



A CLINICAL STUDY ON THE EFFICACY OF JYOTISHMATYADI KALKA IN THE MANAGEMENT OF NASHTARTAVA W.S.R TO ANOVULATION

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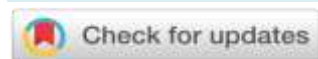
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ABSTRACT

Ovulation is the process of release of an oocyte from the ovarian follicle. As mentioned earlier, it occurs on day 14 of the menstrual cycle. After the description of Ashtartava, Sushruta describes the destruction of **Artava**, i.e. **Nashtartava**, Bhavprakasha mentioned as **Rajonasha**, caused due to margavarodha in artavavaha srotas, by vata and kapha. Sushruta explains the ritukala in such a manner. The first 12 days of ritukala is kapha kala that means maturation of follicle from day 12-16 is considered pitta kala that means the rupture of follicle and release of a secondary oocyte. Many works have been done on **Nashtartava**, but **Jyotishmatyadi kalka**, indicated by Bhavprakasha as **Kusumam Janyate**, is still untouched. Hence, a non-hormonal and safer method has been selected.

Keywords: Nashtartava, Anovulation, Jyotishmatyadi Kalka, Clomiphene citrate

INTRODUCTION

The most noticeable feature of the female reproductive period is the monthly flow of blood from the uterus, referred to as menstruation.¹ After the description of Ashtartava, Sushruta describes about destruction of **Artava**, i.e. **Nashtartava**, Bhavprakasha men-

tion as **Rajonasha**², caused due to margavarodha in artavavaha srotas, by vata and kapha.³

“*Vandhya nashtartavam vidyat*”- here we can get that Vandhyatwa is due to Nashtartava. Efforts to diagnose and treat infertility have long been a central

focus of obstetricians, gynaecologists, and, more recently, reproductive endocrinologists⁴—Ayurveda under the concept of Ritukala. Sushruta explains the ritukala as first 12. Although Modern Medicine provides good treatment for Ovulation induction prolonged use of them gives many side effects. These untouched therapies and medicinal concepts are lying idle in Samhitas, and they want to be trapped in today's highly scientific world of medicine. It is our meaningful effort, coupled with many innovative ideas, to uncover this medicinal concept of **Anovulation**.

Many works have been done on **Nashtartava** but *Jyotishmatyadi kalka*⁵ indicated by Bhavprakasha as *Kusumam janyate*⁶ is still untouched. Hence, non-hormonal and safer method has been selected.

OBJECTIVES OF THE STUDY:

- To study the efficacy of **Jyotishmatyadi Kalka** on *Nashtartava w.s.r to anovulation*

METHOD OF COLLECTION OF DATA

For the clinical study, 30 Patients were selected from OPD and IPD of PT&SR Dept Sri Jagadguru Gavisiddheshwara Ayurvedic Hospital, Koppal are selected for the study simple randomized sampling method as per inclusive criteria. The patients will be divided into two equal groups of 15 patients.

(A) GROUPING: Group A (Standard group)- 15 patients will be given modern standard drug treatment for 3 consecutive cycles.

(D) DURATION OF TREATMENT: 3 months.

(E) FOLLOW-UP STUDY:

GROUP A		GROUP B	
Duration of treatment	3 cycles	Duration of treatment	3 cycles
During treatment follow up	From D ₃ of every cycle	During treatment follow up	From D ₃ of every cycle
After treatment follow up	2 cycles	After treatment follow up	2 cycles

DIAGNOSTIC CRITERIA:

- Diagnosis was made on the basis of symptoms like
- ✓ **Irregular menstruation**
- ✓ **Heavy menstrual bleeding.**

OBJECTIVE PARAMETERS

Group B (Trial group) - 15 patients will be given *Jyotishmatyadi Kalka* from D₂ –D₁₀×3 consecutive cycles.

- ✓ **SAHAPANA: Honey.**
- ✓ **ANUPANA: Milk & Sugar**
- ✓ **DOSE: 1 Karsha in divided doses**

(B) INCLUSION CRITERIA:

1. Age group between 20-35 years.
2. Patients with diagnosed anovulatory cycles.
3. Anovulatory cycles with or without PCOD.
4. DUB Anovulatory (follicular study).

(C) EXCLUSION CRITERIA:

1. Systemic diseases like TB, DM, hyperthyroidism and hypothyroidism, STDs, HIV and HBsAg.
2. Adrenal hyperplasia.
3. Hypothalamic deficiency of GnRH.
4. Undergone GnRH agonist treatment.
5. Hypo pituitary dwarfism, Pituitary adenoma and Pituitary carcinoma.
6. Destruction of the ovary by different radiation or removal by operation.
7. Patient on oral contraceptives.
8. Ovarian causes: streak ovaries, Accessory ovaries, Supernumerary ovaries, infection(mumps), Benign and Malignant lesions of ovaries, Premature Ovarian failure, and Resistant ovarian syndrome.
9. Endometriosis.

ASSESSMENT CRITERIA SUBJECTIVE PARAMETERS

- Regular/Irregular menses.
- Pain.

- Follicular study

SIZE	GRADE
8mm-12mm	0
13mm-16mm	1
17mm-19mm	2
>20mm	3

OVULATION	GRADE
Non-Ovulated	1
Ovulated	2

- The amount and duration of bleeding.

1. RAJASRAVA AVADHI (DURATION OF MENSTRUAL FLOW)-TABLE NO.10

DAYS	GRADE
4-7 days	0
3 days	1
2 days	2
1 days	3

2. ARTAVA PRAMANA (AMOUNT OF MENSTRUAL BLOOD LOSS)

AMOUNT	GRADE
4 or more pads use / day	0
3 pads use / day	1
2 pads use / day	2
1 pads use / day	3

3. MENSTRUAL INTERVAL

DAYS	GRADE
24 to 34 days	0
35 to 39 days	1
40 to 45 days	2
Above 45 days	3

(H) LABORATORY INVESTIGATION

- Blood investigation-Complete Haemogram
- USG- Abdomen and pelvis
- USG- Baseline scans for ovarian reserve.
- Hormonal assay
- Serial cervical mucus study.
- AMH level

Results Statistical Analysis

EFFECT OF TREATMENT ON FOLLICULAR SIZE IN GROUP A

TABLE NO-1

Mean Score	(%) of Improvement	Pair “t” test	Results

BT	0.13		S.D	S.E	t value	p value	
AT1	2.60	94.87	1.06	0.27	-9.01	<0.001	HS
AT2	2.60	94.87	1.06	0.27	-9.01	<0.001	HS
AT3	2.60	94.87	1.06	0.27	-9.01	<0.001	HS
FU1	2.60	94.87	1.06	0.27	-9.01	<0.001	HS
FU2	2.60	94.87	1.06	0.27	-9.01	<0.001	HS

EFFECT OF TREATMENT ON FOLLICULAR SIZE IN GROUP B

TABLE- NO-2

Mean Score		(% of Improvement)	Pair “t” test				Results
BT	0.13		S.D	S.E	t value	p value	
AT1	2.53	94.74	0.99	0.25	-9.43	<0.001	HS
AT2	2.60	94.87	0.83	0.22	-11.46	<0.001	HS
AT3	2.80	95.24	0.62	0.16	-16.73	<0.001	HS
FU1	2.80	95.24	0.62	0.16	-16.73	<0.001	HS
FU2	2.80	95.24	0.62	0.16	-16.73	<0.001	HS

EFFECT OF TREATMENT ON OVULATION IN GROUP A

TABLE NO-3

Mean Score		(% of Improvement)	Pair “t” test				Results
BT	1.00		S.D	S.E	t value	p value	
AT1	1.87	46.43	0.35	0.09	-9.54	<0.001	HS
AT2	1.87	46.43	0.35	0.09	-9.54	<0.001	HS
AT3	1.87	46.43	0.35	0.09	-9.54	<0.001	HS
FU1	1.87	46.43	0.35	0.09	-9.54	<0.001	HS
FU2	1.87	46.43	0.35	0.09	-9.54	<0.001	HS

EFFECT OF TREATMENT ON OVULATION IN GROUP B

TABLE NO-4

Mean Score		(% of Improvement)	Pair “t” test				Results
BT	1.00		S.D	S.E	t value	p value	
AT1	1.80	44.44	0.41	0.11	-7.48	<0.001	HS
AT2	1.80	44.44	0.41	0.11	-7.48	<0.001	HS
AT3	1.87	46.43	0.35	0.09	-9.54	<0.001	HS
FU1	1.87	46.43	0.35	0.09	-9.54	<0.001	HS
FU2	1.87	46.43	0.35	0.09	-9.54	<0.001	HS

Table No-5 BEFORE AND AFTER TREATMENT FOR BOTH GROUPS

S.No	GRADATION	GROUP A		GROUP B	
		No of patients	%	No of Patients	%

1	No improvement - < 25%	2	13.33	1	6.67
2.	Mild improvement – 25% to 50%	11	73.34	5	33.33
3.	Satisfactory improvement –50% to 75%	2	13.33	9	60
4.	Marked improvement – < 75%	0	0	0	0

In Group A out of 15 patients, after treatment 2 patients (13.33%) were shown no improvement 11 patients (73.34%) were shown mild improvement, 2 patients (13.33%) were shown satisfactory, and no patient showed marked improvement. In Group B, out of 15 patients, after treatment, 1 patient (6.67%) showed no improvement, 5 patients (33.33%) showed mild improvement, 9 patients (60%) were satisfactory, and no patient showed marked improvement. This table shows that 14 patients showed improvement in group B, compared to 13 patients in group A. In fact, only 2 patients showed satisfactory improvement in group A, while 9 patients showed satisfactory improvement in group B. This shows that Group B is better than Group A. This study contains a small number of samples, and hence, to draw conclusions, we have to conduct this research on large samples to avoid errors.

DISCUSSION

Jyotishmatiyadi kalka having action on *nashtartava*, Jyotishmatiyadi kalka having *Katu tikta kashaya rasa* all having properties due to *vata prakopaka* and *kapha pitta shamak* due to this properties *vata prakopa* action it dries the *kapha* which is causes *sanga* in the *artavaha srotasa*, due to *katu tikta rasa* it *vilayan* the *kapha* and *scrapes* the *kapha* which is causes *sanga* in the *artavaha srotasa* by this action clears the passage of *artavaha srotas* and we see flow of *artava* regularly, due to the *madhur rasa* we see the maturation of follicle. Due to *katu tikta kashaya rasa*, we know the *Shoshana* of *kapha dosha*, which leads to the clearance of *artavaha srotasa*. All drugs have *katu vipaka*. Due to the *katu vipaka*, it is *kaphahara*. It acts on the vitiated *kapha*, acts on the *avarana*, and makes the free-flowing movement of *vata*. Also, with the increasing *pitta*, we can see the maturation of the follicle and regular menstruation cycles, and due to *pitta*,

we see ovulation. Due to *laghu guna* having *karma* like *utsah* and *sfurti*, due to *utsaha* and *sfurti* action it makes the clear the *avarana* in very short time with the help of *tiksha* and *ruksha guna* properties because *ruksha guna* make *kapha* dry which all are present in *artavaha srotas* according to *Vishwa Mitra* hair like *srotasa* pierce the *garbhashaya* and nourishes the *garbhashaya*, in these all *srotasa sroto sanga* take place due to vitiation of *kapha*, these *kapha* is dried with the *Ruksh guna* and *lekhana* of *kapha* take place with the help of *tiksha guna*. Due to *laghu guna utsah* and *sfurti karma*, we see the maturation of the follicle and movement of the fallopian tube to pick up the secondary oocyte and see the *Beejotsarga*. *Jyotishmati* and *vaca* (50%) have *usna veerya*, and *asana* and *sarjrikakshara* drugs have *sheet veerya*. Due to *sheet veerya* having properties like *kledana*, *jeevniya*, *guru*, *balya*, and *vrishya*, *karma*, we find follicle maturation along with endometrial thickness. Due to *ushna veerya* having properties like *dahana*, *pachana*, and *vilayana-like karma*, we also see the *LH surge* before the 24 hrs of the ovulation, which is responsible for the ovulation. *Dahana karma* helps in the process of thinning and degeneration of the cyst wall and helps in the production of proteolytic enzymes. *Pachana karma* helps in the activation of *plasmin*, which generates active *collagenase*, leading to the degeneration of the collagen in the cell wall and forming the stigma and lysis of the wall of the *gryphon follicle* takes place, and the release of secondary oocyte through the opening. *Jyotishmati* and *Vacha* drugs are *medhya*. So, they directly act on the *CNS* and regulate the *HPO axis*. Drugs also have *lekhniya karma*, so they scrape out the *kapha* and manage obesity with *PCOS* by reducing insulin resistance. All the drugs have *artavajanana*, *garbhashaya shotha*, *yonisrava*, *yonidoshahara*, and *artavajanana* properties, so they act according to that. Interplay and coordination between the above-discussed principles will result in ovulation.

DISCUSSION ON RESULTS:

Menstrual interval – Group A showed 48.48 % relief in *menstrual interval*, while patients of Group B showed 81.82% relief in *menstrual interval*. Statistical analysis of patients of both groups showed highly significant results ($p < 0.001$) in *menstrual interval*.

Duration of bleeding- Group A showed 50 % relief in the duration of bleeding, while patients of Group B showed 54.84% relief in the *duration of bleeding*. Statistical analysis of patients of both groups showed highly significant results ($p < 0.001$) in the *duration of bleeding*.

Amount of bleeding - Group A showed 47.22% relief in the amount of bleeding, while patients of Group B showed 78.38% relief in the *amount of bleeding*. Statistical analysis of patients of both groups showed highly significant results ($p < 0.001$) in the *amount of bleeding*.

Dysmenorrhea – Group A showed 25% relief in *dysmenorrhea*, while patients of Group B showed 85% relief in *dysmenorrhea*. Statistical analysis of patients of group B showed highly significant results ($p < 0.001$) in *dysmenorrhea*.

Follicular size – Group A showed 94.87 % relief in *follicular size*, while patients of Group B showed 95.24% relief in *follicular size*. Statistical analysis of

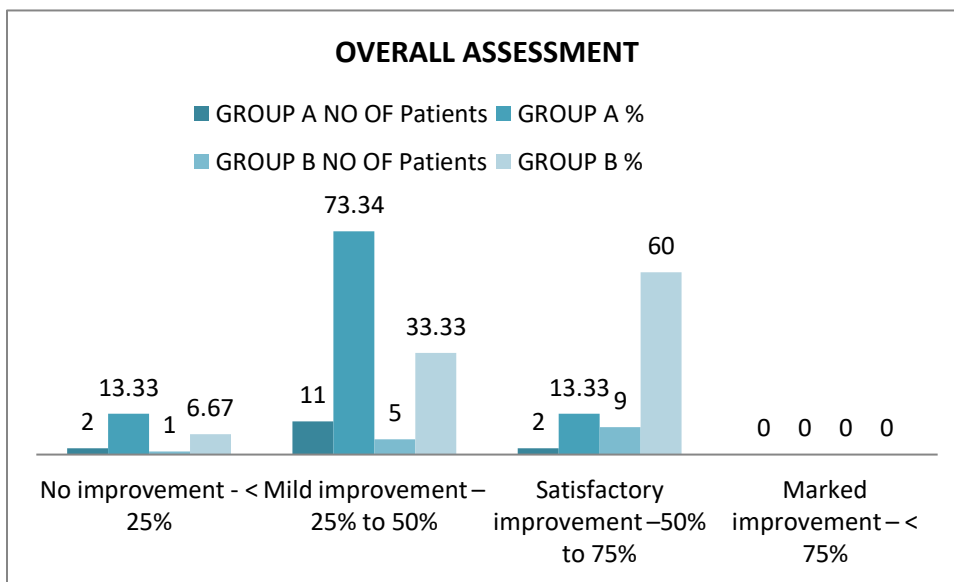
patients of both groups showed highly significant results ($p < 0.001$) in *follicular size*.

Ovulation Group A showed 46.43 % relief in *ovulation*, while patients of Group B showed 46.43% relief in *ovulation*. Statistical analysis of patients of both groups showed highly significant results ($p < 0.001$) in *ovulation*.

OVERALL ASSESSMENT OF RESULTS :

In some parameters like menstrual interval, duration of bleeding, amount of bleeding and in dysmenorrhea in group A 48.63%,50%,47%, 25% and in group B 81.63%,55.07%,78.5%.84.96% shows the percentage of improvements by seeing this data we can say statistically that group B is significant than group A, However, the change in rate in follicular size and ovulation in groups A and B is 95% and 46.5%, respectively. This means that both parameters show significant results and are equally effective in this parameter. In my overall assessment, 9 patients in group B showed satisfactory improvement, and 2 patients in group B showed satisfactory improvement. By seeing this assessment, we can conclude that group B, i.e. treated by Jyotishmatiyadi kalka, shows significant results clinically with the help of the above said that the probable mode of action of the drug

GRAPH NO-1



CONCLUSION

The entire work under the title Clinical study on the effect of *Jyotishmatyadi Kalka* on Nashtartava w.s.r anovulation can be concluded as an attempt is made to evaluate the impact of *Jyotishmatyadi Kalka* in the management of Nashtartava w.s.r to anovulation.

Based on observation and parameters assessed during the study period, data recorded in a separate case sheet performance was analysed statistically with suitable parametric and non-parametric tests. Finally, it was found that group B (trial) had better results than group A, whereas both were equally effective in follicular development. In Ayurveda, no such oral treatment is present with satisfactory proven data, hence Bhavpraksha in the context of street roga

Chikitsa mentioned Jyotishmatiyadi yoga for ovulation with benefit as “Kusuma Janyate”.

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