

A COMPARATIVE CLINICAL STUDY ON THE EFFICACY OF RAJODARSHINI VATI AND LASHUNADI VATI IN THE MANAGEMENT OF ARTAVAKSHAYA

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Abstract:

Mother is the most sacred and beautiful word in the world. Motherhood is the essence of being a woman. There are many physiological changes taking place in women's body among which menstrual cycle is a unique phenomenon. Any alteration in this phenomenon leads to menstrual abnormalities among which Artavakshaya is one.

According to Sushruta Samhita there are 3 "Pratyatma lakshanas" of Artavakshaya, they are Yathochita kala adarshana, Alpata and Yoni vedana¹. All Acharyas have explained the normal duration of artava srava as triratra, pancharatra or saptharathra and the quantity is naatibahu and

naatyalpa^{2,3}.

Menstruation is a physiological process controlled by hypothalamo-pituitaryovarian axis and their associated hormones. On account of modernization & urbanization there is increased exposure to spicy & fried foods, Stress, social problems, hence menstrual disorders become a very challenging problem for working class ladies or common housewives. Menstrual bleeding occurring more than 35 days apart, bleeding for less than 2 days and which remains constant at that frequency is called Hypooligomenorrhoeae⁴, is suggestive of some underlying pathology. Acharya Sushruta has mentioned artavakshaya as one of the cause of vandhyatwa. Artavakshaya is one among the ashtaartavadusti mentioned in Ayurvedic literatures, which is characterized by delayed and scanty menstruation which is associated with pain in vagina^{5,6}. This can be compared with Hypo-oligomenorrhoea based on their signs and symptoms.

In modern science, scanty, & infrequent menstruations are treated by hormonal therapy. Long term use of these drugs produces many side-effects. So it is very essential to find out effective non steroidal, non hormonal, cost effective ayurvedic medicine. Our Classics suggest both Shodhana and use of Aagneya dravya⁷ as the line of treatment. Both Rajodarshini vati and Lashunadi vati⁸ have properties like, Artava janana, Garbhashaya shodhana, vedanasthapana and Vatanulomana; and hence have been chosen for the comparative study.

OBJECTIVES:

To compare the effects of Rajodarshini Vati and Lashunadi Vati in the management of Artavakshaya.

STUDY DESIGN:

This research work is a single blind comparative clinical study with pre test and post test design. 30 women presenting with pratyatama lakshana of Artava kshaya were randomly selected and categorized into 2 groups of 15 patients each. Group A were given Lashunadi vati and Group B were given Rajodarshini vati for a period of 3 menstrual cycle and follow up for further 2 cycles.

RESULTS:

These drugs showed good results in duration of flow, intermenstrual period, amount of flow, changes in the pain & weight.

KEY WORDS:

ARTAVA KSHAYA, RAJAH KSHAYA, LOHIT KSHAYA, RAJODARSHINI VATI,

LASHUNADI VATI, reproductive life, menstrual cycle, shedding of endometrium, hormonal treatment, shaman chikitsa, agneya dravyas.

INTRODUCTION

Ayurveda the science of life has its own values in health promotion, disease prevention, cure from centuries and this will extend to further generations. God, The ultimate creator of the whole universe have bestowed both male and female with the power of reproduction but the women shares a major responsibility. Motherhood is a divine emotion and unique experience in the life of a woman. The “Nari” is called “Stree” but she can be “Mata” only after giving birth to child. The desire of women for children is usually stronger than self interest in beauty and figure, and stronger than the claims of career. Children give the women status as well as psychological and emotional security within the patriarchal family.

To effectively fulfill the above aim, nature has conferred special anatomical and physiological characteristics in the woman which are collectively referred to as “streekarabhavas”.⁸ One among them is the concept of **rajapravriti** i.e. **artava**^{9,10}. As human life is constantly influenced by the rhythmic phenomenon operating in this universe, the female menstrual cycle which involves dramatic monthly hormonal changes affecting a woman’s emotional and physical state is the broad extension of the well known **lok purusha samya sidhanta**. The menstrual cycle which involves the shedding of endometrium which was prepared in the anticipation of providing a bed for the fertilized gamete, when fails, result into the manifestation of **masanumasika rajah pravriti** means **aartava pravriti**^{11,12}.

In the contextual references of Ayurveda the word “Artava” has two meanings “**Antahpushpa**”¹³ (ovum) and “**Bahipushpa**”¹⁴ (Menstrual blood) both are equally important to Ayurveda. These 2 meanings are interrelated. As far as present work is concern, “**Artava**” has been restricted to “**bahirpushpa**” only. Acharya Charaka has described that for the production of “**Garbha**”¹⁵ The shuddha artava, yoni and garbhashaya are the essential factors and also mentioned vitiated artava as one of the reasons of “**yonivyapada**”.¹⁶

The **bahirpushpa** can be seen by **pratyaksha pramana**,¹⁷ the efficacy of drugs acting can be assessed. About the quantity of Artava, Acharya Charaka said When the “Artava” is reduced from its normal pramana it is called Artava Kshaya. Menstrual cycle is a beautiful hormonal change that takes place every month in women life. There is a well co-ordination between the hormones and the shedding of the endometrium that takes place every month indicating the normal menstruation. Nutritional standards environmental influences, topographical conditions, racial factors

and indulgence in strenuous physical activity can affect hormonal status and menstrual cycles of women. A slight deviation in the menstrual cycle which may be excessive or low is filled with fear of some serious pathology of internal genital organs. Ratio of menstrual duration is rising in gynaecological practice which is a precursor of infertility and other problems.

In modern medical science menstrual disorders are treated by hormonal therapy. Long term use of these drugs cause various side effects like cardiovascular diseases, hepatotoxicity, nephrotoxicity, depression, vertigo, headache and skin rashes etc. So it is the need of hour to provide a particular etiopathology and find out effective, non steroid, non hormonal cost effective Ayurvedic medicine for Artavakshaya. In the classics treatment is mentioned to keep the doshas in equilibrium, it can be achieved by;

1. Samshodhana: Cleansing process which is in form of panchakarma.
2. Samshamana: Palliative measures which is in form of agneya dravyas

Hence for the present study shamana line of treatment is selected as the medicines Rajodarshini Vati and Lashunadi Vati are effective, easily available are palatable and cost effective. In such recipes for oral administration we have selected Rajodarshini Vati and Lashunadi Vati.

OBJECTIVES OF THE STUDY:

1. A *conceptual study* of Artavakshaya.
2. To evaluate the efficacy of *Lashunadi Vati* in Artavakshaya.
3. To evaluate the efficacy of *Rajodarshini Vati* in Artavakshaya.
4. To compare the effects of *Rajodarshini Vati* and *Lashunadi Vati* in the management of Artavakshaya.

CLINICAL STUDY

MATERIAL AND METHODS

The current study “A COMPARATIVE CLINICAL STUDY ON THE EFFICACY OF RAJODARSHINI VATI AND LASHUNADI VATI IN THE MANAGEMENT OF ARTAVAKSHAYA ” was carried out on 30 patients attending the OPD & IPD of Prasuti tantra and Stree roga department GAMCH and hospital Bareilly.

A) SAMPLE SOURCE

Patients diagnosed with Artavakshaya attending Prasooti tantra and Stree Roga OPD, GAMCH and hospital Bareilly.

B) DRUG SOURCE:

Raw drugs required for the preparation of vati was identified and selected from the local market and was prepared under the supervision of Dravyaguna & Rasashastra dept.

METHOD OF COLLECTION OF DATA

A separate case proforma was prepared with all points of history taking, physical signs and symptoms, laboratory investigations and other necessary investigations. The parameters of signs, symptoms and investigations were scored and statistically analyzed.

DESIGN OF STUDY:

A single blind randomized comparative clinical study of two groups, trial and control, 30 selected patients were divided into 2 groups of 15 patients each.

- a. Group A (Control) – Patients were given Lashunadi vati with sukhoshana jala for 3 cycles.
- b. Group B (Trial) – Patients were given Rajodarshini Vati orally along with sukhoshana jala or takra for 3 cycles.

A special performa was prepared with all history taking , physical examination, as mentioned in our classics and allied sciences to confirm the diagnosis. The parameters of signs and symptoms will be scored on the basis of standard method of statistical analysis.

INCLUSION CRITERIA:

1. The patients with classical features of *Artavakshaya*.
2. Patients between the age group of 16-30 years.
3. Both married and unmarried.
4. Interval between 2 cycles exceeding more than 35 days and duration less than 2 days.

D) EXCLUSION CRITERIA:

1. Lactating women.
2. Women on OCPs, IUCD.
3. PCOD.

4. Women having systemic diseases like hypertension, DM, hyperthyroidism, hypothyroidism, which interfere with present study.
5. Women with any pelvic pathology like genital TB, benign and malignant tumours.
6. Patients with Hb% < 8gm%.

INTERVENTIONS:

Duration of treatment is for 3 consecutive menstrual cycles.

- Group A (Trial group) will be given 500 mg vati as “*RAJODARSHINI VATI*” with *takra* twice daily in empty stomach for 3 menstrual cycles starting from the 4th day of menstruation.
- Group B (Control group) will be given 500mg vati “*LASHUNADI VATI*” with *sukhoshana jala* thrice daily in empty stomach for 3 menstrual cycles starting from the 4th day of menstruation.
- PATHYA- Vaatkara ahar vihara avoided, Pittakar aahara is advised.

INTERVENTION CHART

GROUP A(LASHUNADI VATI)	GROUP B(RAJODARSHINI VATI)
D ₄ of menstruation – control drug for 3 consecutive cycles	D ₄ of menstruation – trial drug for 3 consecutive cycles
Dose- 500 mg Anupana – Sukhoshan Jala	Dose- 500 mg Anupana - Takra
Pathya- Satmya Ahara Vihara	Pathya- Satmya Ahara Vihara

(D) DURATION OF TREATMENT: 3 months.

(E) FOLLOW UP STUDY:

GROUP A		GROUP B	
Duration of treatment	3 cycles	Duration of treatment	3 cycles
During treatment follow up	From D ₄ of every cycle	During treatment follow up	From D ₄ of every cycle
After treatment follow up	2 cycles	After treatment follow up	2 cycles

(F) DIAGNOSTIC CRITERIA:

- *Yatochitakalaadarshanam*
- *Alpartavam*
- *yoniv vedana*

(G) ASSESSMENT CRITERIA**Subjective Criteria-**

- Prolonged inter menstrual period (>35 days apart)⁹.
- Scanty menstruation (< 2 days).
- Pain.

Objective Criteria

- Amount of blood loss (No: of pads / day).
- V.A.S.
- Amount and duration of bleeding

Showing grading of pain intensity based of visual pain analogue scale

Parameter	Pain Intensity	Grade
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Visual Pain Analogue Scale	No pain	0
	1-3	01
	4-7	02
	8-10	03
Nature of pain	Occasional	01
	Intermittent	02
	Continuous	03

RAJASRAVA AVADHI (DURATION OF MENSTRUAL FLOW)-TABLE NO.10

DAYS	GRADE
4-7 days	0
3 days	1
2 days	2
1 days	3

ARTAVA PRAMANA (AMOUNT OF MENSTRUAL BLOOD LOSS)

AMOUNT	GRADE
4 or more than 4 pad use / day	0
3 pad use / day	1
2 pad use / day	2
1 pad use / day	3

MENSTRUAL INTERVAL

DAYS	GRADE
24 to 34 days	0
35 to 39 days	1
40 to 45 days	2

Above 45 days

3

(H) INVESTIGATIONS

- CBC and Urine investigations will be done.
- USG Abdomen & Pelvis.
- Hormonal Assay if required.
- Diagnostic D & C if required.
- AMH if required.

I) FINAL ASSESSMENT

- No Change

2) IMPROVED

- Increased in amount of bleeding
- Reduction in length and cycle.
- Reduction in pain.

3) CURED

Regularization of menstruation

- Regularization in amount of flow using 1-2 pads per day.
- Absence of pain

PROBABLE MODE OF ACTION OF DRUG

Description of *Rajodarshini vati* mentioned in *Vaidyachintamani* and *Lashunadi vati* mentioned in *Vaidyajeeynam kshayarogadhikara chikitsa*, use of *Lashuna* for *pushpadusti* explained in *Kasyapa samhita kalpasthana*, and related text books of *dravyaguna* reviewed. Other related information from authentic websites, journals and research articles reviewed.

LASHUNADI VATI

S.NO	DRUG	LATIN NAME	GUNA	RASA	VEERYA	VIPAKA	AMAYIK APRAYOGA

1	LASUNA	ALLIUM SATIVUM	GURU, SNIGDHA	KATU	USHNA	KATU	ARTAVAJANAN, VEDANASTHAPAKA
2	JEERAKA	CUMINUM CYMINUM	LAGHU, RUKSHA	KATU	USHNA	KATU	GARBHASHAYA SHODHAKA, STANYAJANAN
3	HINGU	FERULA NORTHEX	LAGHU, SNIGDHA	KATU	USHNA	KATU	ARTAVAJANAKA VEDANASTHAPAKA
4	PIPALI	PIPER LONGUM	GURU, SNIGDHA	KATU, MADHURA	USHNA	KATU	RAKTASHODHAKA, SHULAHARA
5	MARICHA	PIPER NIGRUM	GURU, TIKSHNA	KATU	USHNA	MADHURA	ARTAVAJANANA, SHULAHARA.
6	NAGARA	ZINGIBER OFICINALE	LAGHU, SNIGDHA	KATU	USHNA	MADHURA	RAKTASHODHAKA, SHOTHAHARA
7	SAINDAVA	ROCK SALT	LAGHU, SNIGDHA	MADHURA	SHEETA	MADHURA	ARTAVAJANAKA, AVIDAHI
8	GANDAKA	SULPHUR	GURU, USHANA	KATU,	USHNA	MADHURA	ARTAVAJANKA, SHULAHARA
9	JAMBIRA	CITRUS LIMON	GURU, USHNA	AMLA	USHNA	AMLA	KRIMIGNA, VATANULOMAKA

RAJODARSHANI VATI

1	MANDURA BHASMA	GURU	MADHURA	SHEETA	MADHURA	ARTAVAJANAKA, RAKTAVARDHAKA
2	SAINDAVA LAVANA	LAGHU, SANIGDHA	MADHURA	SHEETA	MADHURA	ARTAVAJANAKA, AVIDAHI
3	KASISA BHASMA	GRAHI	KASHAYA	USHNA	KATU	RAJAHPRAVARTAKA, RAKTASANJANANAM

PROBABLE MODE OF ACTION OF LASHUNADI VATI

Action of the drug can be explained on the basis of raspanchaka , which are the fundamental components of dravyas.

1 On The Basis Of Rasa: 80% of ingredients of katu rasa, pierce all minute channels and are aampachak in property. Remaining 20% having madhur rasa were vatshamak and brimhan in property. Because of vatkaphashamana ,pita experience freeness which inturn is the cause of

Artavavardhana.

2 On The Basis Of Guna: 60 % of ingredients were having guru and snigdha guna ,due to this vatshamana and brimhana effect can be seen.40% of ingredients were having laghu and tikshana guna due to which srotoshodhana and kaphashamana can be seen.Due to above combination of above gunas Artavajanana can be observed due to rasavardhana by brimhan property.

3 On The Basis Of Veerya: 95% of ingredients were ushana veerya dravyas which help in srotoshodhan and aampachana, it clears the obstacles in front of jathragni and agnivridhi can be observed .Due to this proper rasadhatu utapati takes place and obviously Artavavridhi can also be seen.

4 On The Basis Of Vipaka: 50% of ingredients were katu and 50% were madhura in vipaka .Hence simultaneously at one side ampachana and agnideepana were observed and at one side madhur vipaka supports for utpati of rasadhatu.Artava being updhatu will always depend on quality of rasadhatu. Artava being updhatu will always depend on quality of rasadhatu. So Artavavridhi always follow rasavridhi.

5 On The Basis Of Karma: Jeeraka having garbhashayashodhaka property which removes ashayadushti.Lashuna, hingu , maricha , saindhava , gandhaka were Artavajanaka and shulhara. So “ ishatkrishanvivaranam vigandham cha vayuh yonimukham nayet”,which is shudh Lakshana of Artava can be seen.Almost all the dravyas contains guru, snigdha, teekshana guna, ushana veerya, katu vipaka, so vatkaphashamaka & enhances the pitta property in the body. These drugs possess six rasas and deepana, pachana, rasayana, ruchikara, vatanulomana qualities, helps in amapachana, agnideepana, results in dhatuvridhi .Pittakara properties of these dravyas increasing the agneyatava of the body helps in the production of Artava. Finally we can conclude that the drugs present in Lashunadi Vati are vatakapsha shamaka, pitta vardhaka & Artavajanana.

PROBABLE MODE OF ACTION IN MODERN VIEW:

Almost all the drugs act as antibiotic ,bacteriostatic, fungicidal, antehelminthic,antithrombotic, hypotensive, hypoglycaemic, hypocholesterolaemic, laxative,antispasmodic, anti inflammatory & diuretic.Several studies showed that supplementation with Lashuna extract inhibited vascular calcification in patients with high blood cholesterol. *Allium Sativum* has been found to reduce platelet aggregation and hyperlipidemia. **Garlic** cloves are high in

sulphur containing amino acids known as allin, which is converted into enzyme allinase, Allinase breakdown into ajoene, vinylthiol, diallyldisulphide & trisulphide. Diallyltetra inactivates human gastric lipase which is involved in digestion & absorption of dietary fat. This factor may prove effective in preventing obstruction in srothas. Diallyltetra, penta, & hexa hepta sulphide are potential antioxidants.

Jeeraka consists of EOH extract of the fruit exhibits spasmolytic activity. Fenol is considered superior carminative.

Pippali shows the action like digestive, appetizer, carminative, haematonic. The essential oil is antimicrobial and anthelmintic. Piperine is hypotensive, antipyretic, analgesic and nerve stimulant.

Maricha acts as stimulant, carminative, diuretic, anticholinergic. Used in the flatulence, indigestion & is GI stimulant.

Ginger contains lot of minerals and vitamins to boost adrenal glands.

Hingu, Olea gum resin stimulates the intestinal & respiratory tract, used in simple digestive problems such as indigestion & constipation.

Sulphur – It increases bile, acts as a laxative & used in skin disorders.

Jambira – This is used for the bhavana purpose. It mainly contains vitamin c (ascorbic acid), which enhances the absorption of the drug. Jambira swarasa contains coumarins & bioflavonoids. These acids contents once digested, provide alkaline effect within the body & are found useful in all gastric conditions. The bioflavonoid strengthens the inner linings of blood vessels especially veins & capillaries & helps counter varicose vein, circulatory disorder & infection of liver, stomach & intestine.

PROBABLE MODE OF ACTION OF RAJODARSHINI VATI:

On The Basis Of Rasa: Mandura bhasma and saindhava lavana were madhura and enhance vatashamana and rasadhātu vridhi can be observed. Kasisa bhasma possess kashaya rasa helps in srotoshodhana and aampachana.

On The Basis Of Guna: Mandura and saindhava were having guru and snigdha guna responsible for kaphashamana and checks vatagati, So beneficial for proper maintenance of pitta. This supports for Artavavridhi.

On The Basis Of Veerya: Mandura and saindhava were sheeta and supports for rasavridhi which inturn causes vatavridhi. Kasisa bhasma with ushanaveerya helps for rasavridhi by aampachana

and agnideepana.

On The Basis Of vipaka: Mandura and saindhava with madhur vipaka responsible for supplying nourishments to Artava for healthy production. Kasisa bhasma with katu vipaka helps for Artavajanana by srotoshodhana property.

On The Basis Of Karma: All ingredients are Artavajanaka and raktavardhaka in properties, so results into increase in amount and duration of menstrual blood. With its madhura rasa, madhura vipaka, guru, snigdha guna, ushna veerya, properties helps in vata shaman, this regularizing the artava. Kasisa bhasma, ushana veerya of kasisa bhasma relieves the avarana of kapha, enhances the flow of artava. Kashay rasa ushana veerya of kasisa bhasmas relieves the avarana of kapha, enhances the flow of artava. As the Rajodarshini vati contain manmdura bhasma & saindhava lavana contains madhura rasa & madhura vipaka, it nourishes and gives strength to rasa dhatu & its updhatus. So it increases secretions & helps in regenerations of endometrium. As madhura rasa contains carbohydrates in abundance which is very important constituent of endometrium, results in artava vridhi. The ushana veerya of kasisa bhasma helps in digestion of ama, results in proper formation of rasa dhatu, ultimately ends in production of artava. By the combination of above discussed properties improvement in hypooligomenorrhoea was observed.

CONCLUSION:

In the present research work on the basis of facts, observations and results of conceptual, drug and clinical studies the following inferences can be concluded.

CONCEPTUAL STUDY :

- Artava is considered as Bahirpushpa i.e. Menstrual Blood.
- Artavakshaya is not found in our classics as an individual disease entity but as a symptom of various Yonivyapadas and Artava Vikaras. Artavakshaya is taken as hypo-oligomenorrhoea.
- Shodhana and shaman both line of treatment can be adopted.
- Shodhana include panchakarma & shaman includes use of agneya dravyas.

DRUG STUDY :

To maintain normalcy of agni & vata, removing the kapha is the basic line of treatment. In the classics both shodhana & shamana chikitsa has been explained for Artavakshaya.

MODERN VIEW:

1. This disease can be compared with hypomenorrhoea & oligomenorrhoea.
2. Uterine bleeding may be slight in amount, short in duration or both. Bleeding which lasts days or less is unusual & this pathology is termed as hypomenorrhoea.
3. It can be defined arbitrarily as one in which the cycle lasts longer than 35 days with only 4-9 cycles in a year.
4. There is altered physiology in H-P-O-U axis which leads to symptoms like infrequent menstruation & scanty flow.
5. Assurance & hormonal therapy is the accepted line of treatment.

CLINICAL STUDY :

From current study we obtained the following result with the help of required assessment criteria.

1. The effect of Lashunadi Vati and Rajodarshini Vati on the Menstrual Interval was 92.22 % and 95.55 % respectively. Hence Rajodarshini Vati proved to be more effective.
2. The effect of Lashunadi Vati and Rajodarshini Vati on the duration of flow was 91.10% and 95 respectively. Hence Rajodarshini Vati proved to be more effective.
3. The effect of Lashunadi Vati and Rajodarshini Vati on the Amount Of Bleeding was 92.77 % and 96.11 % respectively. Hence Rajodarshini Vati proved to be more effective.
4. The effect of Lashunadi Vati and Rajodarshini Vati on Pain In Vagina was 89.99 % and 92.23 % respectively. Hence Rajodarshini Vati proved to be more effective.

Hence by the clinical trial on 30 patients with 15 patients each in group A Lashunadi Vati & Group B Rajodarshini Vati . The results in Group B was more effective in menstrual interval, duration of bleeding, amount of bleeding and pain in vagina. But there is not a statistically significant difference between two groups.

SUGGESTIONS :

1. Though study of 30 patients was carried out in this research work but further number of patients in large scale will be more valid in suggesting efficacy of the drug.
2. In further study, Hormonal level (Serum FSH and Serum LH) should be assessed)
3. during secretory phase before and after administration of Rajodarshini Vati. Ovulatory effect of drug should also be assessed.

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