

COMPARATIVE CLINICAL STUDY ON *DANTYADI GUTIKA* ALONG WITH YOGA INTERVENTION IN THE MANAGEMENT OF *ARTAVAKSHAYA*

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ABSTRACT

Shudha Artava lakshana (Normal menstruation) is indicator of healthy and normal reproductive organ. In *Ayurveda* Acharya has mentioned "*Artavakshaya*" or "*Nastartava*" as one of the cause of *Vandhyatva*. In present era there is high prevalence of this condition in society. Keeping it under consideration this topic was taken up for present study. *Ayurveda* suggest both *Shodhana* and *Shamana* therapy in management of *Artavakshaya*. *Shamana* therapy used as form of *Agneya dravyas* (*Pittavardhaka*) and *Vata-kaphashamaka Dravya*. *Dantyadi Gutika* mentioned in *Yoga Ratnakara* was used here as the trial drug and *Yoga* protocol designed which improves digestion and increases blood circulation in pelvic region was used to see and

compare their efficacy in the management of *Artavakshaya*. **Methodology:** This research work was a randomized comparative clinical study of 40 patients suffering from the symptoms of *Artavakshaya*, patients were randomly divided into 2 groups of 20 patients each. Group A was treated with *Dantyadi Gutika* and group B was treated with *Dantyadi Gutika along with Yoga Intervention* for a period of 4 consecutive menstrual cycles (3 consecutive cycles with trial drug and further one cycle was drug free follow up). **Result:** Clinical parameters were assessed statistically. Both the groups showed statistically significant results. Statistically there was no significant difference between the groups in parameter of Interval between two cycles, Duration of bleeding and amount of blood flow but there is statistically significant difference was observed in the symptom of Pain during menses. **Interpretation and Conclusion:** Thus group B (*Dantyadi Gutika* along with Yoga

intervention) showed higher response as compare to Group A (*Dantyadi Gutika*) in the management of *Artavakshaya*.

KEYWORDS: *Artavakshaya*, *DantyadiGutika*, *Yoga* Intervention, Oligo-hypomenorrhoea.

INTRODUCTION

Ayurveda the 'Science of human life' is ancient system of medical science which is serving the ailing humanity since the creation of life as its main object is to cure and prevent the disease that means keep a healthy person healthy and alleviate the disease.

Women have a unique existence in the world because she has a power to reproduce. This is why women are considered as reflection of the God in this world.

In *Ayurveda*, Acharyas has mentioned the *Shudha Artava lakshana* as indicator of healthy and normal reproductive organ, where interval between two menstrual cycles is of one month, duration of menstrual bleeding of five days which is not associated with pain or burning sensation. *Artava* should not be very scanty or excessive in amount.^[1] Normal and regular menstrual cycle is regulated by proper functioning of Hypothalamo-pituitary-ovarian axis and its imbalance cause menstrual disorders.

Artavakshaya is explained by *Acharya Sushruta* and is characterized by *Yathochitakala adarshana*, *Alpartava* and *Yonivedana*.^[2] It can be compared with oligo-hypomeorrhoea based on their signs and symptoms. Menstrual bleeding occurring more than 35 days apart and which remains constant at that frequency is called oligomenorrhoea and when the menstrual bleeding is unduly scanty and lasts for less than 2 days it is called hypomenorrhoea.

Eastern Mediterranean Health Journal (EMHJ) have reported Prevalence and pattern of menstrual disorders that out of 80.7% women suffering from irregular menstrual cycle, 19.3% are suffering from Oligomenorrhea, 38.1% Dysmenorrhea and 11.89% Hypomenorrhea.^[3] *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.

In *Ayurvedic* classics the management of *Artavakshaya* mentioned as a use of '*Agneya dravya*' and *Samshodhana Chikitsa*.^[4] *Agneya dravyas* are used as they are *Pittavardhaka*.

By this the *Agni* is stimulated which helps in digestion of *Ama*, formation of *Ahara Rasa*, which later on forms the *Rasa dhatu* from which the *Artava* is formed.

In various research journals it has been demonstrated that regular practice of yoga has beneficial effects on both phases of the menstrual cycle by bringing physical and psychological well-being and by balancing neuro-endocrinal axis.^[5] Yogic therapy helps in improving hormonal and biochemical changes related to H-P-O and H-P-A axis in menstrual disorder.

There are many '*Agneya dravyas*' mentioned in Ayurveda which are having *Artavajanana* property. '*Dantyadi Gutika*' described in Yoga Ratnakara^[6] is one among them which was used here as the trial drug and Yoga Intervention-*Bhadrasana*, *Gomukhasana*, *Dhanurasana*, *Bhujangasana*, *Pashchimottasana* and Pranayama which improves digestion and increases the blood circulation in pelvic region are used to see and compare their efficacy in the management of *Artavakshaya*.

OBJECTIVES OF STUDY

- a) To evaluate the efficacy of *Dantyadi Gutika* in the management of *Artavakshaya*.
- b) To compare the efficacy of *Dantyadi Gutika* along with Yoga Intervention in the management of *Artavakshaya*.

MATERIALS AND METHODS

Source of data

Trial was registered on CTRI with registration number - CTRI/2021/03/031891

Patients with Classical features of *Artavakshaya* were selected from OPD/IPD of *Prasuti tantra & Stri Roga* department of State Ayurvedic College and Hospital, Lucknow.

Source of drug

Raw drugs were purchased from Ayurvedic drug market of Lucknow and authenticated by the Department of *Dravyaguna* of State Ayurvedic College and Hospital, Lucknow.

Preparation of drug

The trial drug was prepared in the pharmacy of State Ayurvedic College Lucknow by concerned experts and under the supervision of Department of *Rasashashtra* and *Bhaishajyakalpana*. Therefore, all the necessary measures regarding the preparation of trial drug had taken by experts.

STUDY DESIGN

Randomized comparative open clinical trial.

Method of data collection

40 Patients suffering from *Artavakshaya* were selected based on diagnostic, inclusion and exclusion criteria.

Sample size- 40 patients in two groups were registered.

Group Allocation

Registered patients were randomly divided by table of random number into two groups- Group A & Group B.

Group A- In this group, patients treated with the trial drug *Dantyadi gutika* 500 mg of 2 Gutika orally for 3 consecutive cycles.

Group B – In this group, patients treated with the trial drug *Dantyadi gutika* 500 mg of 2 Gutika orally for 3 consecutive cycles along with **Yoga Intervention** half an hour daily for 4 consecutive cycles.

Period of study

Total duration of clinical study was 4 consecutive cycles (3 cycles with drug and one cycle was drug free follow up).

Follow up period- Follow up was done on the clearance of each menstrual cycle.

Diagnostic Criteria

Diagnosis was based on the presence of any two or more of the cardinal symptom of *Artavakshaya*.

A. *Yathochitakala Adarshanam* of Artava - Menstrual cycle > 35 days

B. *Alpartavam* –

a) Duration of bleeding < 2 days

b) Decrease in quantity of bleeding (using pad per day 2)

C. *Yoni Vedana* - Pain during menstruation

Inclusion criteria

1. Patients willing to participate in the study with proper written consent.
2. Patients fulfilling cardinal symptoms of *Artavakshaya*.
3. Patients between the age group of 18-40 years.

Exclusion Criteria

1. Patient having systemic diseases which interfere with the present study (HTN, TB, DM, Thyroid disorder and Hyperprolactenamia)
2. Pregnant & Lactating women.
3. Patient on OCPs, IUCD.
4. Congenital anomalies of uterus or ovaries.
5. Patient with any pelvic pathology or malignancy.
6. Hb% less than 8 gm%

LABORATORY INVESTIGATIONS

1. CBC
2. ESR
3. FBS
4. LFT
5. Thyroid profile
6. USG uterus and adnexa – TAS/TVS
7. UPT (Urine pregnancy test in married patients)

ASSESSMENT CRITERIA

The effect of therapy was analyzed on certain parameters before and after treatment.

Subjective criteria

1. Interval between two cycles.
2. Duration of Bleeding.
3. Amount of blood loss.
4. Pain during Menstruation – assess with the help of VAS scale.

Objective criteria

The effect of trial therapy was analyzed on certain parameters before and after treatment.

1. Hb%
2. LFT
3. USG for Endometrial thickness.

RESULT AND OBSERVATION

It was observed that the economical lower class group (70%) and patients from urban area (82.5%) were mainly affected due to *Mithya Ahar-Vihara*. Most of the patient belonged to housemaker (72.5%) followed by the private job workers/students (12.5%), because *Vegadharana*, *Vishamashana*, and *Chinta*, *Shokadi* are commonly found in these people due to indulgence in their work and household activities. Maximum number of patients was found in age group of 26-30 years (37.5%) followed by 18-25 years (32.5%), because these are young age group and have stressful life because of career, job and family.

Table 1: Statistic Result.

Characteristics	Group A				Group B			
Sign and Symptoms	Mean score		% of relief	P value	Mean score		% of relief	P value
	BT	AT			BT	AT		
Interval between two menstrual cycle	1.46	0.27	81.34%	0.002	1.76	0.12	92.91%	<0.001
Duration of flow	2.00	0.33	83.33%	<0.001	1.95	0.32	83.81%	<0.001
Amount of bleeding	2.10	0.72	65.61%	<0.001	2.10	0.63	69.92%	<0.001
Pain during menstruating days	1.85	0.50	72.97%	<0.001	1.95	0.00	100%	<0.001

Statistically and clinically significant effect of the treatment was observed in both the groups.

Table 2: Overall effect of therapy.

Grade	Group A		Group B		chi sq	p-value
	No.	%	No.	%		
Marked improvement	13	65.0%	15	75.0%	0.48	0.490
Moderate improvement	7	35.0%	5	25.0%		
Mild improvement	0	0.0%	0	0.0%		
Unchanged	0	0.0%	0	0.0%		
Total	20	100.0%	20	100.0%		

Out of total 40 patients, 28 patients had marked improvement, 12 patients had moderate improvement was observed.

DISCUSSION

Artavakshaya described as the most common menstrual disorders. In present era due to heavy industrialization, advance technology and urbanization human being indulging in improper food, sedentary lifestyle and stress which is not healthy for constitution of the healthy body and gives rise to various lifestyle disorder in which menstrual cycle irregularities is a major

gynaecological problem. Ratio of menstrual disorder is rising in gynaecological practice so it requires more attention.

Acharya Sushruta has mentioned to "*Artavakshaya*" or "*Nastartava*" as one of the cause of *Vandhyatva*. There are four major factors *Ritu*, *Kshetra*, *Ambu* and *Bija* which is essential for *Garbha* known as *Garbhasambhava samagri*. Here *Bija* means *Artava* and *Shukra* so if there is any defect in it can leads to *Vandhyatva*.

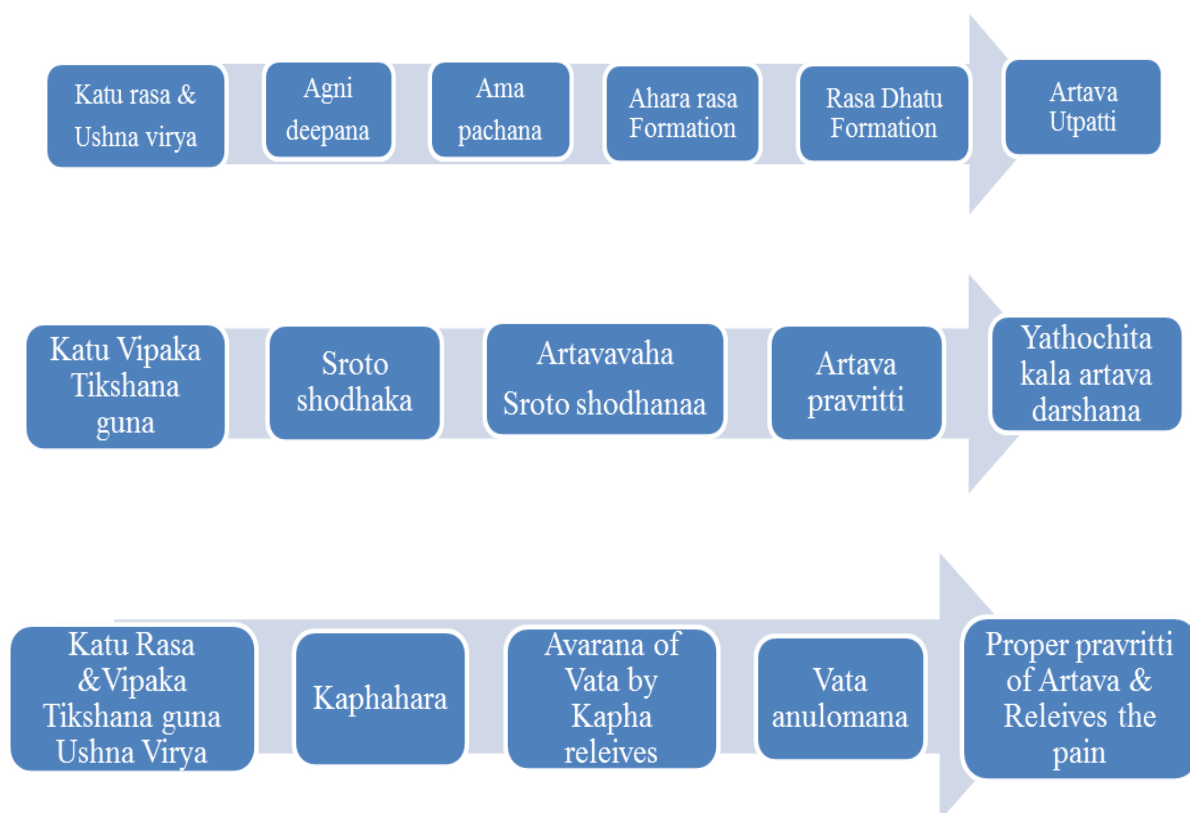
Acharya Sushruta said '*Aartavakshaya*' should be treated by the use of purifying measures (*Samshodhana*) and *Agneya* substance.^[7] *Shodhana* Chikitsa as explained by Acharya Dalhana includes only *Vamana* karma, as this removes only the *Soumya dhatu* and maintains the *Pitta* which is required for formation of *Artava*. Acharya Chakrapani explains that both *Vamana* & *Virechana* karma can be administered. Acharya Kashyapa has mentioned *Basti* to be the best treatment.^[8] *Shamana* Chikitsa is explained in the form of '*Agneya dravyas*'.

Acharya have considered that the cause of *Artavakshaya* is decrease in *Rasadhatu*. As *Artava* is *Updhatu* of *Rasdhatu* and *Rasdhatu* is formed by *Ahar rasa* and due to improper *Aharpaka* it causes *Artavakshaya*. Acharya Sushruta mentioned the use of '*Agneya dravya*' and *Samshodhana Chikitsa* in management of *Artavakshaya*. *Agneya dravyas* are used as they are *Pittavardhaka* by this the *Agni* is stimulated which helps in digestion of *Ama* and formation of proper *Ahara Rasa*, which later on forms the *Rasa dhatu* from which the *Artava* is formed. Acharya Sushruta while explaining about *Nastaratava* says that, the Vitiating of *Vata* and *Kapha* does *Avarana* to the passage of *Artava* leading to *Srothorodha* of *Artavavaha srotas* causing *Artavakshaya*.^[9]

There are many '*Agneya dravyas*' mentioned in Ayurveda which are having *Artavajanana* property. '*Dantyadi Gutika*' described in Yoga Ratnakara is one among them which was chosen as a trial drug. The contents of the *Dantyadi Gutika* are *Dantimoola*, *Hingu*, *Yavakshara*, *Katukalabu*, *Pippali*, *Guda* (Jaggery) and *Snuhi ksheera* for *mardana*.

- Most of the ingredients in *Dantyadi Gutika* are having *Katu Rasa*, *Tikshnaguna*, *Ushnavirya* and *Katuvipaka*, *Kapha-vatashamana* property and *Pittavardhaka* *Shulaprashamana*, *Deepana*, *Pachana*, *Artavajanana*, and *Garbhashayasankochaka* properties.
- Drugs like *Hingu* and *Pippali* have the Emmenagogue property (drug which provoke menstruation).

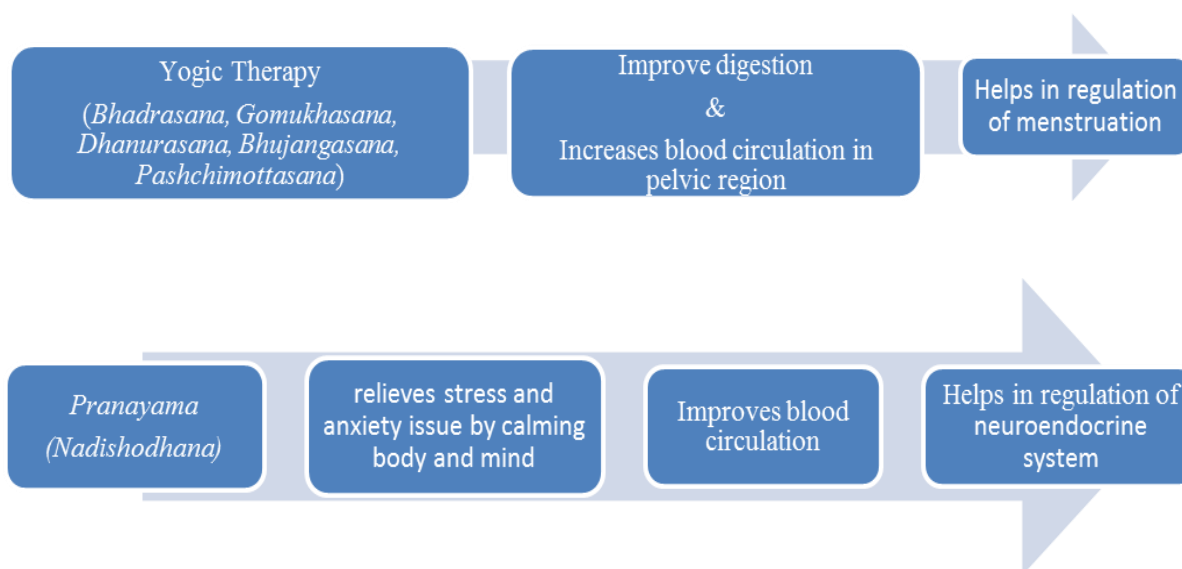
- Drugs like *Katutumbi*, *Hingu*, *Pippali* and *Snuhi ksheera* have antihyperglycemic properties and studies shows that use of anti-diabetic drugs helps in ovulation which results in corpus luteum formation and maintains the normal H-P-O axis balance and thus help in regularizing the menstrual cycle.
- Most of the drugs have antioxidant property which helps in maintaining the proper oestrogen level, ovulation and help in maintaining the luteal phase. Antioxidants also increase the anabolic activity in body hence increase the thickness of endometrium results in increasing the amount of blood flow.
- Most of the drugs possess antispasmodic, carminative and anti-inflammatory property which helps in relieving the pain during menstruation.
- Most of the drugs have minerals, vitamins, carbohydrates, proteins which helped in improving the general health of the patients and therefore maintain the normal hormonal balance in the body which is responsible for normal menstruation.



- *Yogic Intervention* especially which we designed for this research work are *Bhadrasana*, *Gomukhasana*, *Dhanurasana*, *Bhujangasana*, *Pashchimottasana*, improves digestion and increases the blood circulation in pelvic region and thus help in proper functioning of

reproductive organ and regulation of menstruation. More blood flow means more nutrient and oxygen supply to the reproductive organs. This way, constricted vessels are relaxed, allowing easy blood flow to the pelvic region which is also helpful for maintaining the endometrial thickness.

- *Pranayama* directly relieves stress and anxiety issue, by calming our body and mind. Improves blood circulation and thus help in regulation of neuroendocrine system i.e H-P-O & H-P-A axis.



It is observed that regular yogic practices have beneficial effects on both phases of the menstrual cycle by bringing physical and psychological well-being and by balancing neuro-endocrinal axis. Yogic therapy helps in improving hormonal and biochemical changes related to H-P-O and H-P-A axis in menstrual irregularities. Hence Yogic practices are found to be beneficial in minimizing the problem of menstrual irregularities.

CONCLUSION

- *Artavakshaya* can be correlated with Oligo-hypomeorrhoea based on their signs and symptoms.
- The main principle of management of *Artavakshaya* is *Pittavardhaka (Agnivardhaka)*, *Vata kapha shamaka* and *Vata-anulomaka Chikitsa*. In classics, both *Shodhana* and *Shamana Chikitsa* are described. *Shamana Chikitsa* is done by using the *Agneya Dravya*.
- The *Dantyadi gutika* has synergistic action of *Artavajanana*, *Garbhashayasankochaka*, *Agnivardhaka*, *Vedana-sthapana* and *Vata-kaphahara* property.

- Yoga therapy has beneficial effects on the menstrual cycle by balancing neuro-endocrinal axis (H-P-O and H-P-A axis). *Yoga* protocol which we prepared for this study was found to be helpful for digestion and increases the blood circulation in pelvic region so it helps in proper functioning of reproductive organ and thus helps in regulation of menstruation
- On the Interval between two menstrual cycles both the group showed statistically highly significant, where Group B showed 11.57% more effective than Group A.
- On the Duration of bleeding both the group showed statistically highly significant, where Group B showed 0.48% more effective than Group A.
- On the Amount of Blood flow both the group showed statistically highly significant, where Group B showed 3.91% more effective than Group A.
- On the relief of Pain during menses both the group showed statistically highly significant, where Group B showed 27.03% more effective than Group A.

So it is concluded that the response of treatment in group B (*Dantyadi Gutika* along with Yoga intervention) is higher as compare to Group A (*Dantyadi Gutika*).

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