

CLINICAL EFFICACY OF *BHRIHAT SHATAVARI GHRIT AND BALADI CHURNA ON ARTAVAKSHAYA (OLIGOMENORRHOEA)*

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ABSTRACT

Artava kshaya defines as diminished form of menses in *Ayurveda* which can be considering as oligomenorrhoea. The patients having complained of scanty menses (oligomenorrhoea) generally have very thin endometrial lining formation during menstrual cycle. This problem gives its negative impact on female reproductive capability because this thin endometrium is unfavorable for implantation of embryo. A clinical trial was carried out on 10 patients with complain of scanty menses having ≤ 7 mm endometrial thickness evaluated by transvaginal sonography. The patients were registered from O.P.D of *Stree Roga & Prasooti Tantra* Department, I.P.G.T. & R.A., Jamnagar. *Bhrihat Shatavari Ghrith* was given 10 gm orally in empty stomach with luke warm water and *Baladi Churna* 5 gm B.D with milk both for 2 months. Assessment of results was done by subjective and objective criteria Subjective criteria includes grades for classical symptoms of *Artava Kshaya* using before and after treatment and objective criteria includes the tool of serial Transvaginal color Doppler sonography for measure endometrial thickness. *Shatavari* compounds helps in proliferation of endometrium because they are rich source of phytoestrogens. Endometrial thickness increment is directly proportional to rise in amount of menstrual blood in each menstrual cycle as it is direct visual manifestation of endometrial growth during whole cycle. The results revealed that, *Bhrihat Shatavari Ghrith* and *Baladi churna* is a potent *Ayurvedic* regimen to increase endometrial thickness so therapeutically it is useful in oligomenorrhoea.

Keywords: *Artava Kshaya, Baladi Churna, Bhrihat Shatavari Ghrith, Endometrial Thickness,*

INTRODUCTION

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Abnormal menstrual bleeding is commonly encountered by women in the reproductive age group and is held responsible for upto 20% of a gynaecologist's outpatient practice [1]. As per statistical analyses and surveys, the presence of oligomenorrhoea was reported in 11.3% and 6.7% of college and urban populations respectively [2,3]. *Artavakshaya*' can be correlated with Oligomenorrhoea, Hypomenorrhoea, and up to some extent Secondary amenorrhoea. Modern medicine for oligomenorrhoea has sudden results

with additional hazards like check natural process of ovulation, dependency on hormones, unresponsive endometrium. Recent researches suggest that ratio of menstrual disorder is rising in gynaecological practice which is precursor of infertility and other problems, so it requires more attention.

The concept of menstruation physiology and its pathologies are well defined in *Ayurveda* as *Artavanirmana* and *Artavavyapad* respectively. The condition of oligomenorrhoea comes under the pathology of *Artavakshaya* in *Ayurveda*. The symptoms of *Artavakshaya* are parallel to oligomenorrhoea i.e. *yathochitkaleadarshanam*, *alpta*, *yonivedana* are indicated i.e. increased interval between two menstrual cycles, decreased amount of menstrual blood and pain respectively. Menstruation is visible manifestation of cyclic physiologic uterine bleeding due to shedding of the endometrium[4]. The delayed and hypo formation of endometrium results in *Artavakshaya* (oligomenorrhoea). A thick, healthy endometrial lining of the uterus is necessary for a healthy menstrual cycle and pregnancy. The symptoms of abnormal endometrium formation are well defined by *Acharya charak* under *pittajyonivyapad* and recommended *Bhrihat Shatavari ghrit*. Recent researches also proved *Shatavari* as a versatile female tonic [5] and estrogenic effect on the female mammary glands and reproductive system,[6]. *Baladi Churna* [7] contents also have *Vrishya* and *Punsavan* properties that's why these drugs were selected to study their effect on *Artavk-saya*.

Material & method:

Selection of Patients:

Patients attending the OPD of *Stree Roga* and *Prasooti Tantra*, I. P. G. T. and R. A., Jamnagar, fulfilling the criteria for the selection were selected for the study irrespective of their religion, caste, etc.

Inclusion Criteria

Subjective Criteria: Patients who were having symptoms of '*Artavakshaya*' i.e. *yathochitkalea-darshanam*, *alpta*, *yonivedana* were selected.

Objective Criteria: Patients who have Endometrial thickness 7mm on TVS finding

from day 11th- till ovulation / upto 18th day (in case of anovulatory cycle) for 2 consecutive menstrual cycle were selected for the study.

Exclusion criteria

Any organic lesions of reproductive tract like tuberculosis, carcinoma and congenital deformities, or any other pelvic pathology, thyroid abnormalities, cardiac diseases were excluded.

Investigations

Hematological investigations like Hb%, TC, DC, ESR, and routine urine investigations were done.

Trans Vaginal Colour Doppler Sonography was done for measurement of endometrial thickness from day 11th- till ovulation / upto 18th day (in case of anovulatory cycle).

Selection of Drugs:

The drug *BrihatShatavariGhrit* and *BaladiChurna* for the present study was prepared in the Pharmacy of Gujarat Ayurved University, Jamnagar

Method of drug preparation:

BrihatShatavariGhrit: The ratio of contents of *BrihatShatavariGhrit* and its preparation was done according to method given by *Acharya Charka* [8].

Baladi Churna: All contents were mixed in same amount in preparation of *Baladi Churna*

Follow up study

Follow up study was conducted for two cycles after completion of the treatment

Posology:

BrihatShatavariGhrit was given 10 gm orally empty stomach in morning with luke warm water and *Baladichurna* 3 gm orally twice daily with milk after taking meal for 2 months.

Pathya-Apathya

Patients were advised to correct their dietary habits, and avoid unhygienic and junk food. Include milk and cows ghee in their daily diet. Mild to moderate exercise especially inclusion of *Suryanamaskara* as per their capacity was suggested. They were also advised to sound sleep and not to take much of stress.

Criteria for assessment of results:

The criteria for assessment of treatment are based on grading system of subjective and objective criteria.

Subjective criteria for assessment of result:

1. Quantity of menstrual flow was assessed by usages of vaginal pads. 0 gradations was given when upto 3 pad used, 1 gradation for 1-2 pad used, 2 gradation for 1 pad used, 3 gradation for Spotting bleeding without pads given.
2. Duration of menstrual bleeding was assessed by numbers of days of menstruation. 0 gradations were given for 4-7 days of bleeding, 1 gradation for 3 days, 2 gradations for 2 days, 3 gradations for 1 day.
3. Interval between two cycles (inter menstrual period) was assessed by the length of intermenstrual period. 0 gradation for 24 to 28 days, 1 for 29 to 35 days, 2 for 36 to 45 days and 3 for Above 45 days

Objective criteria for assessment of result:

Assessment of Objective criteria was done by Trans Vaginal Colour Doppler Sonography for measurement of endometrial thickness on the basis of Grading system of Appelbaum's USSR for endometrium thickness from day 11th- till ovulation / upto 18th day (in case of anovulatory cycle) for 2 consecutive menstrual cycle.

Grade System: 0 gradation was given when endometrial thickness is < 7 mm, 1 gradation was given when endometrial thickness >14mm, 2 gradation was given when endometrial thickness upto 7-9 mm and 3 gradation was given when endometrium thickness upto 10-14 mm [9].

Statistical analysis

The obtained data on the basis of observations was subjected to statistical analysis. $P < 0.001$ is considered as highly significant, $P < 0.01$ as significant, and $P < 0.05$ as insignificant.

Observations and Results: Results of observations are tabulated in Table no. 1 and 2. Results of effect of therapy is shown from Table No. 3-5 and in Figure no. 1-3

DISCUSSION

Clinical manifestation of Artavakshaya (oligomenorrhoea) and Hypo formation of endometrium

Artava is considered in its two forms as Antapushpa and Bahipushpa. Antapushpa is BeejaRoopaArtava and Bahipushpa is menstrual blood which is nothing but shedded functional layer of endometrium. So, the process of

ArtavaNirman governs in two phases one in ovarian cycles as formation of graffian follicle up to ovulation and another within the uterine cycle for regeneration and proliferation of endometrium says as "Navin Raja Sthapana". Constitutional scanty menstruation perhaps best explained by assuming the presence of an unusual arrangement, or relative insensitivity, of the endometrial vascular apparatus. These points suggest that the formation of menstrual blood is originated from endometrium lining. That's why delayed or declination of endometrium formation leads to ArtavaKshaya (oligomenorrhoea).

Mode of Action of drug on Artava Kshaya (oligomenorrhoea): The process of new cells division and regeneration from basal layer of endometrium is said to be due to Vata, as differentiation or cell division are the functions of Vata. Pitta is responsible for all type of Paka Karma in the body, [10] so here, the role of Pitta can be understood as ovarian Steroidogenesis where two cells (theca cells and granulosa cells) produce different hormones under the influence of two gonadotrophins (LH and FSH) [11]. Pitta is responsible for production of adequate level of hormones. The function of Kapha is Upachaya which means development [12]. So, here it is responsible for further development of endometrial cells by proliferative and secretory changes through estrogen and progesterone respectively. Thus, Tridosha balance is key factor for normal functioning hypothalamus pituitary ovarian axis leads to normal menstrual cycle. BhrihatShatavariGhrit and Baladichurna having MadhuraVipaka, Sheet virya, Madhura, Tikta and Kshaya rasa so, the combined effect of all ingredients having VataPitta shamak property. BrihatShatavariGhrit and BaladiChurna regulate normal female reproductive physiology by their VataPitta shamak action. Regeneration of new cells of functional layer from basal layer of endometrium governs by proper function of Vata. Proper Paka action of Pitta leads to appropriate conversion of all hormones from their subsequent in sufficient level. The hormones formed by aromatization of Pitta are anabolic (having Kaphaja property) in nature because they are product of cholesterol (also hav-

ing *Kaphaja property*). The adequate level of hormones during follicular and luteal phase is responsible for proper function by proliferation and secretory changes in endometrium. Proper function of *VataPitta* enhances regular function of HPO axis results in proper *Upchaya* action of *Kapha* leads to proliferative and secretory changes in endometrium. Menstrual cycle regulates and endometrial thickness increased by

proper action of *tridosha* thus, the amount of menstrual blood increased.

CONCLUSION

Brihat Shatavari Ghrit and *Baladi Churna* both are highly effective in management of *Artava Kshaya* (oligomenorrhoea) due to imbalance HPO axis.

Table No. 1: Results of general observations

Observations	Number of Patients	%
Age group 26-35 years	10	100%
Occupation as house wife	8	80%
History of Abortion	6	60%
Primary infertility	4	40%
Secondary infertility	6	60%
Chinta	10	100%
History of Hormonal treatment	10	100%

Table No. 2: Results of dietary habits

Observations	Number of Patients	%
Vishamasan	7	70%
Vishamagni	6	60%
Mandagni	4	40%

Table No. 3: Grades of Patients Before and After treatment for Quantity, Duration of menstrual phase and interval between two cycles.

Cardinal features	Grade 0		Grade 1		Grade 2		Grade 3	
	B.T.(%)	A.T.(n)	B.T.(n)	A.T.(n)	B.T.(n)	A.T.(n)	B.T.(n)	A.T.(n)
Quantity	0	30%	0	60%	80%	10%	20%	0
Duration of menstrual bleeding	0	0	10%	70%	70%	30%	20%	0
Interval between two cycles	0	40%	20%	60%	80%	0	0	0

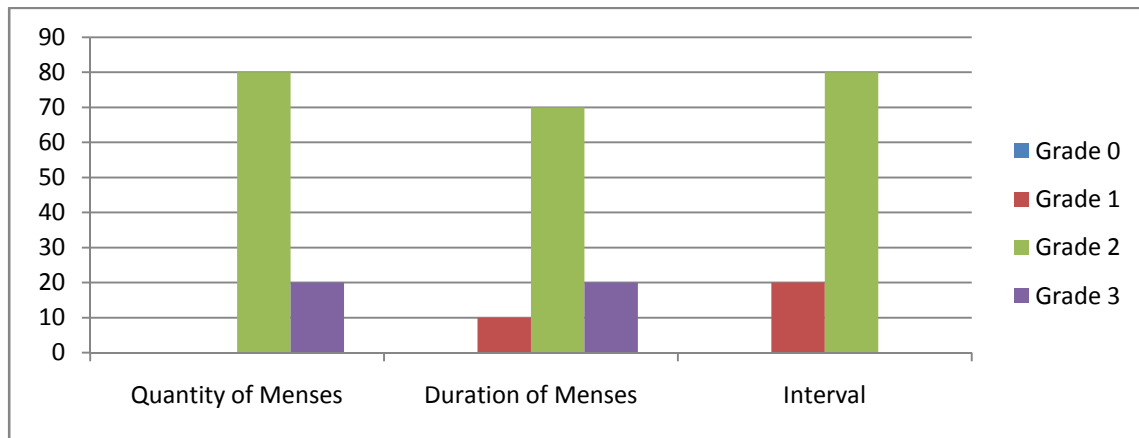
Table No. 4: Result of *BhrihatShatavariGhrit* and *BaladiChurna* effect on Quantity, Duration of menstrual phase and interval between two cycles

Parameter	Mean difference	S.D. (±)	S.E. (±)	“t” (paired)	P
Quantity	1.10	0.31	0.10	11	p<0.0001
Duration of menses	0.80	0.42	0.133	6	p<0.0001
Interval between two cycles	1.2	0.78	0.24	4.81	p<0.001

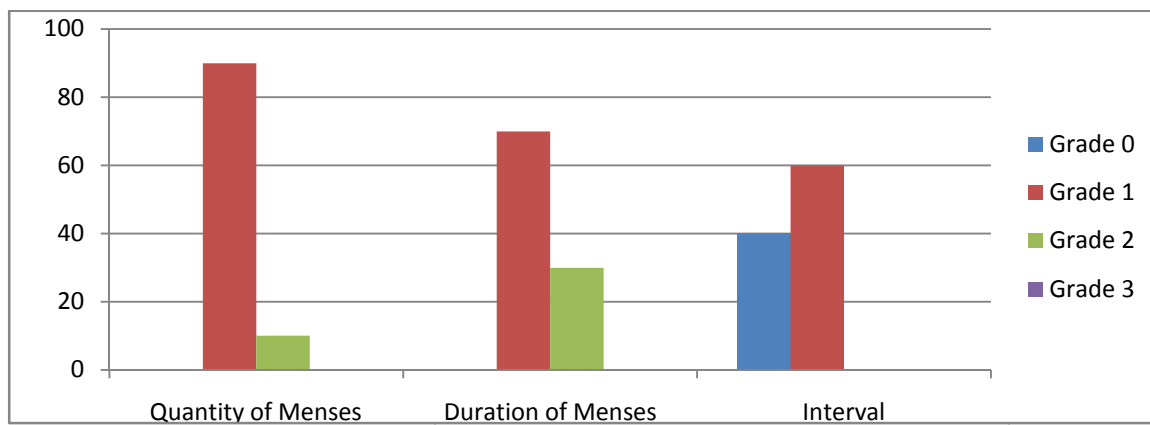
Table No. 5: Result of *BhrihatShatavariGhrit* and *BaladiChurna* effect on Endometrial thickness:

Parameter	Mean Score		% of relief	S.D. (±)	S.E. (±)	“t” (paired)	P
	B.T.	A.T.					
Endometrial Thickness	0.1	2.2	70%	0.875	0.276	7.58	p<0.001

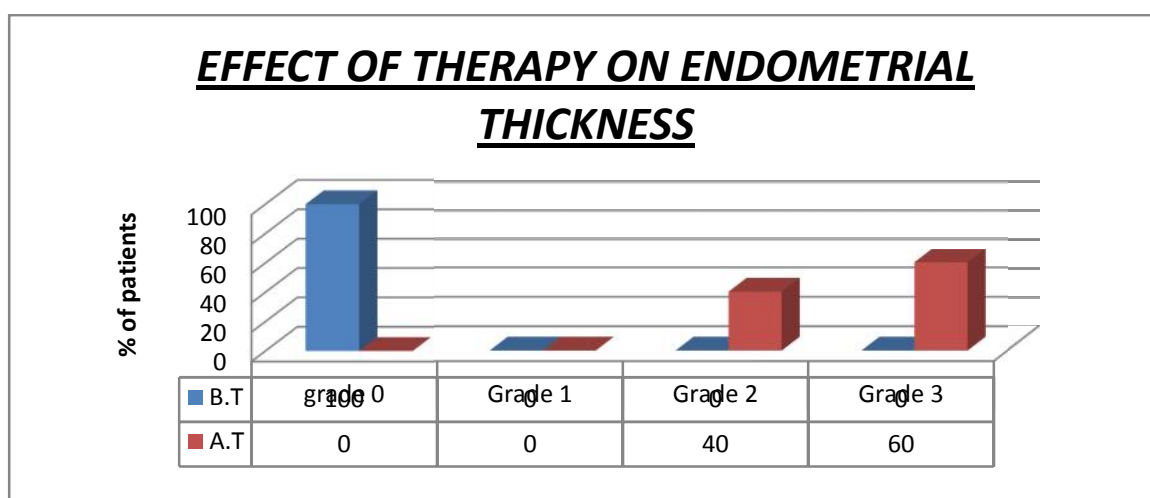
Grades of Patients before Treatment on chief complaints:



Grades of patients After treatment on chief complaints:



Effect Of Therapy On Endometrial Thickness



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