

A COMPARATIVE CLINICAL STUDY OF DANTYADI GUTIKA IN THE MANAGEMENT OF ARTAVAKSHAYA

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ABSTRACT

Background and Objectives- Normal menstruation represents the hormonal and gynaecological health of a female reproductive system, it is controlled by hypothalamus pituitary ovarian axis and other associated hormones. *Ayurveda* gives due importance to *Suddha Artava* and mention that *ArtavaDushti* is one of the causative factor for infertility. 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 by *Agnivardhaka* and *VataSamakDravya* as the line of treatment in *Artavakshaya*. *DantyadiGutika* and *Krishna Tilakashaya* mentioned in *Yoga Ratnakara* were used here as the trial and control group 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 selected in and categorized into 2 groups of 20 patients each. Group A was treated with *Krishna Tila Kashaya* and group B with *DantyadiGutika* for a period of 2 consecutive menstrual cycles and follow up for further 2 cycles. **Result-** Clinical parameters were assessed statistically. Both the groups showed statistically significant results. Statistically there was no significant difference between the groups. **Interpretation and Conclusion-** Thus both *Krishna Tila Kashaya* and *Dantyadi Gutika* are equally effective in the management of *Artavakshaya*.

Keywords: *Artavakshaya*; *DantyadiGutika*; *Krishna Tila Kashaya*.

INTRODUCTION

Normal menstruation represents the hormonal and gynaecological health of a female reproductive system. It is controlled by hypothalamus pituitary ovarian axis and other associated hormones¹.

Ayurveda gives due importance to *Suddha Artava* and mention that *Artava Dushti* is one of the causative factor for infertility². In *Ayurveda* due importance is given to the health of the women because

health of family, society and nation largely depends on the health of its women. *Acharya Manu* has mentioned that women are the origin of progeny³.

The normal menstruation is that which has interval between two menstrual cycles is of one month, duration of menstrual bleeding of five days, not associated with pain or burning sensation. *Artava* should not be very scanty or excessive in amount⁴.

Artavakshaya is explained by *Acharya Sushruta* and is characterized by *yathochita kala adarshanam*, *alpartava* and *yonivedana*⁵. It can be compared with oligomenorrhea and hypomenorrhea based on their signs and symptoms. Menstrual bleeding occurring more than 35 days apart and which remains constant at that frequency is called oligomenorrhea. And when the menstrual bleeding is unduly scanty and lasts for less than 2 days it is called hypomenorrhea⁶.

As *Artavakshaya* is precursor of *nastartava* explained by *Sushrutacharya* and he explained that it is caused due to the involvement of *vata* and *kapha*, which will leads to *margavarodha* of *artavavaha srotas* which are also explained as the causes of *vandhyatwa*⁷ and in present era there is high prevalence of this condition in society. Statistics says that out of 80.7% women suffering from irregular menstrual cycle, 19.3% are suffering from oligomenorrhea⁸ so this topic was undertaken for present study.

For the treatment of *artavakshaya*, *Sushrutacharya* has explained that *shodhana* and *agneyachikitsa* should be done⁹. In our classics various *yogas* have been explained. Among all the *yogas*, *DantyadiGutika* and *Krishna Tila Kashaya* explained in *Yoga Ratnakara*^{10,11} was used here as the trial and control group to see and compare their efficacy in the management of *Artavakshaya*.

Objectives of study:

- To evaluate the efficacy of *Dantyadi Gutika* and *Krishna Tila Kashaya* in the management of *Artavakshaya*.
- To compare the efficacy of *Dantyadi Gutika* and *Krishna Tila Kashaya* in the management of *Artavakshaya*.

MATERIALS AND METHODS:

Selection of patients:

- A minimum 40 patients diagnosed with *Artavakshaya* attending Prasooti Tantra and

StreeRoga OPD in Alva's Ayurveda Medical College and Hospital, Moodbidri.

- Other available sources were selected for the present study.

Selection of drug

DantyadiGutika explained in *Yoga Ratnakara* consist of *Dantimoola*, *Hingu*, *Yavakshara*, *Katutumbi*, *Pipalli*, *Guda*, *Snuhikshira*, these were identified, selected and confirmed from *Dravyaguna* department after they were bought from the local market. *Gutika* was prepared in *Rasa Shastra* and *Bhaishjya Kalpana* Laboratory, Alva's Ayurveda Medical College, Moodbidri as per the references given in classical texts.

Method of data collection:

- 40 Patients suffering from *Artavakshaya* were selected based on diagnostic, inclusion and exclusion criteria. Treatment is done then for 2 consecutive menstrual cycles.
- Group A** (control group) was treated with *Krishna Tila Kashaya* 50 ml along with water twice daily before food for 2 menstrual cycles starting from the 3rd day of menstruation.
- Group B** (trialgroup) was treated with *DantyadiGutika* 500 mg 2 tabs three times a day with water after food for 2 menstrual cycles starting from the 3rd day of menstruation.

Follow-up: On the 3rd day of menstrual cycle after completion of treatment for 2 consecutive cycles.

Statistical test - Paired 't' test and unpaired 't' test

Diagnostic criteria:

Diagnosis was based upon the presence of any one or more of the following criteria.

- Yathochitakala Adarshanam* of *Artava*- Menstrual cycle > 35 days
- Alpartavam* –
 - Duration of bleeding < 2 days
 - Decrease in quantity of bleeding
- Yoni Vedana* - Pain during menstruation

Inclusion criteria

- Patients fulfilling cardinal symptoms of *Artavakshaya*.
- Patients between the age group of 20-35 years

Exclusion criteria

- Pregnant & lactating women.
- Women on OCPs, IUCD.
- Congenital anomalies of uterus or ovaries.
- Women having systemic diseases which interfere with the present study.
- Women with any pelvic pathology or malignancy.
- HB% less than 8 gm%
- Thyroid Dysfunction

Investigation – if necessary

- ESR
- CBC
- RBS
- Urine R/M
- UPT (urine pregnancy test)
- USG uterus and adnexa (TVS/TAS)
- Thyroid profile.

Assessment criteria:

Two parameters- subjective and objective were used in initial and consecutive follow up time, for as-

essment of progress. Subjective criteria- Pain (lower abdomen pain), Objective criteria- Duration of flow (menstrual phase), Scanty menstruation (amount of bleeding on basis of no. of pads/day), Duration of Inter menstrual period.

These parameters were assessed based upon scoring and analyzed statistically.

RESULT AND OBSERVATION-

It was observed that maximum number of patients i.e. 76% were from middle class this can be explained middle class women are under increasing stress due to dual responsibility of having a job and at the same time managing home. Job related stress and competition is comparative more in this class. And 74% patients were involved in addiction habits, out of them 26% addicted to tea, 36.9 % to coffee, and 10.8 % to tobacco. Addiction habit to these stimulates C.N.S. causing insomnia and vitiation of *Vata*, *Artavakshaya* is observed to be *Vata Kapha* vitiated *Vyadhi* only.

Table 1: Statistic Result

Characteristics	Group A			Group B			
Sign and Symptoms	Mean score		Percentage of relief	Mean score		Percentage of relief	P value
	BT	AF2		BT	AF2		
Duration of flow	2.1	1.35	64.28%	1.850	1.15	62.2%	0.422
Interval between two menstrual cycle	1.2	.90	75%	1.25	.90	72%	1.0
Amount of bleeding	1.9	1.55	81.6%	1.6	1.2	75%	2.06
Pain during menstruating days	1.85	1.2	64.8%	1.75	1.35	77.1%	0.661

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

Table 2: Overall effect of therapy

Sr. No.	Effect of therapy	Group A	Percentage	Group B	Percentage
1.	Marked improvement	13	65%	11	55%
2.	Moderate improvement	02	10%	04	20%
3.	Mild Improvement	01	05%	02	10%
4.	No improvement	04	20%	03	15%

Out of total 40 patients, 24 patients had marked improvement, 6 patients had moderate improvement, 3 patients had mild improvement and 7 in patients no improvement was observed.

DISCUSSION

Artavakshaya is one of the menstrual disorders which indicate scanty menstrual flow associated

with pain in variable duration where vitiation of *vata* and *kapha* are predominant. As we all know that *artava* is formed from *rasa dhatu* within a month

after proper metabolism of *rasa dhatu* by its *dhatwagni* and *bhutagni*. The *kshaya* of *rasa dhatu* cause *artavakshaya* and *raktakshaya* will develop simultaneously. As stated above *artava* and *rakta* are interlinked due to same *utpattisrota* i.e. *rasa dhatu* and same nature i.e. *agneya*. Therefore *artavakshaya* may also develop due to *raktakshaya* also. Maharshi Sushruta has mentioned that *artava* is *agneya* and in *artavakshaya*, there is reduction of *agnayaguna* of body i.e. *pitta kshaya* will take place and *vrudhi* of *vata* and *kapha* will be there.

As in our classics *artavakshaya* has not explained as a separate disease, but it has been explained as a symptom for many of the *yoni vyapad* and *artavadushti*.

Acharya Sushruta explained *artavakshaya* in *doshadhatu mala kshayavrudhivigyanam* in *sutrasthana*.

Samprapti-

- Vitiation of *Dosha* takes place along with *Agni mandya*, due to *Dosha dusti karaa hara* and *vi-hara*, because of which proper digestion of *ahara* not take place which leads to production of *dushitaahara rasa* and *ama*. It will further produce *dushita rasa dhatu*. Subsequently there is vitiation of *samanavayu*, *pachaka pitta* and *kledakakapha* due to *jatharagnimandya*.
- *Vikrutakapha* obstruct the *marga* of *apanavayu* and hence *karmahani* of *vata* take place resulting in reduced flow of *artava*. In this condition, the *vrudhakapha (avaraka)* symptoms become predominant and there is decreased activity of *vata (avruta)* which are expressed. Hence there is *kapha* aggravation and diminution *pitta dosha* in quality, which further leads to *jatharagnimandya* and finally *kshaya* of *rasa* and *rakta dhatu* take place leading to *artavakshaya*.
- *Artavavahasrotasa* are obstructed by the *vikrutapanavayu* and *kapha* which leads to *artavakshaya*.

Possible process of manifestations-

1. The formation of *artava*, where the role of *prakruta rasa dhatu* and *prakrutakaphadosha* is in-

involved is affected, due to which *ritukala* is prolonged i.e. *yathochita kala adarshanam* of *artava* take place.

2. Due to obstruction of *apanavayu*, the *artava pravrutti* will not take place at its proper time as *artava pravrutti* is the *karma* of *apanavayu*.
3. Due to *kshaya* of *pitta*, the *artavapramana* is decreased. The function of *apanavayu* to excrete the formed *artava* in proper quantity is hampered resulting in scanty menstruation that is *alpartavam* develops as a symptom in *artavakshaya*.
4. *Yoni vedana* results due to improper evacuation of *artava* which is caused by improper action of *apanavayu*.

Chikitsasidhanta-

- The management should be to correct the pathology i.e. *sampraptivighatanamevachikitsa* should be adopted. The correction should be in such a way as to remove the *margavarodha* from the *artavavahasrotasa* by breaking the *avarana* and *agnideepana* which in turn resulting into proper function of *rasa* and *rakta dhatu*, and leads to *artavavrudhi*.
- In classics both *shodhana* and *shaman chikitsa* has been mentioned for *artavakshaya*. Acharya Dalhana has explained that for *shodhana karma*, *vamana* should be done as it will remove only *saumya dhatu* and increase the *pitta* which will lead to *artavavrudhi*. For *shamanachikitsa*, *agneya dravyas* should be used which will improve the *agni* as well as *pitta* and in turn increase the *artava* and helps in *vatanulomana*.
- Thus *vata*, *pitta* and *kaphadosha* should be brought to normalcy to perform their respective function during *rituchakra* thereby establish the normal *artavapravrutti*. Hence in this context *agneyadravyas* are very relevant.
- Use of *agneyadravyas* not only relieves the *kapha* which does *avarana* to *apanavayu* but also increase the quantity of *artava*. As *agneyadravya* have *ushnavirya*, it maintains the nor-

mal rukshaand sheetaguna of *vayu*, *snigdha* and *picchil aguna* of *kapha*.

- There are many *agneya* drugs mentioned in *ayurveda* which are having *artavajanana* property *DantyadiGutika* is one among them which was the trial drug in this study.

DISCUSSION ON THE DRUG REVIEW- DANTYADI GUTIKA

The trial drug *Dantyadi Gutika* contains *Dantimoola*, *hingu*, *katutumbi*, *yavakshara*, *pippali*, *puranguda* and *snuhiksheera* for mardana. This given to the patients suffering from *artavakshaya* is said to give ultimate effect on *artavavahasrotasa*. The most of the contents of the drug are said to be *agneyadravyas* and have *garbhashayasankochaka* properties. Hence it will directly act on *artavakshaya*.

Artavajanakadravya are the substances which enhance the amount of menstrual blood and also regu-

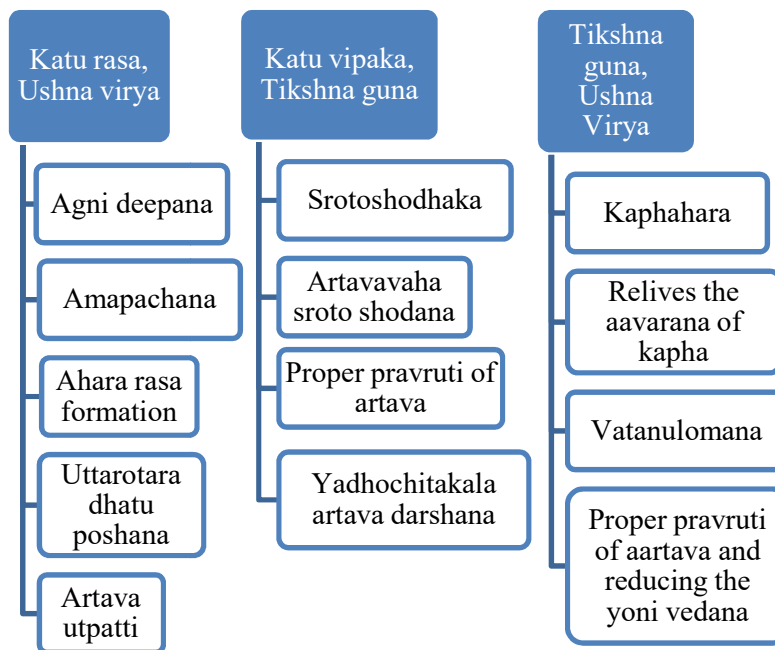
larise the menstrual cycle. *Artavais* said to be *agneya*, hence the drugs need to be attributed with *katu rasa*, *tikshnaguna*, *ushnavirya* and *Katuvipaka* to be called as *artavajanaka dravyas*.

Use of *agneya dravyas* relieves the *kapha* which has done the *Avarana* of the *apana vayu* by blocking the *artavavaha srotasa* and thereby removes the *marga-varodha* and also increases the quantity of *artava*. These *dravyas* increases the amount of menstrual flow by improving the vascular supply or by increasing the thickness of endometrium.

Probable Mode of Action of Drug:

Most of the ingredients in *DantyadiGutika* are having *katu rasa*, *tikshnaguna*, *ushnavirya* and *katuvipaka*, *kaphavataashamana* property and *pittavardhakashulaprashamana*, *deepana* and *pachana* properties.

Sr.no	Dravya	Rasa	Guna	Virya	Vipaka	Karma
1.	<i>Dantimoola</i>	<i>Katu</i>	<i>Tikshna, Guru</i>	<i>Ushna</i>	<i>Katu</i>	<i>Kaphavatahara, Recana, Deepana</i>
2.	<i>Hingu</i>	<i>Katu</i>	<i>Laghu, Snigdha, Tikshna</i>	<i>Ushna</i>	<i>Katu</i>	<i>Kaphavata Shamaka Pittavardhaka</i>
3.	<i>Yavakhsara</i>	<i>Katu</i>	<i>Laghu,snigdha</i>	<i>Ushna</i>	<i>Katu</i>	<i>Kaphavatahar</i>
4.	<i>Katutumbi</i>	<i>Tikta</i>	<i>Laghu, Rukhsa</i>	<i>Sheeta</i>	<i>Katu</i>	<i>Kaphapitthara, rakthshotak , Shothahara</i>
5.	<i>Pipalli</i>	<i>Katu</i>	<i>Laghu, Snigdha, Tikshna</i>	<i>Ushna</i>	<i>Madhura</i>	<i>Kaphavatahara, Deepana, Rasayna</i>
6.	<i>Puran Guda</i>	<i>Madhura</i>	<i>Picchila, Laghu, Tikshna</i>	<i>Ushna</i>	<i>Madhura</i>	<i>Pittavardhaka, Agnideepana,</i>
7.	<i>Snuhiksheera</i>	<i>Katu</i>	<i>Laghu, Snigdha, Tikshna</i>	<i>Ushna</i>	<i>Katu</i>	<i>Kaphavatasamana, Deepana, Recana</i>

Chart 1: Mode of action of *DantiyadiGutika* and *Samprapti Vighatana****Agneyadravya-***

As almost all the *dravyas* of *DantiyadiGutika* are *agneya* in nature and have *agnideepana* property, proper *pachana* of *ahara* take place leads to formation of proper *ahara rasa* and then *suddha rasa dhatu* therefore normal *utpatti* and *pravrutti* of *artava* occurred due to the use of this *yoga*. Most of the drugs had *kaphavata hara* and *pitta vardhaka* properties helped in relieving the *kaphaavarana* of *apanavayu* and further *prakrutagati* of *apanavayu* which helped in normal *pravrutti* of *artava* without any pain.

Mode of action According to modern

- Drugs like *katutumbi*, *hingu*, *pippali* and *Snuhiksheera* 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 HPO balance and hence help in regularising the menstrual cycle.
- Most of the drugs have antioxidant property which helps in maintaining the proper oestrogen production, 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 loss.

- 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 along with helping in the good metabolism and therefore maintain the normal hormonal balance in the body which are responsible for normal menstruation.

Thus *Dantiyadi Gutika* fulfils all the criteria which are needed for the management of *Artavakshaya*.

Krishna Tila Kashaya**Mode of action of *Krishna Tila Kashaya-***

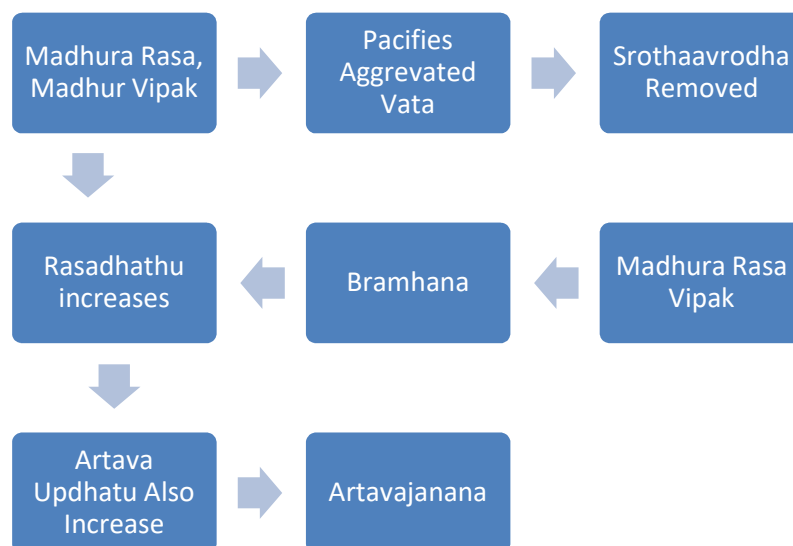
- Krishna tila* pacifies aggravated *vatadosha* due to its *madhurarasa*, *ushnaveerya*, *guru snigdha* gunas and *madhura vipaka*

- It is having *artavajanana* property due to which it will act directly upon *artavakshaya*.
- *Srothoavrorodha* removed by action of *ushnaveerya* and *vata doshaghna* properties of the drugs and aid in proper *arthavapravaruthi*.
- Due to *Madhura rasa* and *madhura vipaka* it increases *Rasadhathu*. As *Arthava* is an *updhatu* of *Rasa* it will also get increase. And because of same property of *madhura rasa* and *madhura vipaka* act as a *Bramhana*.
- *Guda* is also having *Madhura rasa*, *Snigdha-guna*, *Ushnaveerya* and *Madhura vipaka* as *Tila*.

So when given as an Adjuvant it will increase the action of *tila*. Moreover it is having *Agni Deepana* Action which will help in increasing the *Brahmana* Property of *Tila*. Individual action of *Guda* had been explained under *Dantyadi Gutika*.

- *Krishna Tila* have phytoestrogen, high antioxidant and anti-inflammatory property which may explain its pharmacodynamics according to modern on acting in oligomenorrhoea and hypomenorrhoea.

Chart 2: Mode of action of *Krishna Tila Kashaya* and *Samprapti Vighatana*



CONCLUSION

- The main principle of management of *Artavakshaya* is *Agnivardhaka*, *Vata kapha shamaka* and *Vatanulomaka Chikitsa*. In classics, both *Shodhana* and *Shaman Chikitsa* are described. *Shamana Chikitsa* is done by using the *AgneyaD-ravya* which improve the *Artavautpatti* by “*Samanena Samanasya Vruddhi*”.
- Arthavjanya* drugs and drugs having Phytoestrogen, rich in antioxidant can give better results in treating *Arthavakshaya*.

- On the interval between two menstrual cycles both the drug were statistically highly significant, where Group A drug effectiveness found to be 3% more than Group B drug.
- On duration of menstruation both the drug were statistically highly significant, where Group A drug effectiveness found to be 2 % more than Group B
- On amount of blood flow both the drugs were statistically highly significant, where Group A drug effectiveness found to be 7 % more than the Group B drug.

- f) On pain during menstruation both drug were statistically highly significant, where Group B drug effectiveness found to be 12% more than the Group A.
- g) Hence both the drugs were statistically significant in *Artavakshaya* and statistically both the drugs were equally effective in all the criteria.
- h) Thus null hypothesis H_0 is rejected and alternate hypothesis H_3 is accepted i.e. there is significant effect of both *Dantyadi Gutika* and *Krishna Tila Kashaya* in *Artavakshaya*.

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Source of Support: Nil

Conflict Of Interest: None Declared

How to cite this URL: Sneha Tiwari & Vandana Baranwal: A Comparative Clinical Study Of Dantyadi Gutika In The Management Of Artavakshaya. International Ayurvedic Medical Journal {online} 2018 {cited September, 2018} Available from: http://www.iamj.in/posts/images/upload/1898_1905.pdf