



EFFECT OF *CHITRAKADI GHRITAM* IN THE MANAGEMENT OF *VANDHYATVA* (INFERTILITY) WITH *YONIDOSHA*

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ABSTRACT

Reproduction is the noblest and most reverent of all human powers. God has given this precious gift to the woman. Motherhood is the cherished desire deep down in the heart of every woman. Failure to achieve conception is known as *Vandhyatva* (Infertility). Even in the computer age, it is estimated that nearly 10-15% of couples are infertile in India. The ancient system of Ayurvedic medicine advocated variety of medication, which provides good results without any harmful effect. The main causes of infertility are tubal block, PCOD, PID and endometriosis. The drug *Chitrakadi ghrita* was selected which *Sushruta* mentioned in the management of *Vandhya*. The *Chitrakadi ghrita* was given in the dose of 10gm once in a day empty stomach at 6 am with 100ml of lukewarm water for the duration of 3 months with the result assessment recorded at every 1 month. It proved that *Chitrakadi ghrita* is very effective in management of *Vandhyatva* with *Yonidosha*.

KEYWORDS: *Chitrakadi ghrita*, *Yonidosha*, *Vandhyatva*, Infertility.

INTRODUCTION

The creator of universe has empowered the women to carry out the most noblest and reverent work of mankind and that is the work of reproduction. For the perpetuation of the human race woman is the most essential factor. According to *Acarya caraka*, the woman is the origin of progeny.^[1] To become a mother is one of the most cherished desires of women. But unfortunately even in the present scenario of the space age millennium and rapid advancement in the technology, infertility is still a problem that has been continued from ages. Although it do not affect the health directly but has a psychosomatic effects on the patient resulting in reflection over the physical and mental health. The female infertility presents more problem compare to male infertility because of the social stigma attached to it. A woman of reproductive age who has not conceived after one year of unprotected vaginal sexual intercourse is defined as infertility.^[2] Ayurveda gives elaborate description of female infertility by the name *Vandhyatva*. It is mentioned as an independent disease as well as *Upadrava* of many *Yonidoshas*^[3]. The word "Yoni" refers to entire

reproductive system. Thus under this heading, congenital or acquired disease of anatomic components of reproductive system i.e. Vagina, cervix, uterus, fallopian tubes can be included. According to the current statistics, it is the fact that infertility is increasing and major causes of the disease are described in modern science as Tubal block, PCOD, PID, STD and endometriosis. So in this present era when everything is going to be super specialized it is very necessary to provide a particular etiopathology as well as remedy for any particular factors.

Incidence - About 10-15% of couples are infertile in India. Female infertility is about 40-50%. Male factor is about 40%. Unexplained is about 20%. Faults in the female for infertility are as follows.

Tubal factors	:	45%
Ovarian factors	:	25%
Cervical factors	:	20%
Uterine factors	:	10%

AIMS AND OBJECTIVES

- To know the prevalence of disease.

- To study and assess the efficacy of *Chitrakadighritam*^[4] oral in management of female infertility with *Yoni Dosh*a.

MATERIALS AND METHODS

Selection of Patients

50 female patients suffering from infertility were selected randomly as per the inclusion and exclusion criteria from the OPD and IPD of Dr. B.R.K.R.Govt. Ayurvedic College and Hospital, Hyderabad and were given *Chitrakaadi ghritam* - 10gm once in a day empty stomach at 6 am with 100ml lukewarm water for a period of 3 months.

INCLUSIVE CRITERIA

Ages between 20 years to 35 years; Patients irrespective of caste, religion, socio economic status, suffering from infertility due to *Yoni dosha*.

EXCLUSIVE CRITERIA

Ages below 20 and above 35, Unmarried girls, Cervical polyp, Non co-operative patients, Male infertility (male partners), Intrauterine fibroid or growth, malignancy, people living with HIV, Hepatitis and tuberculosis.

INVESTIGATIONS

Hystero -Salpingo graphy (HSG), Mantoux test, Follicular study, Post Coital test (PCT), PAP smear etc., were done prior to the treatment as per need.

Work place for Research Project

Study was conducted in the Department of Prasuti and Stree roga, Dr.B.R.K.R.Govt. Ayurvedic College and Hospital Hyderabad, Andhra Pradesh, India.

CLINICAL STUDY

Chitrakadi ghritam was prepared as per the references from textual literature.

Contents of preparation are as follows

- *Citraka (Plumbago Zeylanicum* Linn.) - root bark
- *Shwetha Sariva (Hemidesmus indicus* R. Br.) - root
- *Bala (Sida Cordifolia* Linn) - root, seed
- *Nalla Sugandhi (Ichno Carpus frutescens* R.) - root
- *Draksha (Vitis vinifera* Linn.) - Fruit, leaves
- *Indravaruni/Vishala (Citrullus Coloegnthis* st kard) - fruit, root

- *Pippali (Piper Longun* Linn.) - fruit, root
- *Citrphala - Pedda papara (Trichosanthes* brateata) - fruit, root
- *Madhuka (Glycyrrhiza glabra* Linn.) - root
- *Haritaki (Terminalia Chibula* Ritz.) - fruit
- *Amalaki (Embllica officinalis* Gaertn.) - Fruit, Seed, leaves, Root, Bark and flowers
- *Kshira* (milk)
- *Ghrita* (ghee)
- *Tavakshira (Curcuma angustifolia* Roxb.) - Tuber

Preparation of the drug

Paste was prepared with each one *Karsha* (10gm) of *Chitramula*, *Sariba*, *Bala*, *Kalanusarrikaa*, *Draaksha*, *Vishaala*, *Pippali*, *Chitrapala*, *Yashtimadhu*, *Haritaki* and *Amalaki*. One *Aadhaka* (2.56kg) of ghee one *Drona* of milk (10.24kg), one *Drona* of water (10.24kg) was added. Ghee should be prepared according to *Ghrtapaaka vidhi*. Then it should be filtered at room temperature. Add one *Prastha* (640gm) of sugar, one *Prastha* of (640gm) *Tavaaksheeri* powder and mixed thoroughly and stored. According to *Dosha* the above medicated ghee should be given orally.

STANDARDIZATION

Preparation of *Ghrita* is subjected to test of standardization parameters at Drug Testing Lab, Hyderabad and no objection certificate is obtained to identify authentic samples for study purpose. As per the drug standardization - TLC reports with closed Rf values are showing **no heavy metals** in test samples i.e. in *Chitrakadi ghritam* Herbal powder and *Chitrakadi ghritam*. Reports of the colour reaction tests are positive in *Chitrakadi ghritam*; EDX reports also showed no heavy metals in research drug.

CLINICAL PLAN

Factors of infertility are confirmed by counseling, check up and investigations. 50 patients of vandhyatwa with yonidosha- Subjected to oral administration of *Chitrakaadi ghritam* for a period of 3 months and results will be reviewed.

ASSESSMENT CRITERIA

1. Clearance of Tubal block through HSG
2. Any inflammation (PID etc.) through USG
3. White discharge through examination
4. PAP smear
5. Regulation of menstrual cycle with normal flow

6. Relief of Cervicitis/Vaginitis

Treatment duration - 3 months

Follow up period: *Chitrakadi ghritam* was administered orally at the dose of 10gm once in a day empty stomach at 6 am with 100ml lukewarm water. Follow up once in 1 month for 3 months for oral drug and examination. Further follow up was done for 1 year for observation and necessary investigation.

Anupana: 100ml lukewarm water.

Assessment of results: Therapeutic response after treatment in 50 patients and conception after treatment in 50 patients.

In Tubal block: Clearance of tubal block by HSG studies

In endometriosis: Relief from the symptoms like dysmenorrhea, dyspareunia, pain abdomen, squeezing pain etc. and the scan on the first week of menstrual cycle.

In PCOD: Release of follicles evident in follicular study and relive of other symptoms like weight loss, regular menstrual cycles and correction of other symptoms.

In PID: Relief from the symptoms like pain abdomen, control of white discharge etc.

1. **Complete relief:** 100-75% correction of underlying disease with subjective and objective parameters.
2. **Partial relief:** 75 to 50% correction of underlying disease with its subjective parameters.
3. **No relief:** 50 to 25% therapeutic correction of underlying disease with its subjective and objective parameters.

Statistical analysis

Statistical analysis was carried out using P value through Chi - square test to assess the Statistical significance.

OBSERVATION AND RESULTS

Table 1: Distribution of infertility according to age

Age 20 to 25	25 to 30	30 to 35
20	15	15

Table 2: Distribution of patients according to Occupation

Labour/physical work	House wife	Working women
5	25	20

Table 3: Distribution of patients according to Chief complaint

Primary infertility	Secondary infertility
31	19

Table 4: Distribution of patients according to Marital life span

Marital span	No: of patients
1-5 years	20
5-10	18
Above 10	2

Table 5: Distribution of patients according to onset of menarche

Between 12 - 13 years	24
Between 13 - 14 years are	16
Between 14 - 15 years are	10

Table 6: Distribution of patients according to menstrual cycle

Regular	22
Irregular	28
Normal flow	35
Scanty flow	10
Excessive/heavy flow	5

Table 7: Distribution of patients according to P/V, P/S examination

Position of the uterus		Size		Mobility		Cervix	
AV	RV	NS	bulky	Mobile	Firm	Normal	Hypertrophied
40	10	42	8	48	2	34	16

Table 8: Distribution according to underlying cause

	Tubal block	PCOD	PID	Endometriosis	Nonspecific
Patients	10	16	12	10	2
percentage	20%	32%	24%	20%	4%

Table 9: Change in PAP smear finding before and after treatment in patients

PAP smear finding	B.T.	A.T.
Inflammation	16	3
Reduced (Normal)	--	13
P-value	< 0.001 ($\chi^2 = 18.66$)	

Table 10: Change in HSG finding before and after treatment in patients

HSG finding		
	B.T.	A.T.
Tubal block	10	2
Spillage	--	8
P-value	< 0.01 ($\chi^2 = 10.21$)	

Table 11: Change in USG finding before and after treatment in patients

Endometrium - USG finding		
	B.T.	A.T.
Thickness etc.	12	4
Improvement	--	8
P-value	< 0.01 ($\chi^2 = 9.19$)	

Table 12: Table Showing symptoms present at base-line and their relief after treatment

Symptoms	Present in number of patients		
	B.T.	A.T.	Subsided
Dysmenorrhea	6	1	5 (83.3%)
Painful coitus	2	-	2 (100%)
White discharge	16	3	13 (81.3%)
On and off Squeezing Pain in lower abdomen	4	1	3 (75%)
Low back ache	2	-	2 (100%)

Table 13: Showing statistical presentation of relief after treatment in patients with white discharge

Present in number of patients		Subsided	χ^2 -test	P < 0.05
B.T.	A.T.			
16	3	13 (81.3%)	18.66	Sig.

Table 14: Showing USG routine finding at base-line and the relief after treatment in patients

Present in number of patients		Subsided	χ^2 -test	P < 0.05
B.T.	A.T.			
46	13	33 (71.74)	48.39	Sig.

Table 15: Showing Therapeutic response in patients

Response	Number	%
Complete relief	23	46
Partial relief	19	38
No relief	8	16
Total	50	

DISCUSSION

Healthy vagina, High vaginal deposition of healthy spermatozoa, Healthy uterine cavity and healthy uterine tubes for the spermatozoa to remain healthy, proper penetration and travel to reach the ovum; Ovum must reach to uterine tube to fertilize by spermatozoon; Migration of fertilized ovum into uterus; Healthy Endometrium which is suitable for the nidation and subsequent development etc. factors are responsible for fertility. Functional or structural disturbances either or together of above causes infertility. Inflammatory condition can be correlated to vitiation of *Pitta*. Dysfunction can be correlated to vitiated *Vata*. Inability of

occurrence (*Dourbalya*) can be correlated to *Sleshma*. A thorough study of the ovarian steroidogenesis (Two cell, Two gonadotrophin concept) gives - an idea about the reproductive tissue. Menstrual cycle includes ovarian cycle and endometrium cycle. Functional zone of the endometrium is under the influence of fluctuating ovarian hormones oestrogen and progesterone. In normal menstrual cycle, thickness of endometrium alters as per the phase. Any abnormality in this process can cause functional disturbance which leads to infertility.

Involvement of Vitiated *Dosha*^[5,6], Vitiated *Dhatu*^[7], *Srotas dushti* and Near *Sroto dushti*^[8,9], *Mala*^[10], *Ama*^[11,12], *Avarana*^[13,14], and effect on *Indriya*^[15], (one among 11 *Indriyas* is *Upastha* (genital organ). - etc. is the oetio pathogenesis in the occurrence of disease. Painful menstruation (*Udavarta*) is one among the symptoms of the *Vyana avrita vudana vata*^[16]. Pain cannot occur without *Vata*^[17]. *Yoni Srava* (abnormal vaginal discharges) is one among the symptoms of *Yoni Vyapat*. Tubal block (obstruction (*Sango*)) is one among vitiated *Sroto lakshna*^[18]. This abnormalcy is the result of *Ama*. During the process of *Paka* (absorption), any substance gets stasis at any stage in any form during the conversion of food into *Dhatu* i.e Exogenous (*Vijaatiya*) to Endogenous (*Sajaateeya*) called *Ama*. *Dushita ama* happens to be with *Rasaadi dhatu* leads to *Rasaadi dhaatu Janya vyaadhi*^[19]. Being *Upadhatu* of *Rasa*, *Artava* also vitiates and becoming a disorder. All hormonal enzymatic disorders are to be *Ama Janitha vyadhis* at respective *Dhatwagni* due to its hypofunctioning. *Apana vayu* is one among the types of *Vayu*. Its vitiation leads to pelvic disorders.

Deepanam, *Graahi* are the remedy for all *Apana avruta* disorders^[20]. *Sroto avarodha* (obstruction) and *Dosha prakopa* (vitiation of *Dosha*) are the result of *Ama* which all are dissolved by *Pachana dravyas*. It is mandatory to use *Pachana Dravya* in *Sama* condition where the elimination of *Doshas* is not possible with *Sodhana karma*. By preventing the production of *Ama* and eliminating the existing *Ama*, above result can be achieved through *Virechana* (purgative) property. The treatment becomes difficult in the condition where *Ama* and *Vata* together involved since "*Viruddhopakramatwat*" because of opposite line of treatment^[21]. Endometrium must be proper enough for healthy implantation and other necessary maintenance which can be resulted by *Prajasthapana* drugs through clearing the adverse effect on fetus^[22]. *Vata* is main factor to get shape of fetus, it stimulates all *Indriyas*, status of all *Dhatu* is under control of *Vata*^[23]. *Vatahara* property preparation is useful in infertility. *Artava Doshas* and *Sukra doshas* are similar. Treatment also similar to both for some extent. The potent *Srotoshodaka dravyas* as constituents of *Ghrita* (ghee) is useful as *Amahara* and *Deepana Pachanakari*.

Positive results like healthy cervix, normal uterus, relief from pain abdomen etc.

resulted regular menstrual cycles, ovulation followed by conception by *Chitrakadi ghritam* noticed as "*Asruk doshaan chaYoni doshaan cha samhataan*", as per literature.

Drugs and Properties of - *Chitrakadi ghritam* used is as follows - *Chitraka* (*Deepani*, *Pachani*; *Grahani vinasani*, *Krimihara*), *Sariba* (*grahi*), *Bala* (*Prajasthapni*), *Draksha* (*Vrushya*, *virechanopaga*) *Chitraphala*, *Indravaruni* (*Rechani*), *Pippali* (*Deepani*), *Madhuka* (*Rasayana*, *Vrushya*, *Jeevaneeya*), *Hareetaki* (*Anulomana*, *Brumhana rasayana*) *Amalaki* (*Vrushya*), *Ksheera* (*Rasayani*), *Ghrita* (*Vrushya garbha sthapana*, *Ojo vardhaka*) *Tugusheeri* (*Brumhana*, *Vrushya*), *Sarkara* (*Raktapittasamaka*)^[24].

50 patients are selected for the clinical study and given *Chitrakadi ghritam* orally. Reduction in symptoms and signs were observed;

- Painful menstruation, pain during or immediate after coitus, white discharge, pain in lower abdomen, low back ache, vaginitis, cervicitis and etc. are taken as parameter. 23 patients got complete relief. 19 patients got partial relief, 8 patients have no relief.
- 13 patients got relief from white discharge sufferers of 16 patients. $P < 0.05$; χ^2 test is 18.66 - Significant.
- Abnormal findings noticed like bulkiness, small than normal, abnormal thickness of endometrium, hypertrophy, etc. other than normal observations into by USG.
- 33patients got relief from abnormal findings of 46 patients. $P < 0.05$; χ^2 test is 48.39 - Significant.
- As per PAP smear test - inflammation reduced in 13 patients of 16 sufferers. P - value < 0.001 ; $\chi^2 = 18.66$ - Highly significant.
- As per HSG - Spillage seen in 8 patients for 10 patients with tubal block. P -value $< .01$; $\chi^2 = 10.21$ - Significant.
- Thickness of the endometrium alters as per the phase. Improper formation as per phase dealt with abnormalcy. Normalcy of EM thickness etc. was noticed in 8 patients out of 12 patients. P -value < 0.01 ; $\chi^2 = 9.19$ - Significant.
- 20 Patients got regular menstrual cycle. 22 patients are ovulated.
- Infertility cases are not easy to assess immediately after the completion of treatment. It needs time and observation

and follow-up to notice ovulation and the conception. In cases where it has been reported of conception, Gravindex test was done for confirmation.

- *Deepana, Paachana, Virechana, Rasayana, Vrushya, Brumhana, Jeevaneeya, Praja sthaapana, Grahi*, etc. combine effect observed in management of yoni *Dosha* in *Stree Vandhyatva* with *Chitrakadi ghritam* through the relieved symptoms and occurred conception.
- General condition is not disturbed during treatment.
- Therapeutic response, Relieved symptoms and Conceptions are noticed which suggest the efficacy of *Chitrakadi ghritam*.
- No Toxic Symptoms are reported during treatment/research work.
- No Complications during the treatment, regarding patients experiences and preferences: No significant complaints from the patients. Four patients were complained belching and got relief with intake of lukewarm water. Drug is palatable to patient. General health status was noticed to be normal.
- Clearance of Symptoms and Signs - as per USG / GFT / HSG/ PAP smear is Highly significant in *Chitrakadi ghritam*.

CONCLUSION

Action of *Chitrakadi ghritam* in management of *Stri vandhyatva* (female infertility) is highly significant by statistical values.

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