

**A COMPARATIVE CLINICAL STUDY TO EVALUATE THE EFFICACY OF JYOTHISHMATHYADI DRAVYA'S AND NASHTAPUSHPAANTHAKA RASA IN NASHTARTAVA - A CLINICAL STUDY**

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**ABSTRACT**

Menstruation may be defined as periodic and cyclical shedding of progesterational endometrium accompanied by loss of blood and is so sometimes described as 'the weeping of a disappointed uterus'. It takes place at approximately 28-day intervals between menarche and menopause. If any of the components of the HPO axis are non-functional, bleeding cannot occur. Absence of menstruation is amenorrhoea, a symptom, often seen as a continuum of oligomenorrhoea. Oligomenorrhoea denotes infrequent, irregularly timed episodes of bleeding usually occurring at intervals of more than 35 days. Hypomenorrhoea refers when menstrual bleeding is unduly scanty and lasts for less than 2 days. *Nashtartava* is said to be caused due to vitiation of *vata* and *kapha doshas*, as they do *marga-avarodha* of *artavavaha srotas* leading to the absence of flow of *artava*. According to *Acharya Dalhana*, the *artava* will be produced but there will not be flow of *artava* or sometimes there may be *kshaya* of *artava* but not always. The hormonal treatment which has good therapeutic value is not devoid of side effects. Therefore, there is increasing demand to address the problem from view of ayurvedic medicines which gives better relief without causing any harm. So, keeping this view in mind *Jyothishmathyadi dravya's* and *Nashtapushpaanthaka rasa* are being selected for the study. They have *katu rasa*, *ushna virya*, *kapha vata shamaka* and *artavajanana* property. Objective: To evaluate the efficacy of *Jyothishmathyadi dravya's* in *Nashtartava*, to evaluate the efficacy of *Nashtapushpaantaka rasa* in *Nashtartava*, to evaluate the efficacy of both *Jyothishmathyadi dravya's* and *Nashtapushpaantaka rasa* in *Nashtartava* and to compare the efficacy of both *Jyothishmathyadi dravya's* and *Nashtapushpaantaka rasa* in *Nashtartava*. Methods: An open labelled comparative clinical study with pre test and post test design. 30 women presenting with *pratyatma lakshanas* of *Nashtartava* were randomly selected and categorized into 3 groups of 10 patients each. *Jyothishmathyadi dravya's* consists of *jyothishmati*, *rajika*, *ajamoda* and *asana*. These *dravya's* were taken and *churna* was prepared and taken with *sheeta payasa* has *anupana* and *Nashtapushpaantaka rasa* was taken with *tila kashaya* has *anupana*. Group A were given *Jyothish-*

*matyadi dravya's*, Group B were given *Nashtapushpaantaka rasa* and Group C were given both *Jyothishmatyadi dravya's* and *Nashtapushpaantaka rasa* for a period of two months and follow up for three months. Observations: Based on the assessment criteria, the data was graded and statistically analyzed using paired 't' test and 'ANOVA' test. Results: After the treatment, these drugs showed good improvement in duration of flow, interval between two cycles, amount of flow and changes in the pain during menstruation.

**Keywords:** *Nashtartava, Marga-avarodha, Artavavaha srotas, Jyothishmatyadi, Nashtapushpaantaka rasa.*

## INTRODUCTION

Menstruation is the visible manifestation of cyclical physiologic uterine bleeding due to shedding of the endometrium following invisible interplay of hormones mainly through hypothalamo- pituitary – ovarian axis. For the menstruation to occur, the axis must be actively coordinated, endometrium must be responsive to the ovarian hormones (estrogen and progesterone) and the outflow tract must be patent. The period extending from the beginning of a period (mens) to the beginning of the next one is called menstrual cycle. The first menstruation (menarche) occurs between 11 and 15 years with a mean of 13 years. Once the menstruations starts, it continues cyclically at intervals of 21-35days with a mean of 28 days. Physiologically, it is kept in abeyance due to pregnancy and lactation. Ultimately, it ceases between the ages 45-50 when menopause sets in. The duration of menstruation is about 4-5days and amount of blood loss is estimated to be 20-80mL with an average of 35 mL. Nearly 70% of total menstrual blood loss occurs in first 2 days. The menstrual discharge consists mainly of dark altered blood, mucus, vaginal epithelial cells, fragments of endometrium, prostaglandins, enzymes and bacteria.<sup>1</sup>

The *shuddha artava lakshana's* are there is flow of *artava* through the *yonis* once in a month for 3-5 days, there is no *picchilata*, no *daha*, is not associated with *vedana*, flow is neither in excess nor very scanty, it does not stain the cloth. The colour of *artava* resembles *gunjaphala*, *padmalakta*, *indragopa*, *shashasruk*, *laksha rasa*. The difference in colour is due to *prakruti* of individuals, and vitiated *doshas*

are responsible symptoms like pain and burning sensation.<sup>2</sup>

*Artavadushti* is one among the important gynaecological disorder mentioned in our classics. After description of *yonis vyapat*, *artava dushti* is explained because when the site *apathypatha* is affected it will have an impact on the flow of *artava* leading to its *dushana*. While describing the clinical features of *Nashtartava*, the *Acharya's* opine that the *doshas* being *vata* and *kapha* hinder the flow of *artavavaha srotas* which in turn resulting in the absence of flow of *artava*, causing *artavanasha*. By this, we can infer that the *vishesh nidana* for *nashtartava* is *vata kapha avarana*.<sup>3</sup> *Acharya Sushruta* has described '*Nashtartava*' has a clinical feature in *Vandhya yonis vyapat* i.e. Absence of menstruation. *Artava* had been manifested with secondary sexual characters. Due to the impediment or reduction, there is no flow of *artava*. The woman also experiences different types of *anila vedana* like *toda*, *bheda* etc.<sup>4</sup> So, can be compared with secondary amenorrhoea with well developed secondary sexual characteristics.

Amenorrhoea is a symptom, not a disease in itself.<sup>5</sup> Defined as 'without menstruation'; technically therefore, to miss one menstrual period is to have amenorrhoea.<sup>5</sup> Based on onset, it can be divided into primary amenorrhoea and secondary amenorrhoea. Secondary amenorrhoea is the absence of menstruation for three normal cycles or for six months.<sup>6</sup>

There are many processes and methods available to alleviate the disease *Nashtartava*. *Shodana chikitsa* can be in the form of *vamana*, *virechana* and *basti*.<sup>7</sup> *Shamana* line of *chikitsa* is also indicated like use of *Lashuna*, *Shatapushpa* and *Shatavari*,<sup>8</sup> use of de-

coction of *Krishna Tila* mixed with *Guda* or *sheeta kashaya* made with *Krishna Tila*, *Shelu* and *Karavi* mixed with *Guda*, *Jyothishmati patra*, *Rajika*, *Ugra*, *Asana dravya's churna* with *sheeta payasa*,<sup>9</sup> *Japa* flower mixed with sour gruel or fried *Jyothishmati* leaves and rice cake of *Durva*.<sup>10</sup>

In modern medicines, there are many numbers of hormonal treatments which are available but their side effects cannot be ignored. But in Ayurveda, herbal remedies bring the richness of herbs in a natural unadulterated form which not only help in treating the disease but also improve the immunity and provide strength, endurance and will.

But until now, it is an incomplete research to find out the treatment which should be more nearer for accomplishment of everlasting cure without side effects. It should be easier to get through the medication and satisfactory by all the class of patients. Hence for the study, *Shamana chikitsa* with oral medications like "*Jyothishmathyadi dravya's*"<sup>11</sup> and "*Nashtapushpaantaka rasa*"<sup>12</sup> have been selected.

#### **Aim and Objectives:**

To evaluate and compare the efficacy of both *Jyothishmathyadi dravya's* and *Nashtapushpaantaka rasa* in *Nashtartava*.

#### **Materials and methods:**

Minimum 30 patients complaining of irregular menstruation were selected from OPD and IPD sections of Prasuti tantra and Stree roga, Shri Dharmasthala Manjunatheshwara college of Ayurveda and hospital, Kuthpady, Udupi.

Source of drug: Required drugs were taken from SDM Pharmacy, Kuthpady, Udupi.

Method of collection of data: 30 selected patients were divided into 3 groups of 10 patients each. A special performa was prepared with all history taking, physical signs, symptoms and lab investigations were carried out as mentioned in allied sciences whichever is necessary. The selected patients were subjected to detail clinical history and complete

physical examination before undergoing the clinical study.

Study design: It is an open labelled comparative clinical study with pre-test and post- test design.

Duration of study: Duration of medicines administered internally to the women was for 2 months.

#### **Inclusion criteria:**

- Patients in between 16-40 yrs of age.
- Both married and unmarried women.
- No bleeding / Spotting/ only ½ to 1 pad is used per day
- Scanty bleeding which lasts for 2 days or less.
- Infrequent bleeding at intervals longer than 35 days.
- Based on *pratyatma lakshana's* of *Nashtartava*.

#### **Exclusion criteria:**

- Patients with systemic disorders like Diabetes mellitus, Tuberculosis, Hypertension etc.
- Patients with malnutrition, anaemia (Hb<8gms/dl)
- Congenital abnormalities.

#### **Follow up:**

Patients were asked to have follow up every once in a month for three months after the study period.

Method of preparation of drugs:

*Jyothishmathyadi dravya's churna* - The drugs are *Jyothishmati*, *Rajika*, *Ajamoda* and *Asana* are taken, cleaned and dried properly in shade. They are then powdered separately with the help of grinder and sieved for fine powder. All the drugs are taken in equal quantity. Then each drug is weighed separately and mixed well to get a homogenous mixture. A sieve of mesh 60 was used to get a very fine powder. The *churna* packets of about 120gms was prepared and dosage to be taken 12gms per day (1 *karsha*) in divided doses i.e. 6gms in the morning on empty stomach and 6 gms in the evening 1 hr before dinner. The *churna* before taking is made into *sampishta / kalka* form with *sheeta payasa* and taken with *sheeta payasa* as *anupana*.<sup>13</sup>

*Nashtapushpaantaka rasa*: *Shuddha Parada*, *Shuddha Gandaka*, *Shuddha Tankana*, *Loha bhasma*,

*Vanga bhasma, Rajata bhasma, Abhraka bhasma, Tamra bhasma*, each 1 pala is taken. First *Kajjali* is prepared from *Shuddha Parada* and *Shuddha Gandhaka* and then all the other *bhasmas* are added and mixed. *Bhavana dravya's* are *Guduchi, Triphala, Shephali, Daruharidra, Jeevanthi, Kushtha, Bruhati, Kakamachi, Haridra, Talisapatra, Gokshura, Vasa, Bala* then *bhavana* from each of these drugs is given for three times. Later powder of *Saindhava, Vamshalochana, Yastimadhu, Dantimula, Lavanga, Rasna, Gokshura* are added 3gms each and mixed well. Lastly *bhavana* with *Jayanthi* and *Tulasi patra swarasa* are given for 3 times. Then 1 *ratti matra vati* is prepared from the *kalka* and dried well in shade. The *vati* is taken with is *Krishna tila kashaya* as *anupana*, prepared by boiling 1pala (48gms) *Krishna tila* with 16 parts of water and reduced to 1/8<sup>th</sup> part.<sup>14</sup>

#### Assessment criteria:

Assessment of clinical study was done by scoring method. Here the symptoms like duration of flow, interval between two cycles, amount of blood loss and pain were grouped and scored according to scoring method and each criterion was considered, rated and the total score at the end was calculated to check the efficacy of treatment protocol.

#### Final assessment:

- No relief
- No change in the clinical symptoms
- Improved
- Onset of bleeding at regular intervals
- Amount of bleeding increased
- Reduction in length of the cycles
- Reduction in pain
- Cured
- Regularisation of menstruation
- Regularisation in amount of flow using 1-2 pads per day
- Reduction in associated symptoms like pain.
- Results were obtained in between the groups and within the groups and the data observed in BT (On 1<sup>st</sup> day), AT (After 2 months), F<sub>1</sub> (after 3 months), F<sub>2</sub> (after 4 months) and F<sub>3</sub> (After

5months) are compared by using paired 't' test for comparison within the groups and 'ANOVA' test for comparison between the groups and the effect of treatment analysed with assessment parameters. Statistical analysis was done using the graph pad in Stat software.

#### OBSERVATIONS AND RESULTS:

- Incidence of cardinal symptoms, among the selected samples like interval between the two cycles was more than 55 days was 60%, duration of flow was 70% with just trickle of menstrual blood, amount of blood loss was 1 pad per day was in 43.3%, and pain during menstruation was in 83.3% with severity in 60% of women respectively.
- The study reveals that majority of the women presented with increased interval between two cycles, duration of flow was just trickle of menstrual blood and severe pain during menstruation which may be due to *marga-avarodha* of the *artavavaha srotas* by *vata* and *kapha* doshas with *vikruti* of *apana vata*.
- **Comparison within the groups:**
- **The statistical analysis revealed that the mean score in duration of flow:** In Group A, mean was 2.6 BT was reduced to 1.7 AT, 1 in F<sub>1</sub>, 0.6 in F<sub>2</sub> and 1.5 in F<sub>3</sub> which is very significant in AT (P value 0.007) and extremely significant in F<sub>1</sub>, F<sub>2</sub>, F<sub>3</sub> (P values <0.001, <0.001, <0.001). Group B, mean was 2.6 BT was reduced to 1.6 AT, 1.1 in F<sub>1</sub>, 0.6 in F<sub>2</sub> and 1.0 in F<sub>3</sub> which is very significant in AT (P value 0.0085), extremely significant in F<sub>1</sub> and F<sub>2</sub> (P values 0.003 and <0.001) and significant in F<sub>3</sub> (P value 0.015). Group C, mean was 2.9 BT was reduced to 2.1 AT, 1.4 in F<sub>1</sub>, 0.7 in F<sub>2</sub> and 1.8 in F<sub>3</sub> and is very significant in AT (P value 0.002) and extremely significant in F<sub>1</sub>, F<sub>2</sub> and F<sub>3</sub> with P values <0.001, <0.001, <0.001 respectively.
- **The statistical analysis revealed that the mean score of interval between two cycles:** In Group A, mean was 1.5 BT was reduced to 1.3 AT, 1.2

in F1 and F2 and 1.0 in F3 and is statistically considered as not significant in AT (P values 0.1679), not quite significant in F1 and F2 (P values 0.0811) and highly significant in F3 with P value 0.001. Group B, mean was 2.5 BT was reduced to 1.6 AT, 0.9 in F1, 0.8 in F2 and 1.1 in F3 and this change is statistically considered as very significant in AT, F1, F2 and F3 with P values 0.0100, 0.005, 0.003, 0.001 respectively. Group C, mean was 2.8 BT was reduced to 2.1 AT, 1.8 in F1, 1.5 in F2 and 1.6 in F3 and this change is statistically considered as significant in AT (P values 0.0445), very significant in F1 and F2 (P values 0.0038, 0.002), and extremely significant in F3 with P value <0.001.

- **The statistical analysis revealed that the mean score on amount of blood loss:** Group A, mean was 1.4 BT was reduced to 0.5 AT, 0.3 in F1, 0.0 in F2 and 0.5 in F3 and is extremely significant AT, F1, F2 (P values <0.001, <0.001, <0.001 respectively) and non-significant F3 with (P value 0.299). Group B, mean was 1.6 BT was reduced to 0.6 AT, 0.3 in F1, 0.1 in F2 and 0.5 in F3 and is extremely significant in AT, F1, F2 (P values <0.001, <0.001, <0.001 respectively) and non-significant in F3 (P value 0.177). Group C, mean was 2.3 BT was reduced to 1.4 AT, 0.6 in F1, 0.3 in F2 and 1.7 in F3 and is extremely significant in AT, F1, F2 and F3 with P values <0.001, <0.001, <0.001 respectively.
- **The statistical analysis revealed that the mean score on intensity of pain:** Group A, mean was 1.4 BT was reduced to 0.5 AT, 0.3 in F1, 0.0 in F2 and 0.3 in F3 and is statistically considered as extremely significant in AT and F1 (P values <0.001, <0.001), very significant in F2 (P value 0.001) and non significant in F3 with P value 0.193. Group B, mean was 1.6 BT was reduced to 0.6 AT, 0.3 in F1, 0.1 in F2 and 1.1 in F3 and is extremely significant in AT, F1 and F2 (P values <0.001) and very significant in F3 (P value 0.017). Group C, mean was 2.3 BT was reduced to 1.4 AT, 0.6 in F1, 0.3 in F2 and 1.5

in F3 and is extremely significant in AT, F1, F2 and F3 with P values <0.001.

- **Comparison between the groups:**
- **The statistical analysis of mean duration of flow between the groups** are AT of Group A was 1.7, Group B 1.6 and in Group C 2.1, in F1 of Group A was 1, Group B was 1.1 and Group C was 1.4, in F2 of Group A and B was 0.6 and Group C was 0.7, in F3 of Group A was 1.5, Group B was 1 and Group C was 1.8 and the P values 0.390 AT, 0.475 in F1, 0.942 in F2 and 0.306 in F3 which is considered as not significant as variation (P=>0.05).
- **The statistical analysis of mean of interval between two cycles between the groups** are AT of Group A was 1.3, Group B 1.6 and Group C 2.1, in F1 of Group A was 1.2, Group B was 0.9 and Group C was 1.8, in F2 of Group A mean is 1.2, Group B is 0.8 and Group C is 1.5 and F3 of Group A is 1.0, Group B is 1.10 and Group C is 1.6 and the P values 0.157 in AT, 0.612 in F1, 0.178 in F2 and 0.904 in F3 which is considered as not significant (P=>0.05).
- **The statistical analysis of mean of amount of blood loss in the groups** are AT of Group A was 0.5, Group B 0.6 and in Group C 1.4, in F1 of Group A was 0.3, Group B was 0.3 and Group C was 0.6, in F2 of Group A mean is 0.0, Group B is 0.1 and Group C is 0.3 and in F3 of Group A is 0.5, Group B is 0.5 and Group C is 1.7 and the P values 0.024 in AT is considered significant, 0.402 in F1, 0.142 in F2 and 0.440 in F3 which is considered as not significant. The difference in mean value after treatment in group A and group B is significant with P value less than 0.05 but in group B with group C and group C with group A is not significant with p values greater than 0.05.
- **The statistical analysis of mean of intensity of the pain in groups** are AT of Group A was 0.5, Group B 0.6 and in Group C 1.4, in F1 of Group A was 0.3, Group B was 0.3 and Group C was 0.6, in F2 of Group A mean is 0.0, Group B is

0.1 and Group C is 0.3 and in F3 of Group A is 0.3, Group B is 1.1 and Group C is 1.5 and the P values 0.195 in AT, 0.060 in F1, 0.172 in F2 and 0.862 in F3 which is considered as not significant as variation among the means is not significant ( $P > 0.05$ ).

- This proves that *Jyothishmathyadi dravya's* and *Nashtapushpaantaka rasa* role in *Nashtartava* has shown successful results in symptomatic relief. Follow up also showed significant results in all the criteria. There was not a statistically significant difference noted between the groups except there was a statistical significance noted only in the comparison factor between group A with group B in amount of blood loss with P value less than 0.05. Special observations, two women in group B conceived one was having history of polycystic ovarian disease and other was having history of two previous abortions.
- Table 1-4 shows effect of treatment on duration of flow, interval between two cycles, amount of blood loss and intensity of pain.

## DISCUSSION

Woman's role is revered in the society. The responsibility increases as her role nowadays has extended to workplace too, she is unable to concentrate on her personal health because there is increased burden of the family with more orientation towards the career with irregular dietary habits and abnormal sleep pattern all these will have an impact on the HPO axis which is the prime cause for stress and strain leading to the fluctuations in the menstrual pattern like which further leads to the complications like amenorrhoea, oligomenorrhoea, anovulation, infertility etc. So, the women have become more conscious about the gynaecological problems and rushed for the treatment. Ayurveda, the ancient Indian herbal system of medicine has many important and useful herbs for women. Nature cure helps women find their body rhythm, which is closely linked to nature. The probable mode of action of *Jyothishmathyadi dravya's* are mentioned below:

- The drug *Jyothishmathi* having *katu, tikta rasa, teekshna guna, ushna veerya* and *katu vipaka* helps in *vilayana* of *kapha* and alleviating the *vata dosha* relieving the obstruction, it also helps in *agnivardhana*, proper formation of *rasaadi dhatu*. *Snigdha guna* having *lepana shakti* helps in regeneration of endometrium layer and strengthens *apana vata*. *Sara guna* helps in removing the obstruction in *artavavaha srotas* and also acts as *vedanasthapana* and helps in relieving pain caused by *vata* during menstruation. Leaves contain alkaloids, saponin, a glycoside and coloring matter and are emmenagogue. A survey was done on ethnomedicinal uses of *jyothishmathi* wild known to four tribal communities of Wayanad district of Kerala, India. Results showed that women are more knowledgeable on the properties and uses of this plant especially for inducing menstruation and abortion.
- The properties of *Rajika* are *katu, tikta rasa, tikshna and laghu guna, ushna veerya, katu vipaka and kaphavata hara* helps in removing the *sanga* in *artavavaha srotas*, *ushna* and *teekshna guna* helps in regularisation of *artava* by removing the *avarodha* and *lekhana* helps in *vilayana* of the obstructed *kapha*. In Java, the whole plant is used as emmenagogue.
- The properties of *Ajamoda* are *katu, tikta rasa, tikshna guna, ushna virya* and *katu vipaka* helps in relieving *marga-avarodha* by *kapha* and *vata dosha* leading to the flow of *artava*. *Garbhashayottejaka* stimulates *garbhashaya* in performing its normal functions and *vata-anulomana* corrects the *apana vata vikruti* helping in proper flow of *artava*. "Spasmolytic potential of some medicinal plants belonging to family umbellifere, a review", revealed that the antispasmodic effects of celery seeds may be due to phthalide constituents (d- limonene, salience and related phthalides).
- The dravya *Asana* due to its *sheeta veerya, rasayana* and *tridoshashamaka* properties helps

in *dhatuwardhana* with *kashaya* and *tikta rasa* acts as *raktashodhaka*.

The probable modes of actions of *Nashtapushpaantha rasa* drugs are mentioned below:

- *Shuddha Parada* has the qualities like *rasayana* which helps in *dhatuwardhana* and by its *yogavahi guna* and *viryavardhaka karma*'s intensifies the properties of other drugs and is *sarva amayahara* helps in treating all the disorders. *Shuddha Gandhaka* as *deepana*, *pachana* and *amashoshana karma*'s helps in *rasaadi dhatu parivartana*. *Rajata bhasma* as *vatakaphahara* property clears the obstructions, being *lekhana* clears the *srotases* by scrapping of excessive accumulation of *kapha* and *medodhatu*. *Rasayana* and *balya* gives stability to the body to fight against different diseases with *sarvarogaapaham* helps in eradication of diseases. *Tamra bhasma* as *krimighna* property help in *margavishodhana* and *rakta shodhana*. *Loha bhasma* by its *koshtashuddhikara quality* helps in *shodhana* of accumulated *doshas* in the *shareera*. Since, there is *shoshana* of *raja* in *shareera* in general debility and in anaemia resulting into reduced flow can be corrected. *Vanga bhasma* as *kapha vata hara*, *medohara* and *vilekhana karma*'s does *samprapti vighatana* because the *doshas* involved are *kapha* and *vata* in *nashtartava*. This helps to relieve *margavarodha* and correcting *artava dushti*. *Abhraka bhasma* as *balya* and *tridoshashamaka* properties help in providing strength and ability to the *shareera* by *uttarotara dhatu poshana*. *Tankana kshara* induces menstruation due to *katu rasa*, *katu vipaka*, *tikshna guna*, *ushna virya* and their *stree pushpa janana* properties. *Guduchi* acting as *agnivardhaka* and *amapachana* does *srotoshodhana*, *vataanulomana* helps in removing the obstructions and pain during menstruation, *medohara* helps in relieving the impediment caused due to *medodhatu* because the *kapha dosha* takes shelter in *medas*. *Haritaki* acting as *anulomaka* helps in balancing the *vata dosha* which is the causative factor for

all the *vyadhi*'s because of its *sukshma guna*, *lekhana* helps in scraping the obstructed *kapha dosha* and helps in reducing *medodhatu* if it is in *vikruta avastha*, *garbhashayashotahara* helps in relieving any infections and inflammations in *garbhashaya* and *yakrut pleeha uttejaka* helps in proper estrogen metabolism. *Vibhitaki* has *kaphapitta hara* qualities which help in removing the obstruction by normalization of *artava srava* and attainment of *shuddha artava lakshana*'s because in *rakta dhatu*, the *pitta dosha* takes the *ashraya*, *bhedana* helps in removing the obstruction to the flow of *artava* and *kashaya rasa* helps in *raktashodhana*. *Amalaki* by its *rasayana karma* helps in *dhatuposhana* where there is *anartava* due to *dhatushoshana*, *garbhashthapana* helps in improving the quality of uterine tissues making it capable enough for conception. *Triphala* acts as a carminative, expectorant, reduces serum cholesterol, triglycerides, anti-helminthic, appetizer, anti-oxidant, anti-inflammatory, antispasmodic, antibiotic, hepatoprotective, aphrodisiac and anti hyperglycaemic. Vitamin C helps in iron absorption so if there is amenorrhoea due to anaemia this can also be corrected. *Nirgundi* with *artavajanana guna* not only increases the quantity of *artava* but also helps in achieving *shuddha artava lakshanas*, *vedanasthapana* helps in relieving pain caused due to *vata dosha*. Its hepato-protective, emmenagogue, carminative and rejuvenating properties helps in proper formation of *dhatu*s, corrects HPO axis in turn corrects the disease. *Daruharidra* having *chedana karma* helps in clearing the impediment caused due to *vata* and *kapha doshas* to the flow of *artava*. The bark of root of *Yastimadhu* contains most active component glycyrrhizin about 4% , potassium or calcium salt of the glycyrrhizinic acid, anti-oxidants such as flavanoids, saponins, coumarins, sterols, choline, triterpenoids, estrogenic substances, protein, sugar and vitamins B1, B2, B3, B6 and E, anti-inflammatory and antispasmodic proper-

ties can help in reducing premenstrual and menstrual cramps, nausea, bloating, mood swings and breast tenderness because glycyrrhizin inhibit prostaglandin production. *Jeevanthi* acting as *kaphanisaraka* helps in clearing the *srotoavarodha* caused due to *kapha dosha* and *jeevaniya* helps in increasing the vitality. *Kantakari* acting as *garbhashayasankochaka* stimulates the *garbhashaya* for normalizing the flow of *artava*. *Kushtha* by its *garbhashayottejaka* and *artava-janana* properties help in stimulating the *garbhashaya* for the formation and flow of *artava*. *Bruhati* has *vata kaphahara* and *garbhashayasanchoka* which helps in proper expulsion and formation of *artava* because of its stimulant action. *Haridra* by its *kapha vatahara* helps in removing obstructions caused due to the *vata* and *kapha dosha*, *garbhashayashodhana* property helps in clearing the *srotasas of garbhashaya* and removes the accumulated *dosha*. The other *dravya's* like *danti, kakamachi, vamshalochana, talisapatra, tulasi, jayanthi, gokshura* are also having the similar characteristics. *Saindhava lavana* with its *rochaka, pachaka* and *agnideepaka gunas*, it increases the appetite, helps in increasing the *agni* and its *tridoshashamaka* property helps in balancing all the *tridoshas* and maintains the equilibrium of *shareera*.

- The *phala shruti* of *Nashtapushpaantaka rasa* states that it is given in conditions like *Nastapushpa, Nashtashukra, Yoni shula, Yoni daha* and *Yoni kleda*. The chemical constituents of drugs possess flavanoids, phytoestrogens, phytoosteroids etc which acts as Anti-hyperlipidaemic, Anti-hyperglycaemic, Emmenagogue,

Anti inflammatory, Analgesics, Uterine stimulant, Folliculogenesis, Rejuvenating, Aphrodisiac, Immunomodulators etc have been proved by various researches.

## CONCLUSION

*Nashtartava* (secondary amenorrhoea) is absence of visible *artava* due to the *marga-avarodha* of *vata* and *kapha* to the *artavavaha srotas*. The main *chikitsa* should be focussed on removing the *marga-avarodha to artavavaha srotas* with alleviation of *vata* and *kapha doshas* leading to the proper flow of *artava*. For irregularity in menstruation to happen the root causes are imbalanced dietary habits which include dieting, excessive consumption of junk foods, erratic eating habits, abnormal sleep pattern, emotional Stress and physical Strain like excessive physical training, sedentary life style, excessive travelling and suffering from chronic systemic disorders. Irregular menses from any cause may make it more difficult to conceive sometimes treating the underlying condition can restore fertility. Fluctuations in the hormones leading to menstrual disorders are rising in gynaecological practise which requires special attention because it may lead towards various complications. The *chikitsa* in the form of *Shodhana* includes *basti, vamana* and *virechana* and *shamana chikitsa* includes use of *agneya dravyas*. The *dravya's* which are used for the study are *Jyothishmatyadi dravya's* and *Nashtapushpaantaka rasa* orally for two months. Overall improvement on duration of flow among three groups, Group B showed (61.54%) better improvement than group A (37.93%) and C (37.93%). Group B showed (56%) of improvement than group C (42.86%) and A (33.33%) in interval between two cycles. Group B showed (68.75%) of improvement than Group A (64.28%) and C (26.08%) on amount of blood loss. Group A showed 78.57% of improvement in intensity of pain during menstruation compared to B (31.25%) and C (34.78%) respectively. Suggestion for further studies should be carried out with large sample size and comparing with hormonal assay.

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**Table 1:** Showing the effect of treatment on duration of flow

GROUP	N	BT- MEAN	AT- MEAN		DIFF D	%	Paired t test			
							SD	SE	t	P
A	10	2.6	AT	1.7	0.900	34.62	0.82	0.26	3.354	0.007 VS
			F1	1	1.600	61.54	0.81	0.25	9.798	<0.001 ES
			F2	0.6	2.000	76.92	0.69	0.22	9.487	<0.001 ES
			F3	1.5	1.100	42.31	0.71	0.22	6.708	<0.001 ES
B	10	2.6	AT	1.6	1.000	38.46	1.07	0.33	3.354	0.0085 VS
			F1	1.1	1.500	57.69	0.87	0.27	5.582	0.003 ES
			F2	0.6	2.000	76.92	0.69	0.22	9.487	<0.001 ES
			F3	1.0	1.600	61.54	1.05	0.33	3.000	0.015 S
C	10	2.9	AT	2.1	0.800	27.59	0.56	0.17	6.000	0.002 VS
			F1	1.4	1.500	51.72	0.51	0.16	9.000	<0.001 ES
			F2	0.7	2.200	75.86	0.82	0.26	8.820	<0.001 ES
			F3	1.8	1.100	37.93	0.78	0.25	7.216	<0.001 ES

**Table 2:** Showing effect of treatment on interval between two cycles

GROUP	N	BT MEAN	AT MEAN	DIFF D	%	paired t test			
						SD	SE	t	P
A	10	1.5	AT -1.3	0.200	13.33	1.16	0.36	1.500	0.1679 NS
			F1 -1.2	0.300	20	1.03	0.32	1.964	0.0811 NS
			F2-1.2	0.300	20	1.03	0.32	1.964	0.0811 NS
			F3-1.0	0.500	33.33	0.66	0.21	4.743	0.001 HS
B	10	2.5	AT-1.6	0.900	36	0.84	0.26	3.250	0.0100 VS
			F1-0.9	1.600	64	0.73	0.23	5.237	0.005 VS
			F2-0.8	1.700	68	0.63	0.20	5.667	0.003 VS
			F3-1.1	1.400	56	0.74	0.23	4.714	0.001 VS
C	10	2.8	AT-2.1	0.700	25	0.87	0.27	2.333	0.0445 S
			F1-1.8	1.000	35.71	0.63	0.20	3.873	0.0038 VS
			F2-1.5	1.300	46.43	0.70	0.22	6.091	0.002 VS
			F3-1.6	1.200	42.86	0.52	0.16	9.798	<0.001 ES

**Table 3:** Showing effect of treatment on amount of blood loss

GROUP	N	BT MEAN	AT MEAN	DIFF D	%	paired t test			
						SD	SE	T	P
A	10	1.4	AT -0.5	0.900	64.28	0.70	0.22	9.000	<0.001 ES
			F1 -0.3	1.100	78.57	0.48	0.15	11.000	<0.001 ES
			F2-0.0	1.400	100	0.00	0.00	6.332	<0.001 ES
			F3-0.5	0.900	64.28	1.43	0.45	1.103	0.299 NS
B	10	1.6	AT-0.6	1.000	62.50	0.69	0.22	-	<0.001 ES
			F1-0.3	1.300	81.25	0.48	0.15	8.5100	<0.001 ES
			F2-0.1	1.500	93.75	0.31	0.10	9.0000	<0.001 ES
			F3-0.5	1.100	68.75	1.08	0.34	1.4640	0.177 NS
C	10	2.3	AT-1.4	0.900	39.13	0.84	0.26	9.0000	<0.001 ES
			F1-0.6	1.700	73.91	0.69	0.22	11.120	<0.001 ES
			F2-0.3	2.000	86.96	0.48	0.15	9.4870	<0.001 ES
			F3-1.7	0.600	26.08	0.48	0.15	11.129	<0.001 ES

**Table 4:** Showing effect of treatment on intensity of pain

GROUP	N	BT MEAN	AT -MEAN		DIFF D	%	paired t test			
							SD	SE	t	P
A	10	1.4	AT	0.5	0.900	64.29	0.70	0.22	9.00	<0.001 ES
			F1	0.3	0.100	78.57	0.48	0.15	11.00	<0.001 ES
			F2	0.0	1.400	100	0.00	0.00	6.332	0.001 VS
			F3	0.3	1.100	78.57	0.67	0.21	1.406	0.193 NS
B	10	1.6	AT	0.6	1.000	62.50	0.69	0.22		<0.001 ES
			F1	0.3	1.300	81.25	0.48	0.15	8.510	<0.001 ES
			F2	0.1	1.500	93.75	0.31	0.10	9.000	<0.001 ES
			F3	1.1	0.500	31.25	1.19	0.37	2.905	0.017 VS
C	10	2.3	AT	1.4	0.900	39.13	0.84	0.26	9.000	<0.001 ES

			F1	0.6	1.700	73.91	0.69	0.22	11.12	<0.001 ES
			F2	0.3	2.000	86.96	0.48	0.15	9.487	<0.001 ES
			F3	1.5	0.800	34.78	0.53	0.16	9.000	<0.001 ES

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