

**A CLINICAL STUDY TO EVALUATE THE EFFECT OF AYURVEDIC FORMULATION
ON ARTAVAKSHINATA W.S.R.TO PCOS*****Dr. Pradnya Shirke M.S.(Streerog Prasutitantra)**

Asso.Professor, Dr. D.Y.Patil Ayurved College, Pimpri, Pune.

***Corresponding Author: Dr. Pradnya Shirke**

Asso.Professor, Dr. D.Y.Patil Ayurved College, Pimpri, Pune.

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ABSTRACT

Fertility and childbearing is a complex process. Ovulation plays a crucial role in the reproductive process of fertility and is the first identifying step for a woman to get pregnant. Among many causes of infertility the anovulation is very common problem in approximately 40% cases of female. Majority of these cases could be treated either hormonal therapy. This study will emphasize on careful holistic approach in management of rajakshinata and anovulatory cycles. 30 patients had completed clinical trials with an Ayurvedic formulation which contains churnas of shatavari, Shatpushpa, Kumari, Jeerak, Chitrak, Trikatu, Hingu. The subjective and objective parameters were measured before and after the treatment. This treatment showed timely ovulation, increase in menstrual flow, and cycle regulation in some cases.

KEYWORDS: Artavakshinata,, Anovulatory Cycle, Ayurvedic formulation.**INTRODUCTION**

Women are considered as reflection of the GOD in this world. But root of the importance of women lies in their capacity of creation. This is the reason why the question of fertility is most important for women. Infertility is becoming a major health problem in India. The rate of infertility is steadily increasing due to the change in life style, high pollution, socioeconomic causes, enormous amount of stress and deterioration of quality of gametes. Maharshi Sushruta described the four major components for achieving conception.^[1] Those are RUTU (Menstrual cycle), KSHETRA (Female reproductive system), AMBU (Ahar rasa), BIJA (Ovum & Sperm). Among many causes of infertility the anovulation(absence of beej) is a very common problem that presents in a variety of clinical manifestations. The most common manifestation of anovulation is artavakshinata i.e. scanty menses. Chronic anovulation is one of the commonest features in the polycystic ovaries (PCOS) (Rotterdam consensus workshop, 2003). According to Acharyas, Artava kshaya is a complication of Rasa and Raktakshaya due to vitiation of Vatadosha.^[2] So the treatment should be Vatashamaka and Agneyagunatmak.^[3] In modern context, the treatment is based on hormonal preparations only which have many hazardous effects like weight gain, and chances of carcinoma. Several drugs and formulae are available in Ayurveda classics for the remedy of Artavakshinata.

NEED FOR THE STUDY

1. Due to changing, sedentary lifestyle and inappropriate food habits, increased incidence and prevalence of artavakshinata as well as PCOS.
2. Since the large number of patients are suffering from this disorder and are unsatisfied with the existing management of modern drugs, it is essential to treat the artavakshinata & PCOS with an ayurvedic treatment.
3. As many patients are reluctant to go for panchakarma and prefer oral medicines, I tried to treat this disorder by oral medicines only.

ARTAVAKSHINATA**a;t;*v;Z;y;e y;q;eic;t; k::ldx;*n;m;Dp;t;; v;; y;;en;Iv;edn;; c; == (s;u.s;U.(15/12)**

In ayurvedic samhitas the term 'Artava' describes both Streebija and Raja i.e. ovum and menstrual flow respectively.^[1]

Maharshi Sushruta described about treatment of Artavakshaya as-

t;F; s;"x;;eQ;n;;m;gn;ey;;n;;m;< c; 7vy;;n;;m;U iv;Q;Iv;ty;up;y;;eg;;+ ==

Absence of menses in appropriate time should be treated by purification measures ,and Agni dominating medicines.^[1] The treatment principle is to clear the obstruction in the pelvis i. e. vatanuloman, to reduce kapha using Agneya gunatmak dravyas, and to regulate the menstrual system.

AIM AND OBJECTIVES**AIM**

To study the effect of Ayurvedic formulation in artavakshinata & PCOS.

OBJECTIVES

1. To study the effect of agneya gunatmak dravya in artavakshinata.
2. To study the effect of agneya gunatmak dravya in irregular menses.
3. To study the effect of agneyagunatmak dravya on anovulation in PCOS.
4. To study the pathophysiology of PCOS in ayurvedic view.

MATERIALS AND METHODS**MATERIALS**

1. Patients -The patients attending the O.P.D. of streerog-prasuti department of Dr. D.Y. Patil College of Ayurved, Pimpri, Pune were registered for present study.

2. Drugs - For this study following combination of drugs was selected.

Shatapushpa-1gm

Shatavari-1 gm

Jeerak-1gm

Kumari-1gm

Chitrak-500mg

Trikatu-250mg

Hingu-250mg

Route of administration: oral.

Dose- -The above formula was given into two divided doses, twice a day for 3 months.

ANUPAN –water

Duration - 90 days

INCLUSION CRITERIA

patients between age- 18 to 40 yrs, complaining of scanty menses.

-known Patients of PCOS complaining of scanty menses.

-Patients of infertility complaining of scanty menses and unovulatory cycles.

-Unmarried girls complaining of scanty menses.

-Patients complaining above symptoms for minimum 3 cycles.

EXCLUSION CRITERIA

-woman of age below 18 & above 40 yrs.

- woman having congenital defects of the female genital tract.

-woman having medical emergencies, chronic illness or having any surgical intervention, lactational amenorrhoea scanty bleeding or amenorrhoea due to other causes as adrenal hyperplasia, androgen secreting tumors, Cushing's syndrome.

-Patients of PCOS having normal & heavy menstrual flow

WITHDRAWAL CRITERIA

-If patient develops any adverse effect.

-If patient is not responding to treatment and aggravation of symptoms.

-If patient refuses to continue with the treatment.

INVESTIGATIONS

-HMG

-Follicular study -(ultrasonography)

METHODOLOGY

Sample size -30 patients

REASERCH PLACE

Dr. D.Y.Patil College of Ayurved & Research center- Ayurved Hospital Streerog-Prasutitantra O.P.D.

MANAGEMENT OF THE PATIENTS TREATMENT SCHEDULE

Follow up-monthly

a) after 30 days

b) after 60 days

c) after 90 days

final assessment was done on 90th day.

ASSESSMENT**Criteria for assessment**

The criteria for assessment of treatment & patient based on improvement in symptoms. It is shown by scoring method as following criteria.

1. Assessment of duration of bleeding

Duration	Score
3-4 days	0
1-2 days	1
1 day	2
<1 day	3

2. Assessment of intermenstrual period

Intermenstrual period	Score
25-30 days	0
30-45 days	1
45-60 days	2
>60 days	3

3. No. of pads used during period

No. of pads	Score
2-3	0
1-2	1
1	2
Just spotting	3

4. Evidence of ovulation on USG

USG	SCORE
Ovulation present	0
Ovulation absent	1

Diet advice

-Patient was advised to avoid excessive oily, sweet, spicy, fried food, overdiet.
-To have adequate and nutritious food.

Instructions

-Patients were asked to reduce weight by diet management and exercise.
-They were also asked to avoid upavas, adhyashana, ratri jagran, diwaswap, & other hetu of kapha and medovruddhi.

**STATISTICAL ANALYSIS
DURATION OF BLEEDING**

Duration of bleeding	DAY-0		DAY- 90		% Relief	Wilcoxo n Signed ranks test Z	P
	Mean score	Sd	Mean score	Sd			
No. of patients	2.07	0.69	0.4	0.89	80.7	4.789	<0.001 HS

DURATION OF BLEEDING	DAY-0	DAY -90
MEAN SCORE	2.07	0.4

The initial mean of duration of bleeding was 2.07 which was reduced to 0.40 after the completion of treatment showing 80.7% relief which was statistically significant.

INTERMENSTRUAL PERIOD

Duration of bleeding	DAY-0		DAY- 90		% Relief	Wilcoxo n Signed ranks test Z	P
	Mean score	Sd	Mean score	Sd			
No. of patients	1.24	0.68	0.41	0.56	66.9	4.374	<0.001 HS

INTERMENSTRUAL PERIOD	DAY-0	DAY-90
MEAN SCORE	1.24	0.41

The initial mean of interval between two cycles was 1.24, which was reduced to 0.41 showing 66.9 % which was statistically significant.

NO OF PADS USED

Duration of bleeding	DAY-0		DAY- 90		% Relief	Wilcoxo n Signed ranks test Z	P
	Mean score	Sd	Mean score	Sd			
No. of patients	1.20	0.61	0.27	0.52	77.5	4.460	<0.001 HS

NO. OF PADS USED	DAY-0	DAY-90
MEAN SCORE	1.2	0.27

The initial mean of no. of pads used was 1.20, which was reduced to 0.27 showing 77.5% which was statistically highly significant.

Evidence of ovulation on USG

Duration of bleeding	DAY-0		DAY- 90		% Relief	Wilcoxo n Signed ranks test Z	P
	Mean score	Sd	Mean score	Sd			
No. of patients	1.5	0.93	0.6	0.77	60	4.208	<0.001 HS

OVULATION	Day-0	Day-90
Mean score	1.5	0.6

The initial mean of evidence of ovulation was 1.5 which was reduced to 0.6 which was statistically highly significant.

TOTAL EFFECT OF TREATMENTS OF IN PERCENTAGE

Assessment criteria	% Relief
Duration of bleeding	80.7 %
Intermenstrual period	66.9 %
No of pads used	77.5 %
Ovulation on usg	60 %

OVERALL EFFECT OF TREATMENT

OVERALL EFFECT	NO OF PATIENTS
Not improved	3
Mild improvement	4
Moderate improvement	4
Marked improvement	19

DISCUSSION

Artavakshinata and anovulation is a condition which is a major responsible factor for infertility. Here, an attempt has been made to deal with this condition with oral ayurvedic formulation. Raja is described as upadhatu of rasadhatu in our classics. Upadhatu are nourished from Prasad portion of dhatu. They receive their nourishment from that sukshma prasada portion of dhatu which provide nourishment to the successive dhatu. Dhatvagni, vayu and strotasa play an important role in proper nourishment of upadhatu. Vayu is responsible for conveyance of specific amount of nutrient to the particular upadhatu. Strotasa are the channels for transportation and transformation. Agni is essential for any type of transformation. So it is concluded that dhatvagni of each dhatu is responsible for parinama of dhatu from one state to another state, as well as formation of upadhatu. The treatment principle is to clear obstruction in the pelvis i.e. vatanuloman, to reduce kapha using Agneya gunatmak dravyas, and to regulate the menstrual system. I have selected this formulation because it's a combination of Agneya gunatmak, vatanulomak, kaphanashak dravyas. i. e. ushna, tikshna, katu.

Shatavari helps in promoting normal development of ovarian follicles, regulates menstrual cycle and revitalizes the female reproductive system, mainly due to its phytoestrogen.^[14] Phytoestrogens are also believed to help reduce the cellular imbalance which leads to metabolic disturbances in PCOS. Shatapushpa is Kaphavataghna due to its laghu, ruksha, tikshna gunas. It helps in regularizing the menstrual cycles, promotes normal menstruation and normalizes ovarian hormonal imbalance. Kumari is Kaphavataghna, with its Laghu, ruksha, tikshna gunas. with the help of its Strotoshodhan property it improves uterine perfusion. Jeeraka is tikta, katu Ushna Kaphavataghna and garbhashaya shodhak, so improves blood flow. Trikatu is katu, ushna, laghu, tikshna so Vatkaphaghna, agnidipak, amapachak, vatanulomak, sthoulyahar, lekhan, strotoshodhan and

improves perfusion. Hingu is also Kaphavataghna and garbhashaya shodhak.^[13]

RESULTS

Effect of therapy on symptoms of artavakshinata

- 1. Duration of menstrual bleeding:** this formulation provided 80.7 % relief i.e. improvement in the duration of bleeding.
- 2. Interval between two cycles:** the intermenstrual period was reduced in 66.9% cases.
- 3. Number of pads used:** the amount of bleeding was increased in 77.5 patients.
- 4. Evidence of ovulation on usg:** ovulation was observed in 60 % of cases.

The effect of this formula found more on scanty bleeding. Duration of bleeding was increased in 80.7 % of patients. Amount of bleeding was increased in 77.5 % of cases.

CONCLUSION

Artavakshinata is found mostly in obese patients. In 63.33 % patients BMI was above 25. In this study married patients were more in no. i. e. 73.33 %. It means in unmarried state there is ignorance towards this condition. So awareness about PCOS and scanty menses is necessary among unmarried girls. On the basis of criteria of assessment adopted, the total effect of therapy has been carried out, which has shown that 19 patients were markedly improved, 4 patients were moderately improved and 4 patients were mildly improved. This result proves that selected formula is significantly effective in scanty menses (artavakshinata). Regarding PCOS, the only symptom i. e. anovulation was taken into consideration in this study. Ovulation occurred in 60.5 % patients only. It means PCOS should be treated aggressively. More treatment like sanshodhan karma should be done for more effects regarding ovulation.

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