



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 administered *Satapushpa 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 *satapushpa 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 menstruation^[1] 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] Bhavamishra^[4] and other Rishies^[5] 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 vagina^[6] and can be counted as *Vataja Rajadushti*,^[7] *Kshinartava*^[8] and *Artavakshaya*^[6] 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*.^[11,12] 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 *Shatapushpa* (*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-

Address for correspondence: Dr. P. K. Panda,
Reader & Head, Department of Roga Nidan, Govt. Ayurvedic
College, Balangir, Orissa, India.
E-mail: drpkpandanidan@rediffmail.com

in case of virgins and unmarried girls) were done for every cases. 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* (oligomenorrhoea) and *Kashtartava* (dysmenorrhoea) 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 administered in selected patients for three months. All patients were advised to take same diet till the end of trial.

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 menstruation and pain through out menstruation period. The objective 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 oligomenorrhoea.

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 *Upadhātu*, formed from *Rasa* within a month after proper metabolism of *Rakta dhātu* by its *Dhatwagni* and *Bhutagni*.^[10] The decrease or *kshaya* of *Rakta dhātu* causes *Artava kshaya* and simultaneously *Rakta kshaya* is developed.^[11,13] Maharshi

Table 1: The incidence of age groups (n=30)

Age group in years	No. of patients	Percentage (%)
15-20	8	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

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

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*.^[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. It may be due to the *brinhaniya* and *pustibardhaka* effect of *Shatapushpa churna* and presence of fat in it, but significant result was not observed.

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 (3.33%) case showed unsatisfactory result after completion of the clinical trial.

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.

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