Clinical Research

Clinical efficacy of Shatapushpa (Anethum sowa Kurz.) powder in the management of Artava kshaya (oligomenorrhoea)

A. Ghose¹, P. K. Panda²

¹Lecturer, Department of Prasutitantra & Streeroga, Govt. Ayurvedic College, Balangir, Orissa, ²Reader & Head, Department of Roga Nidan, Govt. Ayurvedic College, Balangir, Orissa, India

Abstract

A clinical trial was carried out on 30 oligomenorrhoea [Artava Kshaya] patients aged between 15 and 35 years having complaints of irregular, scanty and painful menstruations. The patients were registered from OPD and IPD of Gopabandhu Ayurveda Mahavidyalaya Puri. They were administrated Satapuspa churna for three months in a dose of 5 g twice daily with cow grita. The specific investigations were done in order to exclude TB endometritis, endocrine disorders, diabetes and heart disease. The clinical assessment was carried out in thirty days intervals. It is inferred that the study discloses the effect of satapuspa churna on irregularity of interval of menstruation [90.47%], duration of menstruation [79.37%], amount of blood flow [90.00%] and pain during menstruation [100.00%] which were highly significant in clinical study. No untoward side effect was noticed during clinical trial.

Key words: Oligomenorrhoea, Artavakshaya, Shatapushpa, Anethum sowa Kurz., Rajadushti, Upadhatu, Dhatwagni

Introduction

Menstruation is an essential physiological function of women during their reproductive age. According to Ayurveda, normal menstruation¹ is the indicator of healthy and normal reproductive organ in which intermenstrual period is one month, duration of blood flow is five days (differ according to different opinion of Maharshies) but not associated with pain or burning sensation. The menstruated blood is not unctuous, not very scanty or excessive in amount. The color resembles the red juice of Laksha, red lotus flower, fruit of jequirity or rabbits blood. Maharshi Sushruta,² Charaka,³ Bhavamishra⁴ and other Rishies⁵ have given emphasis on menstrual outflow and their close clinical observations regarding the intermenstrual period, duration of blood flow, the color, amount and various types of odor emitted in the menstrual blood denoted as normal menstruation. The abnormal menstrual flow indicates scanty menstrual flow both in amount and duration with associated symptom of pain in lower abdomen or back or vagina⁶ and can be counted as Vataja Rajadushti,⁷ Kshinartava⁸ and Artavakshaya⁹ in Ayurveda classic. It may be due to nutritional deficiency or decrease in Rasa and Rakta Dhatu and Upadhatu (Raja/Artava) and hormonal deficiency and it can be compared with oligomenorrhoea or hypomenorrhoea described in modern medical science, in which hormonal disorders occurs due to underproduction of the endometrium and lack of co-ordination of hypothalamo-pituitary ovarian axis.⁹ The aforesaid three are indicators of abnormal menstrual flow, Artava kshaya, that is covered in this feature and captioned as the title of the research profile. According to Acharyas, Artava kshaya is a complication of Rasa and Raktakshaya due to vitiation of Vatadosha.¹⁰ So the treatment should be Vatashamaka and Agnivardhaka.¹¹¹² In modern context, the treatment is based on hormonal preparations only which have many hazardous effects like weight gain, cysts in reproductive organ and chances of carcinoma. Several drugs and formulae are available in Ayurveda classics for the remedy of Artavakshaya, among them Shatapurshpa (Anethum sowa Kurz.) Churna (powder) mentioned by Kashyapa Samhita is selected for clinical study.¹²

The aim of this study is to establish an Ayurvedic medication as a remedy of Artava kshaya in reproductive life of women which mimics the normal life span of present era.

Materials and Methods

Selection of patients

Thirty oligomenorrhoea (Artava Kshaya) patients of age group 15 to 35 years, complaint with irregular, scanty and painful menstruation, were enrolled from OPD and IPD of Gopabandhu Ayurveda college and hospital, Puri. Detailed history, complete general systemic and gynecological examinations, (P/A P/S/P/R-
in case of virgins and unmarried girls) were done for every case. The patients diagnosed as tubercular endometritis, polycystic ovarian syndrome, thyroid, pituitary and hypothalamic abnormalities, general diseases like tuberculosis, nephritis, diabetes, VDRL, and heart diseases were excluded from this clinical study. All selected patients were advised to attend in 30 days interval regularly for three months. During the follow up time, all required investigations were also recorded.

Selection of drugs
The drug Shatapushpa seed in the form of churna has classical reference of Kashyapa samhita in Artava kshaya (oligomenorrhea) and Kashitaratva (dysmenorrhea) with Anupana of Goghrita (cow ghee). In order to prove this, the aforesaid clinical trial was done.

The Shatapushpa Churna was purified properly and powdered by the help of mortar and pestle and was kept in a new earthen jar with air tight for use of clinical trial. Five grams of Shatapushpa Churna thrice daily in empty stomach with 2.5 ml Goghrita was administrated in selected patients for three months. All patients were advised to take same diet till the end of trial.

In order to prove this, the aforesaid clinical trial was done.

Investigations
Hemoglobin g% (Sahilis method) and weight in kilogram of the patient were collected from each patients on the first day of clinical trial and each follow up period in 30 days interval for three consecutive follow up period.

Assessment of progress
Two parameters - subjective and objective, were used in initial and consecutive follow up time for assessment of progress. The subjective parameters were interval of menstruation, duration of menstrual pain through out menstruation period.

The object parameters were amount of blood flow by using pad, hemoglobin in g% and weight in kilogram of the patients. The assessments were separated by grading 0, 1, 2, 3, on the basis of days of interval, duration and painful menstruation and increasing Hb g% and weight gain.

Overall effect of therapy
In view of changes in grade of clinical features, it was declared as follows-

Complete cure 100% free from chief complaint (irregular, scanty and painful menstruation and pain in back and lower abdomen)

Maximum improvement - 75% to <100% improvement of the clinical features.

Moderate improvement - 50% to < 75% improvement of the clinical features.

Mild improvement - 25% to <50% improvement of the clinical features.

No improvement - <25% or no improvement in both subjective and objective parameters.

Observation and Results
It was observed that out of 30 patients maximum number of patients (40%) was enrolled at the age from 30 to 35 years [Table 1]. The unmarried [Table 2] and middle class economical status patients [Table 3] were more affected with oligomenorrhoa.

The chronicity of disease was observed more in more than six months [Table 4] of attack. Among the clinical features, painful menstrual bleeding [Table 5] was found more rather than other features.

The assessment of progress of result [Table 7] was inferred from 1st follow up period and 60% patients were under the category of moderate improvement.


discussion

Artava kshaya is one of the menstrual disorders which indicate scanty menstrual flow associated with pain in variable duration where vitiation of Vayu and Kapha are predominant. Artava is an Upadhatu, formed from Rasa within a month after proper metabolization of Rakta dhatu by its Dhatwagni and Bhutagni. The decrease or kshaya of Rakta dhatu causes Artava kshaya and simultaneously Rakta kshaya is developed. Maharsi

| Table 1: The incidence of age groups (n=30) |
|------------------------------------------|
| Age group in years | No. of patients | Percentage (%) |
|-------------------|-----------------|----------------|
| 15-20             | 6               | 27             |
| 21-25             | 7               | 23             |
| 26-30             | 3               | 10             |
| 31-35             | 12              | 40             |
| Total             | 30              | 100            |

| Table 2: The incidence of marital status (n=30) |
|-----------------------------------------------|
| Marital status | No. of patients | Percentage (%) |
|----------------|-----------------|----------------|
| Married        | 12              | 40             |
| Unmarried      | 18              | 60             |
| Total          | 30              | 100            |

| Table 3: The incidence of economical status (n=30) |
|--------------------------------------------------|
| Economical status | No. of patients | Percentage (%) |
|-------------------|-----------------|----------------|
| Poor              | 10              | 33             |
| Middle            | 12              | 40             |
| Higher            | 8               | 27             |
| Total             | 30              | 100            |

| Table 4: The incidence of chronicity of disease (n=30) |
|-----------------------------------------------------|
| Chronicity in months | No. of patients | Percentage (%) |
|----------------------|-----------------|----------------|
| 01 - < 6             | 10              | 33             |
| 07 - <12             | 12              | 40             |
| >12                  | 8               | 27             |
| Total                | 30              | 100            |

| Table 5: The incidence of clinical features (n=30) |
|---------------------------------------------------|
| Clinical features | No of patients | Percentage (%) |
|--------------------|----------------|----------------|
| Irregular menstrual cycle | 21 | 70 |
| Painful menstrual bleeding | 28 | 93 |
| Scanty menstrual bleeding | 24 | 80 |
| Pain (backache) | 17 | 57 |
| Pain (lower abdomen) | 27 | 90 |
| General weakness | 15 | 50 |
Sushruta has mentioned that Artava is Agneya, in Artava kshaya Agneya or Pitta and simultaneously Rakta and Artava are increased. Shatapushpa mentioned in Kashyapa Samhita is a Vata Kapha shamaka and Pitta vardhaka drug due to its Katu-Tikta Rasa. Tikshna –Snigdha guna and Ushna Veerya.\textsuperscript{[12]} So Shatapushpa is chosen for the present study.

In the present study, it was observed that the maximum numbers of patients (40%) were under the age of 31-35 years [Table 1]. The above age group is considered as the late reproductive age while usually physiological hormonal changes occur. The maximum numbers of unmarried patients (60%) were registered. It shows that this disorder is common in unmarried life, may be due to psychological stress, over consciousness, shyness and spices pungent sour diet which change the physiological hormone leading to less production of Artava.

Among the clinical features, painful menstrual bleeding (93%) was found [Table 5] more. It may be due to over load of education, inadequate formation of hormone and inadequate taking of food. After administration of trial drug, satisfactory significant result \( t=2.89, P<0.01 \) for painful menstrual bleeding was observed. Scanty menstrual bleeding was observed in 80% of patients [Table 5]. After taking drugs, result was highly significant \( t=4.13, P<0.001 \). Irregular menstrual cycle was also observed in 70% patients. After medication, a satisfactory significant result was observed \( t=2.89, P<0.01 \). Pain in lower abdomen and back were also observed in 90 and 57% respectively, but statistically result was not satisfactory. There was an increase in Hb g% in all the cases. It may be due to Agni and pitta vitiated effects of Shatapushpa but significant result was not observed. In some cases, it is observed that there was as increase of weight up to 1 kg (30%) after the treatment.

The statistical evaluation of clinical study revealed that significant results were observed [Table 7] in painful menstrual bleeding, scanty menstrual bleeding and irregular menstrual cycle. Improvements were revealed in reducing pain in back and lower abdomen but statistical results were unsatisfactory.

The over all result [Table 6] of the present clinical study shows that six (20%) cases were shown maximum improvement, 18 (60%) cases were moderately improved whereas mild improvement was noted in five (16.67%) cases and only one (3.3%) case showed unsatisfactory result after completion of the clinical trial.

### Table 6: The incidence of clinical assessments of result (n=30)

| Clinical assessments of result | At first month | At second month | At third month |
|-------------------------------|---------------|----------------|---------------|
|                               | No. of patients | Percentage (%) | No. of patients | Percentage (%) | No. of patients | Percentage (%) |
| Cure                          | -             | -              | -              | -              | -              | -              |
| Maximum improvement           | -             | -              | 02             | 6.7            | 06             | 20             |
| Moderate improvement          | 02            | 6.7            | 11             | 37             | 18             | 60             |
| Mild improvement              | 16            | 53             | 12             | 40             | 05             | 17             |
| Unsatisfactory                | 12            | 40             | 05             | 17             | 01             | 3.3            |
| Total                         | 30            | 100            | 30             | 100            | 30             | 100            |

### Table 7: Effect of therapy on clinical features (n=30)

| Clinical features                              | BT (Mean ± SD) | AT (Mean ± SD) | 't'      | P       |
|-----------------------------------------------|----------------|----------------|----------|---------|
| Irregular menstrual cycle                      | 21.86 ± 2.48   | 23.16 ± 1.94   | 2.89     | <0.01   |
| Painful menstrual bleeding                     | 2.73 ± 2.03    | 1.17 ± 0.91    | 2.05     | <0.05   |
| Scanty menstrual bleeding                      | 9.3 ± 4.61     | 14.23 ± 3.11   | 4.13     | <0.001  |
| Pain (backache)                                | 1.2 ± 0.56     | 0.98 ± 0.39    | 1.26     | >0.10   |
| Pain (lower abdomen)                           | 2.4 ± 1.03     | 2.11 ± 0.97    | 1.01     | >0.10   |
| Anemia (hemoglobin g%)                         | 10.46 ± 2.09   | 11.29 ± 1.94   | 1.12     | >0.10   |
| Weight                                        | 39.78 ± 5.39   | 40.43 ± 4.12   | 0.89     | >0.10   |

BT - Mean score before treatment, AT - mean score after treatment, SD - standard deviation, \( P<0.05 = \) Significant

### Conclusion

In nutshell, this clinical study was conducted on the basis of the aforesaid parameters, and encouraging result was inferred by the treatment of Ayurvedic drug, Shatapushpa churna in Artava kshaya patients. Being chief, easily available, effective, nontoxic and safe, the Shatapushpa churna can be utilized in Artava kshaya. However, this is a preliminary study; further study is required to establish its action on hormones interference in menstruation. No untoward side effect was observed in this clinical study.

### Acknowledgment

It is indeed a pleasing privilege for us to do this work due to constant co-operation of patients and department staff. The authors express heartiest thanks and indebtedness to them.

### References

1. Charaka Samhita. Chikitsa Shhana Adyaya 30/226 with Ayurdeva Dipika comm. of Chakrapani, Yadav T, editor.Varanasi: Chaukhamba Sanskrit Series; 4th ed. 1981, p.643.
2. Sushruta Samhita Sharira Sthana Adhyaya 2/17 with Govinda Bhaskara Ghanekar comm. Varanasi: Chaukhamba Sanskrit Pratisthana; 1978. p. 25.
3. Asthanga Hrudaya Sharira Sthana Adhyaya 1/18-19 with Vidyotini Hindi comm. Gupta A, editor. Varanasi: Chaukhamba Sanskrit Sansthana; 1991. p. 362.
4. Bahvaprakash Samhita Purva Adhyaya 3/206 with Vidyotini Hindi comm. Mishra BS, editor. Varanasi: Chaukhamba Sanskrit Sansthana; 1969. p. 63.
5. Madhava Nidan. Adyaya with Vijayarakshita and Srikantha Dutta comm. 2nd ed. Varanasi: Chaukhamba Sanskrit Pratisthana; 1998. p. 6-7.
6. Sushruta Samhita Sutra Sthana Adyaya 15/12 with Govinda Bhaskara Ghanekar comm. Varanasi: Chaukhamba Sanskrit Pratisthana; 1978. p. 92.
7. Sushruta Samhita Sutra Sthana Adyaya 2/4 with Govinda Bhaskara Ghanekar comm. Varanasi: Chaukhamba Sanskrit Pratisthana; 1978. p. 13.
8. Asthanga Hrudaya Sharira Sthana Adhyaya 1/11 with Vidyotini Hindi comm. Gupta A, editor. Varanasi: Chaukhamba Sanskrit Sansthana; 1991. p. 361.
9. Dutta DC. Text Book of Gynaecology. 2nd ed. New Delhi: New Central Book Agency (p) Ltd; 1994. p. 174.
10. Asthanga Hrudaya Sharira Sthana Adhyaya 1/24 with Vidyotini Hindi comm. Gupta A, editor. Varanasi: Chaukhamba Sanskrit Sansthana; 1991. p. 364.
11. Tiwari P. Ayurvedeeya Prasutitantra Avam Stree Roga. 2nd ed. Varanasi: Chaukhamba Orientalia; 2007. p. 92.
12. Kashyapa Samhita. Vidyotini Hindi Commentary. 7th ed. Varanasi: Chowkhamba Sanskrit Pratisthana; 1994. p. 184.
13. Joshi NG. Ayurvediya Concepts in Gynaecology. 2nd ed. Varanasi: Chowkhamba Sanskrit Pratisthana; 2006. p. 42.