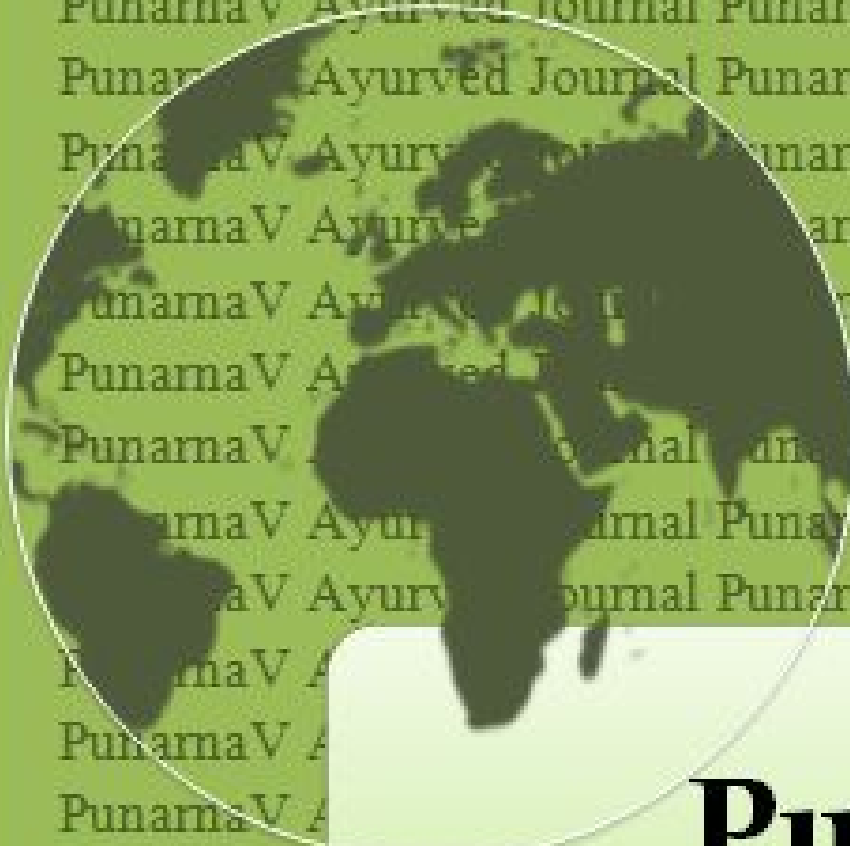


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VANDHYATVA W.S.R. TO FEMALE INFERTILITY**

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**CLINICAL STUDY TO EVALUATE EFFECT OF BRAHMI GHRITA
UTTARA BASTI IN VANDHYATVA W.S.R. TO FEMALE INFERTILITY**

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ABSTRACT:

According to Ayurveda, cause of Vandhyatwa (Female Infertility) is mainly due to vitiated Vata. Sneha and Basti are the best treatment for vitiated Vata, in this aspect, Basti is considered to be the best treatment for the present research which is related to Yoni gatavikara for which Uttar basti is a specialized form of basti treatment. Uttar basti imparts excellent qualities to the reproductive system (Ch. Si. 10). It is a procedure where the drugs are administered directly in to the Garbhashaya (Su. Chi.37). Therefore Uttar basti with Sneha will definitely act on yonigatavikara and hence on female Infertility. So the following study was done on 10 patients of Vandhyatwa (Female infertility) in which Brahmi Ghrita given as Uttar basti drug.

Result showed significant improvement in Chief Complaints, many Ayurvedic symptoms and in Biophysical parameters.

KEY WORDS: *Vandhyatwa, female infertility, Brahmi Ghrita, Uttar Basti,.*

INTRODUCTION

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Now a day's more and more couples are showing up at fertility clinics around the world, searching for answers, hope and eventual parenthood. Despite the enormous growth in population it should be noted that humans are not very efficient at producing babies. However being born a human is blessing and reproduction is double blessing. To have your own family is a universal dream.

Reproductive endocrinologists, the doctors specializing in infertility, consider a couple to be infertile if: 1

- The couple has not conceived after 12 months of unprotected intercourse if the female is under the age of 35.
- The couple has not conceived after 6 months of unprotected intercourse if the female is over the age of 35 (declining egg quality of females over the age of 35).
- The female is incapable of carrying a pregnancy to term.

TYPES OF INFERTILITY²

1. Primary infertility: It denotes those patients who have never conceived.
2. Secondary infertility: It indicates previous pregnancy but failure to conceive.

Conception depends on the fertility potential of both the Male and Female partners. Infertility is a problem of neither the male nor the female but both are equally responsible. The contribution of both of them is as follows:³

Male	30%
Female	40%
Both	20%
Unexplained	10% (D. C. Dutta)

According to Ayurveda the four main factors required for the proper conception are *Ritu (RituKal)*, *Kshetra* (Fertile uterus), *Ambu* (Amniotic fluid), and *Beeja*(viable Ovum and Sperm). Absence or any abnormality in any of the above factors may cause *Vandhyatva*.⁴

AIMS AND OBJECTIVES OF THE STUDY

1. To provide safe, cheapest, non-surgical treatment .
2. To avoid the undue social and psychological stress due to infertility.

3. To evaluate the effect of *Uttar Basti* with *Brahmi Ghrita* in female infertility.

DRUG AND PROCEDURE

SELECTION

In Ayurveda the word "Yoni" refers to reproductive organs collectively. Without *Vata* yoni never gets spoilt. *Vatadosha* is the governing factor of the whole reproductive physiology; therefore any vitiation in *Vata* will certainly affect the normal phenomenon of fertility⁵. Female infertility is a *Yoni GataVikara* and pacification of vitiated *Vata* is the best cure of *Yoni gatavikaras*, and we know that the *Snehais* the best treatment for *Vata*.

A lot of research work has been done on many of them but some of them are still untouched, one of them is "**Brahmi Ghrita**" described in *Ashtang hridaya uttarasthanam adhyaay 6 /23-25*. It has been indicated as a useful medicine for *Vandhya Stri* and for *Unmaad, Kushtha, Apasmara*⁶. Taking reference from there, this specific *Ghritha* has been selected for treatment.

Keeping all these views in mind a clinical study was planned to evaluate the efficacy of *Uttar basti* with *Brahmi Ghrita*. So to find a sure shot treatment of *Vandhyatva*, without any side effect, *Uttar Basti* is selected.

MATERIALS AND METHODS

1. Selection of Patients

The Study was conducted on 10 clinically diagnosed and confirmed patients of Infertility at P.G. Department of *PrasutiandStrirogaof* N.I.A. Jaipur (Raj.). Patients were selected with consent, from O.P.D. / I.P.D. of NIA hospital, Jaipur and were examined thoroughly as per the case sheet specially prepared for this clinical study.

(i) A special proforma was prepared incorporating all signs and symptoms based on both *Ayurvedic* and Modern description.

(ii) A detailed clinical history was taken and complete physical examination of each patient was done on the basis of proforma.

INCLUSION CRITERIA

1. All primary and secondary cases of infertility
2. Age group between 20 to 35 years
3. Male counterpart should be normal in all aspects
4. Duration of infertility less than 10 years

EXCLUSION CRITERIA

1. Infertility more than 10years.
2. Female less than 20 years and more than 35 years of age.

3. Congenital anatomical defect.
4. Surgical cases of Infertility.
5. Infertility due to abnormality in male partner.
6. Infertility due to chronic systemic diseases.
7. Tubal blockage.

2. Management of the patients

During the treatment period, patients were admitted to IPD and given *light diet and ushnodaka*.

For clinical trial 10 patients selected and given *UttaraBasti* with *Brahmi Ghrita*

Route - Intrauterine

Kala - *Ritukala*

Dose - 5ml

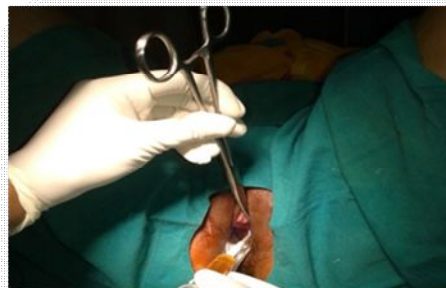
Duration - 3 days alternatively in a month for consecutive three cycles (After 24 hours of cessation of menses)

Uttarabasti will be started after one *Niruha (Dashmoola Kwatha)* and one *Anuvasana Basti (Dashmoola oil)*.

Image 1: Instruments Used in Uttara Basti



Image 2: Uttara Basti Procedure



3. Criteria for Diagnosis - Criteria for diagnosis was based on-

Investigation (Before Treatment)

Medical History and Physical Examination

Pelvic Examination to look for abnormalities, or infection

1. Blood test - Hb%, TLC, DLC, ESR, VDRL, Montoux test, RBS/FBS (if needed)

2. Urine test - Routine and Microscopic

3. Routine tests –

1. X-ray chest PA view (if needed)
2. TSH, FSH, LH (if needed)
3. Pap smear (if needed)

4. Special test for infertility.

1. Semen Analysis of male partner
2. Cervical mucus (1) Spinnbarketttest (2) Fern Test
3. Post coital test

4. USG- Pelvis and Adenexa , Follicular study (if needed)
5. HSG or SSG
6. Antisperm Antibody Test (if needed)

Specific Investigations: (Before Treatment)

1. Cervical Mucus Study for Amount, Viscosity, Spinnbarkeit, Ferning and PCT.
2. Endometrium Biopsy (wherever required) to assess the nature of Endometrium. (if needed).
3. Hysterosalpingography- (wherever required) to rule out tubal patency.
(In Proliferative phase- 2 days after the bleeding stops).
4. Transvaginal Sonography (for Follicular Size Study).
5. Laparoscopy (If required)

Investigation (After Treatment)

1. Cervical Mucus Study for Amount, Viscosity, Spinnbarkeit, Ferning and PCT.
2. Hormonal Study (After treatment if needed)
3. Transvaginal Sonography (D 10-D18 for Follicular Size Study)
4. Urine Pregnancy Test (Gravindex Test) - After 7th day of missed period.
5. USG-to see the improvement.

5. Follow Up

1. Follow up done monthly up to two months after the completion of Therapy.

2. Treatment completed / not completed.

6. Result Assessment

1. Subjective improvement-Feeling of well-being and relief in associated complaints.
2. Objective Improvement- Clinical recovery and Goal Achievement i.e. Conception.

Follow Up Study -

After completion of trial follow up was done monthly upto two month and result assessed in following parameters.

Note – During treatment intercourse was advised during ovulation period mainly.

Criteria for Assessment - To facilitate the statistical analysis of the efficacy of therapy, four grade scoring system from 0 to 4 (zero to four) was adopted. Effect of treatment depends on four grade (from 0 to 4) scoring system of-

- Fern test
- Post coital test
- Menstrual bleeding –
- Amount of blood loss during menstruation
- Pain during menstrual bleeding
- Interval of menstrual cycle

Most importantly on the basis of conception.

**CLINICAL STUDY TO EVALUATE EFFECT OF BRAHMI GHRITA UTTARA BASTI IN
VANDHYATVA W.S.R. TO FEMALE INFERTILITY**

Overall effect of treatment -

The score of individual symptoms were obtained before and after treatment. And the total effect of therapy was assessed accordingly in term of

- Conception.
- Increased in size of Ovarian follicle

- Improvement in the quantity and characters of cervical mucus
- Improvement in menstrual parameters.
- Improvement in leucorrhoea.
- Unchanged

Table No. 1 : Effect of therapy on follicular study-

The follicular study in this work is done with USG per Abdomen. Follicular Study improve in 50.00% patient.



Follicular study	No follicle both side		Small follicle(s) and unruptured		follicle(s) size normal and unruptured		follicle(s) size normal and ruptured	
	BT	AT	BT	AT	BT	AT	BT	AT
No. Of Patient	3	0	3	3	4	5	0	2
%	30	00	30	30	40	50	00	20

Table No.2 : Effect of therapy on size of endometrium in follicular study-

Endometrial size improved in 50.00% of patient.

Endometrium Size	≤ 4.9 mm		5- 7.9 mm		8-10.9 mm		≥ 11 mm	
	BT	AT	BT	AT	BT	AT	BT	AT
No. Of Patient	0	0	3	0	6	5	1	5
%	00	00	30	00	60	50	10	50

• **Effect on fern test -**

On 14th day fern pattern formation in cervical mucus due to crystallization of Sodium chloride shows, the estrogenic effect in mid menstrual phase prior to ovulation. Positive fern pattern before and after treatment shows that drug have no effect on change in fern pattern in the view of physiological changes in infertility on the 14th day of menstrual cycle.

On 22nd day of cycle ,in all the patient, before treatment mean score was 0.7 and after treatment it was 0.6 with 14.28% relief showing statistically not significant (P >0.1) result.

According to modern concept disappearance of fern pattern on 22nd day shows presence of increased progesterone level after ovulation. Thus disappearance of ferning is presumptive evidence of ovulation.

According to *Ayurvedic* point of view fern pattern can be taken as the function of the proper *Agni*. So when there will be proper functioning of *Agni* there may be proper fern pattern.

Effect of therapy on cervical mucus on 14th day in spinnbarkeit test-

it is improved in 80.00 % of patient.

Effect of therapy on post coital test in 14th day –

In 100.00% of patient of sperm was motile and adequate in amount.

Effect of therapy on dysmenorrhoea –

10% of patients were having mild and 90.00 % were having moderate dysmenorrhoea before treatment while after treatment 90.00% had mild dysmenorrhoea and only 10.00% of patients have moderate dysmenorrhea.

Table No.3 :Effect of therapy based on conception -

Out of 10 patients 2 patients got conception during or after treatment.

S. No.	Type of administration of drug	Total no. of pts.	Effect based on conception		
			conception	No conception	%relief
1	Uttar Basti	10	02	08	20.00

DISCUSSION

As the subject matter discussed in *Ayurveda*, it becomes necessary to study, understand and prove them particularly in light of modern scientific parameters in the present era. So the field of research in the *Vandhyatva* opens broad scope for a worker.

Discussion is divided in the following headings

-
- Conceptual discussion
- Drug discussion
- Clinical discussion
- **Conceptual discussion**
Importance of *Shukra* (spermatozoa), *Artava* (ovum), healthy state of female reproductive system, nutritional and psychological status of female for having conception has been accepted by all the ancient treatise of *Ayurveda* as a prerequisite for conception⁷.

Acharya Sushruta has propounded four factors responsible for *Garbhotpatti*, which have to be studied in *Vandhyatva*. According to this the four main factors required for the proper conception are *Ritu* (fertile period), *Kshetra* (Fertile uterus), *Ambu* (Amniotic fluid), and *Beeja* (viable Ovum and Sperm)⁸. Absence or any

abnormality in any of the above factors may cause *Vandhyatva*⁹.

The *Yoni* never gets spoilt without vitiated *Vata*. *Vandhyatva* has also been described in eighty types of *VataVikaras*. The Main reasons for *Vata* vitiation are *Margavarodha*, *Dhatukshya* and *Svanidanaprakopa*.

In *Vandhyatva* there is *Dushti* of *Vata Dosha* due to *Svanidanaprakopa*. The treatment should be directed to the treatment of *Vata* and eradication of the cause.

For *AvritaApana Vayu* (*Margavarodha*) with *KaphaDosha*, The treatment should be *Agnideepaka*, *Vatanulomaka*, *Srotoshodhana* and *Pakvashaya Shuddikara*.

In case of association or *Avarana* of *Pitta Dosha Daha*, *Srava*, *Shosha* etc occurs. Which required *Pittashamak*, *Sheet* and *Brimhana* treatment?

Sneha- kalpana is the best treatment for the *Ruksha Vatadosha*. *Ghrta* is also said *Vata shamaka*, *Pitta shamak*, *Brimhana* and with *Samskaranuvartanaguna* it also overcomes the vitiated *Kaphadosha*. *Basti* is the main treatment for the vitiated *Vata*, and *Uttarbasti* is the specialized *basti* specially for *Yoni Vikaras*

i.e. *Vandhyatva*. In classics at so many places *Uttara basti* is given as a treatment of *Vandhyatva*, so here it is selected. Here

Uttarabasti with *Brahmi Ghrita* has been selected.

DRUG AND PROCEDURE DISCUSSION

PROBABLE MODE OF ACTION OF DRUG

- ✓ Main ingredients of *Brahmi Ghrita* are *Brahmi*, *Shankhapushpi*, *Saptala*, *Argvadha*, *pippali*, *marica*, *shunti*, *goghrita*etc¹⁰.
- ✓ These drugs are mainly having *Vatapittashamaka*, *Vrishya*, *Balya*, *Garbha sthapaka* properties.
- ✓ Majority of the drugs are having *Rasayana* property.

Probable Mode of Action of Uttara Basti

BastiChikitsa is the best treatment for *VatikaVikara*. *Vandhyatva* is also said to be one of *VatikaYoniroga*. The *Vatanulomaka* and *Srotoshodhana* effect of *Basti* is well known. But it also acts as stimulant by contents used in formation of *bastidravya*.

Uttarabasti which is given in *Garbhashaya* i.e. *Artavahasrotas* stimulates the *srotas* as well as the *Beejagranthi*. By the stimulation of ovary, the *Sang* in the *Beejagranthi* is removed and *Vata* performs its proper function i.e.

Vibhajana. So *Vibhajana* of *Beejastarts*, which in turns may lead to ovulation.

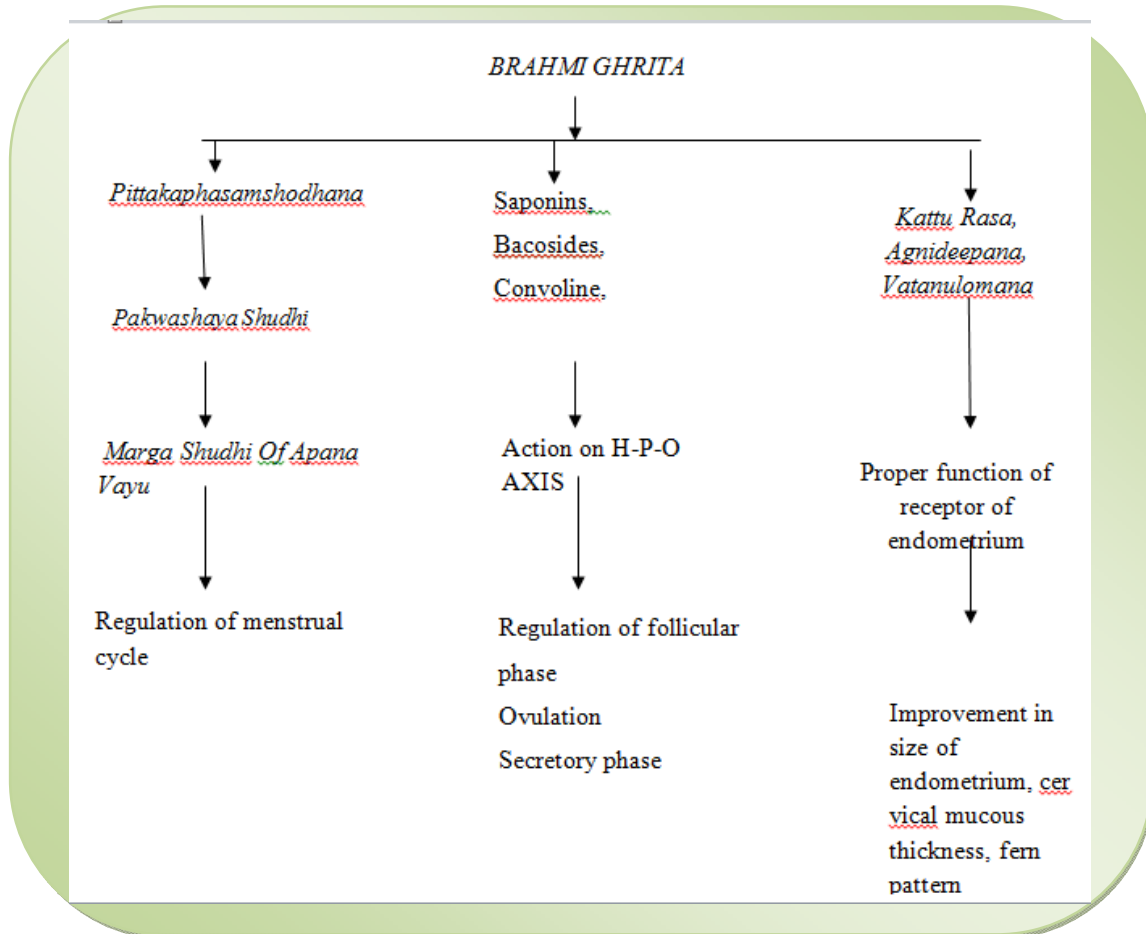
Due to *Sukshunaguna* of *Ghrita*, it enters the *Srotasa*(micro channels). The medicated *Ghrita* when enter through the intrauterine route, it enters the *ArtavahaSrotasa* and due to its *Snigdha*guna it causes the *Vatashamana*. *Uttarabasti* may itself stimulates the organs and also increases the blood supply, which may favour absorption of drugs and excretion of waste products i.e. *Sthanika karma*.

Basti in general regulates the nervous control and *Uttarabasti* regulates the ANS controlling the pelvic organs. There by gives proper feed back to the Hypothalamus, the governing body of H-P-O axis, By governing the H-P-O axis, it helps in the maintenance of Follicular growth, Ovulation and Corpus luteum regulates the vitiated *Dosha*, *Malas* and *Apanavayu*.

The result shows improvement in the follicular size, endometrial thickness, fern pattern, cervical mucous thickness and in

**CLINICAL STUDY TO EVALUATE EFFECT OF BRAHMI GHRITA UTTARA BASTI IN
VANDHYATVA W.S.R. TO FEMALE INFERTILITY**

conception. Thus we can recommend management of *Vandhyatva*.
the *Uttara Basti* with *Brahmi Ghrita* in the



CLINICAL DISCUSSION

The study shows that Uttar basti of Brahma ghritagives better response in menstrual cycle- interval, duration, flow, Dysmenorrhea, Leucorrhoea and last and improvement of follicular size, important is conception. endometrium , fern pattern, post coital test,

CONCLUSION

In All the patient no unwanted effect was observed during and in follow-up study and factors towards fertility enhances so *Uttara Basti* with *Brahmi Ghrita* can be recommended for the management of Unexplained cases of *Vandhyatva*.

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