Aartavahavedutayormulam Garbhashaya”

Aartava Vaha Srotas are two in number, having roots in Garbhashaya and Aartava Vahi

Dhamanis, injury to these produces infertility, dyspareunia and amenorrhoea. Acharyas have different opinion regarding modern concept of ‘Aartava Vaha Srotas’. Pandit Gangadhar Shastri denotes Aartava Vahi Srotas as Uterine mucosa.

Acharya Ghanekarji cite uterine arteries as, “Aartava Vaha Srotasa”

Aartavakshaya as Disease:

Acharya Sushruta quoted Aartavakshaya as a disease as it is known that disease is a combination of sign and symptoms.

1) Yathochit Kale Adarshanam
2) Yoni Vedana.
3) Alpata

1) Yathochit Kale Adarshana: It means increase or decrease menstrual cycle or dysfunctional uterine bleeding.
2) Yoni Vedana: pain during menstruation / dysmenorrhea.
3) Alpata: It may be hypomenorrhea or oligomenorrha.

Hypomenorrhea means scanty menses in normal menstrual cycle (25 to 35 days)

Oligomenorrhea means increased menstrual cycle ≥ 35 days to 6 month.

The word Aartava denotes two meanings one of them is Antah Pushpa and another one is Bahir Pushpa. Both Antah and Bahir Pushpa are interrelated. Bahir Pushpa is outward manifestation of appropriate work of Antah Pushpa which is necessary for conception. Here, the present studies deal with Bahir Pushpa that is menstrual blood.

Aartavakshaya is more related to internal genital organs. To evaluate the disease Aartavakshaya genital organs are very important. To understand the pathology of internal genital organ, anatomy of this organ must be understood. Normal menstrual pattern depend upon ovulation so it is necessary to understand ovum according to Ayurveda as Antah Pushpa term frequently used in the context of ovum in Ayurveda.

Kamini B, Sharma OP, Bhatted SK, Conceptual study on Aartavakshaya, JOA XII-4 2018; 120-128
Beejagranthi:-

- While describing Viddhalakshana of Aartavavaha Srotas, Acharya Sushruta has enlightened the functions of ovary.
- Tatraviddhaya Vandhyatva Maithunasahishnuta Aartavanashash\textsuperscript{10}

Means, any trauma to the Aartavavaha Srotas may leads to Vandhyatva, Maithunaasahatva and Aartavanasha. However, he has not given any description about The Anatomy Of Ovary.

Beeja Nirmana:-

Aahara is the most important entity for survival. The Aahara, composition of Panchamahabhuta, is acted upon by Jatharagni, Bhutagni and Dhatvagni and the resultant nutritious material is made available up to cellular level. In this course, Ayurvedic texts mentioned the formation of Dhatus, Upadhatus, Malas, and Doshas etc. The formation of the factor responsible for Garbhdharana occurs from Rasadhatu. The Aahara Rasa derived from the consumed Aahara by the action of Jatharagni is subjected to Rasa Dhatvagni to produce the Aartava. The process of Pravartana of Aartava is governed by Apana vayu as mentioned by Acharyas in the Prakrita Karma of Apana vata.\textsuperscript{11}

Swarupa of Beeja:

The Swarupaas described by Acharyas in various contexts are:

- Rakta Lakshanam Aartavam Garbhakruttacha...\textsuperscript{12}
- Aartavam Agneyam\textsuperscript{13}

Aartava is Agneya, has characteristics of Rakta, forms Garbhaand also essential for creation of life.

Kala of Beeja Nirmana:

The Aartava becomes Vyakta in a female body from the age of twelve years and persists up to fifty. Thus it is physiologically absent before twelve years and after fifty years. The Aartava is manifested from Rasa in the female body within a month. The production of both menstruation and ovum is monthly\textsuperscript{14} so, this reference can be true for the meanings of Aartava. The term Rutukala is defined as period most suitable for achievement of conception. The Rutukala in which, the seeds deposited are likely to bear fruits. This directly refers to the period of ovulation wherein the chances of conception are most. Acharya Kashyapa has also explained Rutu Kala as the Beeja Kala.\textsuperscript{15}

Aartavakshaya Chikitsa:

Chikitsa is nothing but ‘Samprapti Vighatana’ Chikitsa mainly divided into two segments.

1. Shamana or Abhyantra
2. Samshodhana or Sthanika

Acharya Sushruta said ‘Aartavakshaya’ should be treated by the use of purifying measures (Samshodhana) and Agneya substance. Dalhana says that for purification, only emetics should be used not the purgatives, because purgation reduces Pitta, which in turn decreases ‘Aartava’ while emesis removes Saumya substances, resulting into relative increase in Agneya constituents of the body consequently ‘Aartava’ also increase.

Commentator Chakrapani says that by use of purifying measures Srotas are cleared. Emesis and purgation clear upward and downward direct Srotas respectively, thus both should be used, giving due consideration to the dosages of drugs used for purification and fitness of the woman.

Acharya Kashyapa says Aartavakshaya is Anuvasana Sadhya Vyadhi.\textsuperscript{16}

Acharya Vagabhata –I – II, recommend Pitta Vriddhi Kara and Rakta Vriddhi Kara Chikitsa

\textsuperscript{10} Tatraviddhaya Vandhyatva Maithunasahishnuta Aartavanashash

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### Abhyantara Chikitsa

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Sthanika Chikitsa

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<td>Ch.si 12/18, Ch.chi 30/102, Ka.Kalpa-shatpushpa, Shatarvari Kalpa, Bha.bhai.rat-4</td>
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**Abbreviations:**
- Bha. Pra. Chi: Bhauprakash Samhita chikitsasthan
- Yogratna: Yog Ratnakar
- Ka: Kashyap Samhita
- Bhai. Rat.: Bhaishajya Ratnavali
- Bhel. Chi : Bhel Samhita Chikitsasthan
- H.S. Sutrsthana : Harita Samhita Sutrasthana
- Yog.Rat.: Yogratnakar
- Ch.chi: charaka Chikitsasthan
- A.S. Utt: Ashtang Sangrahauttersthan
- A.H. Utt: Ashtang Hridyamuttersthan
- Ch.si: charaksiddhisthan
- Ch.chi: Charakchikitsathan
- Ka.Kalpa: Kashyap Samhita Kalpasthan
- Bha.bhai.rat: Bharat Bhaishajyaratnakar

**Sadhyasadhyata (Prognosis):**

In Ayurvedic classics, there is no description about prognosis of *Aartavakshaya* but prognosis of *Kshinartava* is described in *Ashtartava Dusti*. Here, *Aartavakshaya* is synonyms of *Kshinartava*, so we can take it.

*Sushruta* says that Kunapa-gandhi, Granthi-bhuta, Putipuya, Kshina and Mutrapurishagandhi disorder are incurable.

*Vagabhata* – I, corroborating *Sushruta* has accepted *Kshinartava Dusti* as curable one.

**Physiological Consideration Of Aartava:**

Each and every process of human body depends upon rhythmic phenomenon. Some processes of rhythmic phenomenon of human body are heart rate and menstrual bleeding. These phenomena are most rhythmic because it is noticed externally. Here our subject is related to menstruation. Menstruation depends on the cyclic release of the steroid hormones estrogen and progesterone. If this cyclic phenomenon is normal then everything goes normally. It is therefore very essential to know physiology of menstruation to diagnose abnormality of menstrual disorder.
according to Ayurveda it is necessary to understand normal menstrual pattern.

**The Normal Menstrual Cycle**

The menstrual cycle is divided into a follicular or proliferative phase and a luteal, or secretory, phase. The secretion of FSH and LH is fundamentally under negative feedback control by ovarian steroids (particularly estradiol) and by inhibin (which selectively suppresses FSH), but the response of gonadotropins to different levels of estradiol varies. FSH secretion is inhibited progressively as estrogen levels increase—typical negative feedback. In contrast, LH secretion is suppressed maximally by sustained low levels of estrogen and is enhanced by a rising level of estradiol—positive feedback. Feedback of estrogen involves both the hypothalamus and pituitary. Negative feedback suppresses GnRH and inhibits gonadotropin production. Positive feedback is associated with an increased frequency of GnRH secretion and enhanced pituitary sensitivity to GnRH. The length of the menstrual cycle is defined as the time from the onset of one menstrual bleeding episode to onset of the next. In women of reproductive age, the cycle averages 28 - 30 days and the mean duration of flow is 4 -2 days. Longer menstrual cycles (usually characterized by anovulation) occur at menarche and near the onset of menopause. At the end of a cycle, plasma levels of estrogen and progesterone fall and circulating levels of FSH increase. Under the influence of FSH, follicular recruitment results in development of the follicle that will be dominant during the next cycle. After the onset of menses, follicular development continues, but FSH levels decrease.

Approximately 8 to 10 days prior to the midcycle LH surge, plasma estradiol levels begin to rise as the result of estradiol formation by the granulosa cells of the dominant follicle. During the second half of the follicular phase, LH levels also begin to rise (owing to positive feedback). Just before ovulation, estradiol secretion reaches a peak and then falls. Immediately thereafter, a further rise in the plasma level of LH mediates the final maturation of the follicle, followed by follicular rupture and ovulation 16 to 23 h after the LH peak. The rise in LH is accompanied by a smaller increase in the level of plasma FSH, the physiologic significance of which is unclear. The plasma progesterone level also begins to rise just prior to midcycle and facilitates the positive feedback action of estradiol on LH secretion. At the onset of the luteal phase, plasma gonadotropins decrease and plasma progesterone increases. A secondary rise in estrogens causes further gonadotropin suppression. Near the end of the luteal phase, progesterone and estrogen levels fall, and FSH levels begin to rise to initiate the development of the next follicle (usually in the contralateral ovary) and the next menstrual cycle. Inhibin A levels are low in the follicular phase but reach a peak in the luteal phase. Inhibin B levels, in contrast, are increased in the follicular phase and low in the luteal phase. The endometrium lining the uterine cavity undergoes marked alterations in response to the changing plasma levels of ovarian hormones. Concurrent with the decrease in plasma estrogen and progesterone and the decline of corpus luteum function in the late luteal phase, intense vasospasm occurs in the spiral arterioles supplying blood to the endometrium, causing ischemic necrosis, endometrial desquamation, and bleeding. This vasospasm is caused by locally synthesized prostaglandins. The onset of bleeding marks the first day of the menstrual cycle. By the fourth to fifth day, the endometrium is thin. During the proliferative phase, glandular growth of the endometrium is mediated by estrogen. After ovulation, increased progesterone levels lead to further thickening of the endometrium, but the rapid growth slows. The endometrium then enters the secretory phase, characterized by tortuosity of the glands, curling of the spiral arterioles, and glandular secretion. As corpus luteum function begins to wane in the absence of conception, the sequence of events leading to menstruation is again set into action.

**Discussion:**

Aartavakshaya is one of the important diseases pertaining to Aartava. It is explained in Brhatrayee i.e Sushruta, Charaka, Vagbhata & in Laghutrayee like Bhavaprakasha,Sharangadhara. It is characterised by delayed, scanty menstruation associated with pain along reproductive tract.
Ayurvedic literature, advocates Shodhana & Agneya Dravya Upayogya. Aartavakshaya described as the most common menstrual disorders have become a challenging problem may cause functional disturbance associated with complaint of infertility and other metabolic disorder etc. Aartava is related to reproductive life of woman as well as it helps to restore the normal rhythmic pattern of body. In modern medical science it is treated with hormone replacement therapy (HRT), having long terms use and produces many side-effects. But Ayurveda describes various treatment modalities and drugs to treat Aartavakshaya with better responses and without causing any side-effects.

Conclusion:
Ayurveda has given various aspects of physiology of menstruation in microlevel than that of modern science which are helpful to aware of menstruation. In Ayurveda all menstrual irregularities associated with decrease menstrual flow comes under broad heading of Aartavakshaya. As menstruation is governed by Doshas their imbalance causes abnormality. Therefore, it is necessary to have balance state of Dosha, Dushya, Dhatu and Mala.

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सारांश:
आधुनिक युग में आसीन जीवन एवं तनाव से जुड़ी रौदी के कारण मासिक धर्म संबंधी विकार में वृद्धि हुई है। मासिक धर्म संबंधी विकार जैसे कि अत्य रज जैसे आम लोगों को समस्या है। मासिक धर्म विकार के अनुपात में लगातार वृद्धि हो रही है, जो की बाँझपन एवं इससे संबंधित विभिन्न चिकित्सा विकारों का कारण है। इसलिए इस समस्या को और अधिक ध्यान देने की आवश्यकता है। मासिक धर्मविकार महिलाओं को मानसिक स्थिति को प्रभावित करता। आधुनिक चिकित्सा विज्ञान में मासिक धर्म संबंधी विकार की चिकित्सा में हामस्तिस थेरपी दी जाती हैं, जिसके लिए समय के लिए जाने लोग से कई दुष्परिणाम होते हैं। तो, समकालीन युग में इसके लिए एक विशेष हेतु विज्ञान और उपचार प्रदान करना बहुत जरूरी है। अतः वर्तमान लेख में, आयुर्विद विज्ञान में उद्धृत आर्तवक्ष्य के विवेचन का विस्तार से वर्णन किया गया है।

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