

An Ayurvedic Clinical Approach to Anovulatory Infertility: Efficacy of Lashun Tail Matra Basti combined with Apamarga Churna

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ABSTRACT

Every organism in this universe reproduces to continue his existence. Both male and female play important role in reproduction. *Putraishna* (desire of child) is the strongest desire of all the married couple. Infertility is defined as failure to conceive within one or more years of regular unprotected coitus. Primary infertility denotes those patients who have never conceived and secondary infertility indicates previous pregnancy but failure to conceive subsequently. According to the WHO report about 2-10% of couples worldwide are unable to conceive primarily and about 60-80% couples in the world are infertile. Ovulatory dysfunctions are the major problem in approximately 40% cases of female infertility (Infertility of Leon Sperrof). Among other factors of female infertility, tubal factors are 25-35%, uterine factors are 10% and cervical factors are 5%. In current study, efforts have been made to study the effect of *Lashun Tail Matra Basti* and *Apamarga Churna* on Anovulation (*Beeja Dushti*). Here present study is based on the reference available in *Kashyapa Samhita* where it is said that *Lashun* is *Vandhyatanashak* and in *Atharvaveda* it is said that *Apamarga* is *Apatyatakarak*. Study was done on 40 patients of female infertility having anovulatory factor.

Keywords: *Vandhyatwa, Anovulation, Lashun Tail, Matra Basti, Apamarga Churna, Infertility, Ayurveda*

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1. INTRODUCTION

The desire of women for children is usually stronger than self interest in beauty and figure and may be stronger than the claims of career. Childlessness may be tragedy to the married women and can be a cause of marital upset as well as of personal unhappiness and ill health. Infertility is a global issue of an issue. 10-15% of marriages prove to be childless.

According to Acharya Charak, the woman is root of offspring.¹

.....यदपत्यानां मूलं नार्यः परं नृणाम् (च. चि. 30/5)

Acharya Sushruta has described four essential factors like *Ritu* (Fertile period), *Kshetra* (Female reproductive organ should be normal), *Ambu* (Proper nutrient fluid) and *Beeja* (Viable ovum and sperm) to achieve conception.²

ध्रुवं चतुर्णां सान्निध्यात् गर्भः स्यात् विधिपूर्वकः।

ऋतुक्षेत्राम्बुबीजानां सामग्र्यादंकुरो यथा॥ (सु. शा. 2/35)

Presence of any abnormality in any of the above said factors causes *Vandhyatwa* (*Tridoshaja Vyadhi*). Among these factors, *Beeja* is the core stone of the female reproductive process and in absence of this factor *Garbha* can't occur in spite of the proper *Ritu*, *Kshetra* and *Ambu*. *Dushti* in the *Beeja* formation may be considered as an ovulatory dysfunction.

Modern science treatments including ovulation induction, hormonal therapy, assisted conception and surgical treatments may produce iatrogenic problems (Ovarian cancer, Endometrial cancer, Breast cancer, Gallbladder disease, venous thromboembolism) in the body.³ After the failure of both medical as well as surgical method, the next line of treatment is

ART. The most common complication of ART is OHSS (Ovarian hyperstimulation syndrome).

In *Vandhyatwa*, due to vitiation of *Kapha*, there is no proper development of follicles occurs and due to vitiated *Vata* premature luteinisation of follicles occurs leading to Anovulation. Here, the function of *Pitta* is somewhat suppressed by *Vata* and *Kapha*, so there is reduced rate of aromatization (*Pitta* being not enough to convert increased androgens into oestrogens causing androgen excess) and no maturation of follicles occur.

Among the three *Doshas*, *Vata* plays a major role in physiology and pathology of reproductive tract^{4,5} and *Basti* is considered to be the best treatment for *Vataja* disorders.⁶

2. MATERIAL AND METHODS:

Selection of patients:

Clinically diagnosed patients of *Vandhyatwa* (Anovulation) were registered from OPD & IPD of PG Department of *Prasuti Tantra & Sri Roga*, University Post Graduate Institute of Ayurveda Studies and Research, DSRRAU, Jodhpur. Kani Ram Salag Ram Tak Satellite Hospital, Mangra Punjala (Jodhpur), various surveys and camps conducted by university as per fulfilling the criteria of inclusion. Required medicine were procured from pharmacy of DSRRAU, Jodhpur.

Inclusion criteria:

Primary or secondary cases of infertility other than exclusion criteria.

Age group between 20 to 40 years.

Infertility due to polycystic ovarian syndrome (PCOS).

Male counterpart should be normal in all aspects.

Exclusion criteria:

Surgical factors including cervical stenosis, cervical polyp, fibroid uterus etc.

Congenital anatomical defect.

Patient suffering from severe infection and any systemic disorder.

Infertility due to tubal, peritoneal, uterine and cervical factors.

Withdrawal criteria:

During the course of trial if any serious condition occurs that requires urgent treatment.

Patient herself wants to withdraw from the clinical trial.

Non-compliance of the patient.

Ethical Committee Clearance:

As this was a clinical research, Institutional Ethics Committee (IEC) approval was taken prior to initiation of research & its letter No. is DSRRAU/UCA/IEC/19 20/278.

Selection of drug:

As per *Kashyapa Samhita*,⁷ *Lashun* (*Allium sativum* Linn) is *Vandhytanashak*, it produces *Shukra*, *Shonit* and *Garbha* and is best for stability of life. *Matra Basti*, being capable of is most effective in *Nashtapusha/Akarmaya Beeja* as said by *Aacharya Kashyapa*. *Apamarga* indicated in *Atharvaveda*⁸ has *Apatyakarak*, *Vata-Shamana*, *Kapha Pitta Samshodhana*, *Rakta Shodhaka*, *Rakta Vardhaka*, anti-oxidant, Immunomodulator properties. Hence keeping this view in mind, *Lashun Kalpaw* was chosen for *Shodhana* and *Apamarga Churna* was chosen for *Shamana* in the present study.

Safety Measure:

For the safety of the study participant, the quality assured drugs were manufactured and used complying the standards developed by UPGIAS&R pharmacy and approved by the Ayurvedic Pharmacopoeia Committee (APC). Prepared drugs were analysed at Government Drug Testing Laboratory Punjab, Patiala and complies with the limits and standards as per APC.

Method of research:

In the present clinical trial, 42 patients were registered in a single study group; but 2 of them withdrew before the trial was completed. Hence present study was completed on 40 patients in a single arm trial.

Posology:

Dose, duration and route of administration are placed at **Table 1**.

Name of drug	<i>Lashun Tail Matra Basti</i>	<i>Apamarga Churna</i>
Number of patients	40	40
Type of study	Open	Open
Duration of drug trial	90 days (3 consecutive cycle)	90 days (3 consecutive cycle)
Dose	60 ml	2 gm BD
Duration	Once a day	Twice a day
<i>Anupana</i>	-	<i>Ushnodak</i>
Route	Per rectum	Oral
Randomization	Simple random sampling	Simple random sampling

Investigations: Table 2-

Before treatment	After Treatment
Routine laboratory test: Haematological: CBC, ESR, VDRL, HIV, HBsAg Blood Sugar LFT, RFT Urine R/M Thyroid Profile Specific tests Cervical mucus (1) Spinn Barkeit (2) Fern Test Trans Vaginal Sonography (TVS) Hormonal assays - Serum FSH, LH and PRL	Urine Pregnancy Test – after 7 th day of missed period USG- To Confirm Pregnancy

TVS was carried out from day 9th of menstrual cycle up to at least 22nd day of the cycle to diagnose anovulation according to the growth of a follicle. In all the patients, TVS was carried out for 3 consecutive cycles for final diagnosis.

To evaluate male factor, semen analysis of the partner was carried out.

Follow up study:

Cases were followed up fortnightly during the trial.

After one month of completion of the trial, the cases were followed up.

Criteria for assessment:

The result was assessed on the basis of follicular study (ovulation study)-

Primary Outcome Measures: Ovulation rate, menstrual cycle regularity, endometrial thickness (TVS), conception.

Secondary Outcome Measures: Hormonal profile (FSH, LH, PRL, TSH), ovarian volume, psychological well-being, adverse events.

Assessment of overall effect of the therapy: (Table- 3)

The assessment of overall effect of therapy was grouped into 5 types:

Sr. No.	Effect of Therapy	% Improvement
1.	No change	Up to 25% relief in signs and symptoms

2.	Mild improvement	26-50% relief in the signs and symptoms
3.	Moderate improvement	51-75% relief in the signs and symptoms
4.	Marked improvement	Above 76%
5.	Complete remission	100% relief in the signs and symptoms

3. OBSERVATIONS:

In the present study 18 (45.00%) patients were in the age group of 20-25 years, 38 (95.00%) patients belonged to Hindu religion, 34 (85.00%) patients were housewives, 17 (42.50%) patients were from middle class, 38 (95.00%) patients had no family history of infertility, 32 (80.00%) patients had taken allopathic treatment, majority of the patients i.e., 27 (67.50%) had active marital life between >1-5 years, 24 (60.00%) patients were nulligravida, 32 (80.00%) were nullipara, considering the data of frequency of coitus, 30 (75.00%) patients had frequency of intercourse 3-5 times/week, 28 (70.00%) patients were not having any significant past medical history, 8 (20.00%) patients had history of PCOS and 4 (10.00%) patients had history of thyroid disease, maximum patients i.e., 31 (77.50%) had 1-5 years chronicity of infertility. 7 (17.50%) patients were suffering from severe stress.

Onset of menarche was found in 32 (80.00%) patients in the age of 13-15 years, 22 (55.00%) patients were having regular menses and 18 (45.00%) patients were having irregular menses, 23 (57.50%) were having moderate quantity of menstrual flow, 13 (32.50%) patients were having scanty menses and rest 4 (10.00%) patients were having excessive quantity of menstrual flow, 12 (30.00%) patients were having 1-2 days duration of menses, 8 (20.00%) patients had 6-7 days duration, 6 (15.00%) patients had 46-60 days interval and 6 (15.00%) had >60 days interval of menses. 10 (25.00%) patients had BMI between 25-30 (overweight), 5 (12.50%) patients had BMI >30 (obese), 52.50% patients were having poor appetite, maximum 18 (45.00%) patients had *Vata-Kapha Prakriti*, 33 (82.50%) patients had *Taruni Vaya* (17-32 years).

Maximum no. of patients i.e., 19 (47.50%) were having 12-20 mm sized follicles, 16 (40.00%) patients had <12 mm sized or no dominant follicles, 5 (12.50%) patients had 20 mm sized and unruptured follicles and none of the patients were ovulating. 20 (50.00%) patients were having endometrial thickness between 4-5.9 mm, 16 (40.00%) patients had 6-7.9 mm, 2 (5.00%) patients had <4 mm size and 2 (5.00%) patients had ≥8 mm size endometrial thickness. 20 (50.00%) patients' fern test were showing primary and secondary stem, 11 (27.50%) patients were showing tertiary and quaternary stem, 9 (22.50%) patients were showing atypical fern formulation and none of the patients were showing 'no crystallisation pattern' of fern test. 23 (57.50%) patients were having cervical mucus length between 1-4 cm, 9 (22.50%) patients were having <1 cm, 8 (20.00%) patients were having 5-8 cm and none of the patients were having >8 cm cervical mucus length.

4. RESULT:

Table- 4- 'Subjective parameters'

Variable	Mean			% of Improvement	S.D.	S.E.	'p'	Result
	B.T. (+)	A.T. (-)	Mean Diff.					
Interval of menstrual cycle	38	12	2.6	68.42	0.3162	0.1000	0.0029	S
Duration of menses	31	06	2.5	80.64	0.5270	0.1667	0.0101	VS
Psychological stress	71	27	4.4	61.97	0.3262	0.1333	0.0173	S

Table-5- “Objective parameters”

Variable	Mean			% of Improvement	S.D.	S.E.	‘p’	Result
	B.T. (+)	A.T. (-)	Mean Diff.					
Follicular study on TVS	93	30	6.3	67.74	0.3162	0.1000	0.0029	S
Endometrial thickness	62	14	4.8	77.41	0.4218	0.1667	0.0101	VS
Fern test	82	24	5.8	70.73	0.5676	0.1795	0.0173	S
Spinnbarkeit test	81	24	5.7	70.37	0.5676	0.1795	0.0173	S

Average percentage improvement:

Average percentage improvement of therapy was 66.76%. Maximum improvement was seen in duration of menses i.e., 80.64%. Improvement in endometrial thickness was 77.41% and improvement in follicular study was 67.74%.

Table-6- Showing average % improvement of therapy:

Sr. No.	Parameters	% Improvement
1.	Follicular study on TVS	67.74%
2.	Assessment of endometrial thickness	77.41%
3.	Fern test	70.73%
4.	Spinnbarkeit test	70.37%
5.	Interval of Menstrual Cycle	68.42%
6.	Duration of Menses	80.64%
7.	Psychological stress	61.97%
8.	Hemoglobin (Hb%)	7.56%
9.	RBC Count	9.82%
Average percentage improvement		66.76%

Overall effect of therapy:

Comparing the improvement in various subjective, objective and laboratory parameters of *Vandhyatwa* (Anovulation) in the trial, it was found that 17 (42.50%) patients showed marked improved, 12 (30%) patients were moderately improved, 06 (15%) patients were mildly improved, 05 (12.50%) patients showed complete remission and no patients (00%) were found unchanged. In study group, ovulation was seen in 17 patients and out of 40 patients, 5 patients conceived after the

completion of trial.

Table-7- Showing the overall effect of therapy:

Sr. No.	Effect of Therapy	% Improvement	No. of Patients	Percentage
1.	No change	Up to 25%	00	00.00%
2.	Mild improvement	26-50%	06	15.00%
3.	Moderate improvement	51-75%	12	30.00%
4.	Marked improvement	Above 76%	17	42.50%
5.	Complete remission	100%	05	12.50%

Total effect of the therapy on ovulation:

After treatment 17 patients (42.50%) of study group showed rupture of follicle (Ovulation) while 23 patients (57.50%) had un-ruptured follicle (Anovulation).

In the follow up, it was found that 4 more patients had ovulation. This data showed that *Lashun Tail Matra Basti* and *Apamarga Churna* were not only effective during treatment but also have long term better effects.

Conception:

In study group, 5 patients (12.50%) conceived after the completion of trial.

5. DISCUSSION:

Infertility (Anovulation) is one of the burning issues among women of reproductive age. Anovulation may be diagnosed through (1) Menstrual disturbances, (2) Clinical and/or biochemical signs of hyperandrogenism, (3) Cervical mucus study, (4) Ultrasonography (TVS) and (5) Hormonal assay.⁹ Infertility is due to a result of changes in lifestyle such as irregular working hours, late marriage, professional and social stress. It will affect all aspects of people's lives which can cause reduced quality of life especially through the negative psychosocial consequences like marital instability, anxiety, depression.¹⁰

42.50% patients were suffering from moderate stress, anxiety and stress disrupt the HPO axis, which in turn disrupts ovulation. 80.00% patients had taken allopathic treatment shows that patients come to Ayurveda as a result of unsuccessful or expensive treatments. 20.00% patients had history of PCOS, approximately 2/3rd of PCOS affected women will not ovulate on a regular basis.¹¹

77.50% of the patients in the current study had chronicity of 1 to 5 years. It demonstrates that Ayurvedic line of treatment is preferred early on due to the adverse effects of allopathic medication and aversion to repeated surgical procedures. 25.00% patients had BMI between 25-30 (overweight), 12.50% patients had BMI >30 (obese). A study reported that the time to conceive is longer in women with BMI >25 kg/m² or <19 kg/m². High BMI is also associated with adverse pregnancy outcomes.

Lashun Tail has *Artavajanna*, *Vatakaphashamaka*, *Garbhashaya Shodhaka*, *Vajikarana*, *Vatanulomana*, *Medohara* properties. *Nashatabeeja/Akarmanya Beeja* are *Anuvasana Sadhya Vyadhi* and *Matra Basti* is a type of *Anuvasana Basti*. *Apamarga Churna* have *Vatanulomana*, *Medohara*, *Chhedana*, *Lekhana* properties that will cure the disease by treating etiological factors of Anovulation. *Balya*, *Vrishya*, *Rasayana* and *Artavajanna* properties of both the trial drugs help in proper formation and functioning of *Artava* and *Beeja Nirmana*. It may be hypothesized that both the treatment modalities may prevent premature luteinisation by decreasing LH level. Thus, normal FSH level stimulates growth and development of follicle.

Phyto-estrogenic properties are found in *Lashun* and *Shatavari*. Depending on the target tissue, phytoestrogens can have both estrogenic and anti-estrogenic effects, which serve to increase hormone production. It's having emmenagogue which promotes menstrual flow, digestive and carminative help in metabolism, while antihypertensive, antidiabetic and antioxidant medications help to maintain blood sugar levels, eliminate oxidative stress and anti-hyperlipidaemic property corrects BMI.¹²

Phyto estrogenic properties of *Apamarga Churna* help to maintain hormone level and leads to regularity of menstruation and ovulation. The hepatoprotective, antihypertensive, cholesterol lowering and antioxidant effects help to cure the liver

dysfunction resulting in improved metabolism, hormonal balance, reduced risk of CVD, DM, oxidative stress and ultimately correcting the overall pathology of ovulation.

Probable mode of action of Lashun Tail and Apamarga Churna:

Lashun Tail by virtue of its *Katu*, *Tikta Rasa* and *Ushna Veerya* decrease *Kapha Dosha*, *Ushna Veerya* helps in *Vata Shamana*. The properties of *Deepana*, *Pachana* and *Anulomana* aid in clearing obstructions in *Srotasa* and increasing the *Pitta Dosha*. Thus, *Samyak Dhatu (Rasa-Rakta)* and *Samyak Upadhatu (Artava) Utpatti* occurs and that will lead to *Samyak Kriya* (function) of *Beeja* (ovum) and *Beejotsarga* (ovulation).

Apamarga Churna possesses *Katu* and *Tikta Rasa* which subside the *Kapha Dosha* by *Ama Pachana*. *Laghu* and *Ruksha Guna* help to remove *Sang* (obstruction). *Ushna Veerya* of *Apamarga Churna* increases *Pitta Dosha* leading to *Artavajanna*. *Katu Vipaka* and *Lekhana*, *Chhedana*, *Medohara Karma* help in *Srotovishodhana*. Thus, *Samyak Dhatu (Rasa, Rakta)* and *Upadhatu (Artava) Utpatti* occurs leading to *Samyak Artava Nishkramana* (menstruation) and *Beejotsarga* (Ovulation).

Probable mode of action of Matra Basti:

Matra Basti is administered via the *Guda* (rectal route) and normalizes *Apana Vayu* resulting in *Vatanulomana*. The physiological functioning of *Vata* then aids in the extrusion of the ovum from the follicle and ovulation. *Basti Dravya* spreads all over the body, calms the aggravated *Dosha* along with *Vyana Vayu* resulting in *Samyak Rasa Raktadi Dhatu Nirmana*. *Sukshma Bhaga* of *Rasa* reaches the *Beejagranthi* (Ovary) and regularizes the *Beejotsarga* (Anovulation) with the help of normal *Apana Vayu*. *Matra Basti* after absorption, enters systemic circulation and the concept of Central Nervous System (CNS) resembles Enteric Nervous System (ENS). The endogenous opioids in the ENS specially endorphins (β -endorphin) are influenced and with the help of neurotransmitters, causes stimulation of the pituitary for Follicle Stimulating Hormone (FSH) and Luteinizing Hormone (LH) and the hypothalamus for GnRH leading to regulation of ovarian cycle and ovulation. Endogenous opioids are a class of peptides that have a significant impact on the ovarian cycle by inhibiting GnRH secretion. Opioids also affect other pituitary hormones. β -endorphin has been best known of the opioid related to the reproductive system regulating variety of pituitary hormones including gonadotrophins. β -endorphin has a role in the regulation of the normal ovarian cycle.

6. CONCLUSION:

The combined use of *Lashun Tail Matra Basti* and *Apamarga Churna* demonstrated promising results in managing *Vandhyatwa (Anovulation)*, offering a safe, cost-effective and holistic alternative for infertility management. The therapy improves ovulation, menstrual cycle regularity and conception rates with excellent safety and tolerability. Integration of such Ayurvedic protocols with modern diagnostics may benefit women seeking holistic infertility management. Further large-scale studies are recommended to validate these findings.

REFERENCES

- [1] Charaka Samhita of Agnivesha by Dr. Brahmanand Tripathi, ChaukhambhaSurbharatiprakashan, Varanasi, Chikitsasathan, 30 adhyaya.
- [2] Sushruta Samhita by kaviaraj Ambika Dutt Shashtri, sharirasthan, 2 adhyaya.
- [3] Flyckt, R. L., & Goldberg, J. M. (2011, March). Laparoscopic ovarian drilling for clomiphene resistant polycystic ovary syndrome. In Seminars in reproductive medicine (Vol. 29, No. 02, pp. 138-146). © Thieme Medical Publishers.
- [4] Ibidem, Charaka Samhita, Chikitsa Sthana, Yonivyapat Chikitsa Adhyaya, 30/115; 639.
- [5] Vagbhata, Ashtanga Hridaya, Uttar Tantra, GuhyarogaPratishedha, 34/23, Bhishgacharya HarishastriParadkara Vaidya editor. Reprint 9th ed. Varanasi: Chaukhambha Orientalia; 2005. p. 898.
- [6] Agnivesha, Charaka, Dridhabala, Charaka Samhita, Sutra Sthana, Yajjhapurashiya Adhyaya, 25/40, Jadavaji Trikamji Acharya editor. 4th ed. Varanasi: Chaukhambha Sanskrit Sansthan; 1994. p. 132]
- [7] Kashyapa Samhita, Pt. Hemraj Sharma, Vidhyotini Hindi commentary, Chaukhambha Sanskrit Sansthan, Varanasi Reprint 2013, Kalpa Sthana 2
- [8] Atharvaveda Samhita edited by K. L. Joshi, Chaukhambha Orientalia, Varanasi, Kand 4, Apamarga Sukta 17/6
- [9] Subhadra Poornima, Swarnalatha Daram, Rama Krishna Devaki and Hasan Qurratulain, Chromosomal Abnormalities in Couples with Primary and Secondary Infertility: Genetic Counseling for Assisted Reproductive Techniques (ART), J Reprod Infertil. 2020 Oct-Dec
- [10] Dyer SJ. Psychological and social aspects of infertility in developing countries. Int J Gynaecol Obstet. 2009;107 (Suppl.): S25-S26.

- [11] R Hart, PCOS and infertility, *Panminerva Med.* 2008 Dec; 50 (4):305-14 [PubMed]
- [12] Cheichi LM, Lobascio A, Valerio T. Phytoestrogen containing food and prevention of postmenopausal osteoporosis and CV disease. *Minerva Ginecol*1999;51:343 8.
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