



## A REVIEW OF AN AYURVEDIC MANAGEMENT OF VANDHYTVA W.S.R. TO CERVICAL FECTOR

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### ABSTRACT

**Introduction:** *Vandhyatva* (Infertility) has been long standing problem since ancient period. Infertility is increasing now-a-days. Many herbal and herbo-mineral formulations are mentioned as a treatment of Infertility in the ancient texts, but they are not categorized according to the responsible factor like *Ritu*, *Kshetra*, *Ambu* and *Beeja*. It is the need of time to evaluate the efficacy of formulations in respect to various factors of infertility. **Aim:** To collect the broad data regarding cervical factor in Infertility from various reaserches. **Materials:** Total 5 works had been carried out at IPGT and RA, Gujarat Ayurveda University, Jamnagar, Gujarat. All had *Uttarbasti* as treatment with diffrent *Ghritas*. Among them 4 were on *Phala Ghrita* and other were on *Ashvagandha Ghrita*, *Shatavari Ghrita* and *Go-Ghrita*. Post coital test and USG were selected for the diagnosis and for evaluation of efficacy of therapy on cervical factor. Sim's hunter and Moghissi' cervical mucus Test and Post coital test were selected for the diagnosis and for evaluation of efficacy of therapy on cervical factor. **Method:** Hand search. **Discussion:** The B.T.and A.T.values were compared for final conclusion.All the scholar had concluded that: Lipsa Pandya (1997)concluded in 11 patients that combine therapy of *Phala ghrita Uttarbasti* and Oral *Garbhaprada vati* is more effective. Neha Pandya (1999) concluded in 13 patients that *Phala ghrita* is more effective as oral then *Uttarbasti*. Jasmin Dave (2000) concluded in 12 patients that combine therapy of *Phala ghrita Uttarbasti* and *Prajasthapan Yoga* is more effective. Parikh P M (2001) concluded in 14 patients *Ashvagandha ghrita* is more effective then *Phala ghrita* as oral and *Uttarbasti*. Chetana(2008) in 14 patients concluded that *Shtavari ghrita* is more effective than *Go-ghrita* as *Uttarbasti*. **Conclusion:** All works were targeted on *Uttarbasti* due to its best effect on *Vandhyatva*. The all *Ghrita* has *Garbhasthapaka* property. *Ruksha Guna* of *Vata* and *Ushna* and *Tikshna Guna* of *Pitta* are the causes of Cervical factor. *Bruhana*, *Agnivardhaka*, *Vat Anulomana* is the base of cervical factor treatment.

**KEYWORDS:** Cervical factor Infertility, *Vandhytva*, *Uttarbasti*, *Garbhasthapak* Property.

### INTRODUCTION

Every creature in this universe, tries to keep up its progeny. For this purpose, each creature has been given reproduction by the God. Reproduction is the noblest and should be the 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. The desire for offspring in every woman is as synonymous with motherhood as it adds a new meaning to her life and existence. In order to fulfill this achievement, it is essential that both the partners should be fertile. Infertility<sup>[1,2]</sup> is a disease of the reproductive system defined by the failure to achieve pregnancy after 12 months or more of regular unprotected sexual intercourse. Childlessness is described as *Vandhyatva* in

Ayurveda and is termed as Infertility in Modern Science. Childlessness brings: Marital disharmony, Social rejection: Results in Anxiety and Disappointment, Increased Anxiety: Hampers sexual functions. Acharya Charaka has mentioned that the woman is the origin of progeny. Means, one who lodges Foetus (*Garbha*) is known as *Stree*. A woman whose *Aartava* is perished is called *Vandhya*.<sup>[3]</sup> In Modern Infertility Mainly two types are described: Sterility and Infertility.a) Sterility: Sterility implies that inability to conceive. b) Infertility – Infertility implies that failure to conceive. Infertility is divided into two groups: (1) Primary Infertility - Infertility where concePation has never occurred. (2) Secondary Infertility – Infertility where concePation has failed to occur after period of fertility. Acharya Sushruta<sup>[3]</sup> has described four essential factors for

fertility. *Rutu* = Proper fertile period, *Ambu* = Proper nourishment for developing the zygote, *Beeja* = The activated ovum and spermatozoa, *Kshetra* = Physiological maturity and healthy organs of reproductive system. We ensure motherhood, when four factors are fulfilled, for woman where as only one factor is essential for men. Female Infertility Factors are: Tubal factor - 45%, Ovarian factor - 25%, Cervical factor – 20%, Uterine factor - 10%.<sup>[5]</sup> J. M. Sims, (1968) first identified the influence of Cervical Factor in causing Infertility. They are following: Hormonal factor and good estrogenic effect can be seen on cervical mucus as positive fern test and formation of spinnbarkeit. Causes of cervical factor of Infertility are Stenosis / scarring of cervix, Poor mucus, Anti bodies, Malposition, Congenital absence.

From female faulty factors only the cervical factors are taken up for the present study. The cervical mucus acts as a filter allowing only functionally best spermatozoa to penetrate cervical mucus. When cervical mucus is hostile and unfavorable, it doesn't allow penetrating, even if spermatozoa are healthy. According to our classics we can describe this factor as *Kshetra* and *Ambu Dusti*. Cervical mucus becomes *Drava* by *Drava Guna* of non-vitiated *Pitta* and *Snigdha* by *Snigdha Guna* of non vitiated *Kapha* and non vitiated *Vata* helps in its secretion properly. As flower of lotus closes after sunset,<sup>[6]</sup> similarly after *Rutukala*, the yoni of women gets constricted and doesn't accept *Shukra* or permits the entry of *Beeja* (sperm) into the uterus.

Less quantity and poor quality of cervical mucus may be due to inadequate Oestrogen<sup>[7,8]</sup> level or less utilization of estrogen through receptor is the main factor of infertility caused by cervical factor. Proper secretion of cervical mucus is a resultant of balanced *Tridosha* (Three humors of body), *Prasada Rasa Dhatu* (Essence plasma or nutrients), *Rakta Dhatu* (Blood), *Mamsa Dhatu* (Muscles, tissues) and *Sthanika Agni* (Local metabolism at cellular level) according to Ayurveda. Functions of cervical mucus can be linked with the *Kledana Karma* (Moisturizing action) of *Kapha*. *Vata* vitiated due to *Ruksha Guna* (Dry property) and *Pitta* vitiated due to *Ushna Guna* (Hot property) and *Tikshna Guna* (Penetrating or pungent property) are mainly responsible for reduction in cervical mucus.

#### The role of cervix in reproduction

The cervix stands as the 'GATE KEEPER' to the female reproductive tract. For sterilization of the ovum to occur within the fallopian tube, the cervix must permit the sperms to pass through. This is facilitated by the changes in the cervical mucus, brought on by the hormonal changes in the menstrual cycle. The pre-ovulatory cervical mucus is thin and Acellular, brought on under the influence of the high pre-ovulatory estrogen and low

progesterone concentrations. This mucus will facilitate passage of sperm into the uterus, and henceforth into the fallopian tubes where fertilization will occur.

The most important test to diagnose a cervical cause of infertility is the Sims- Huhner post coital test. The post coital test provides information regarding both the receptivity of cervical mucus and the ability of sperm to reach and survive in the mucus. The test must be performed only in the pre or ovulatory phase of the menstrual cycle.

#### AIMS AND OBJECTIVE

- To know various research drugs and procedures on *Vandhyva* w.s.r. to cervical factor carried out at Institute for Post graduate Teaching and Research in Ayurveda, GAU, and Jamnagar.
- To provide the guidelines for further research works in the area of Infertility due to cervical factor.

#### MATERIALS AND METHOD

All the theses were collected from Department of Streeroga and Prasootitantra at Institute for Post graduate Teaching and Research in Ayurveda, Gujarat Ayurveda University, Jamnagar and the titles are procured from "Ayurvedic research database". The procured theses were studied in detail and scientific review was done.

#### METHOD: HAND SEARCH

##### Observations

On cervical factor infertility Total 5 works had been carried out at IPGT and RA, Gujarat Ayurveda University, Jamnagar. All had *Uttarbasti*<sup>[9]</sup> as treatment with different *Ghrita*. Among them 4 were on *Phala Ghrita* and other were on *Ashwagandha Ghrita*, *Shatavari Ghrita*<sup>[10,11,12]</sup> and *Go-Ghrita*. Post coital test and other parameters like USG were selected for the diagnosis and for evaluation of efficacy of therapy on cervical factor. The details of clinical trials are in following paper.

##### Dr. Pallavi M. Parikh (2001)<sup>[13]</sup>

In this study 14 patients were treated, 7 patients in each groups. In group A (n=7) *Ashwagandha Ghrita Uttarbasti* 3 cc for 6 days and orally 15 gm 2 times per day with the *Anupan* of Milk for 2 months. In group B *Phala Ghrita Uttarbasti* 3 cc for 6 days and 15 gm orally 2 times per day for 2 months were given. This study showed that in patients 7.14% Marked improvement, 42.86% Moderate improvement, 50% Improvement. Author concluded that *Ashwagandha Ghrita Uttarbasti* and oral has given more hopeful results.

**Table 1: Overall effect of therapy.**

	A	%	B	%	Total	%
Completely cured	0	00.00	0	00.00	00	00.00
Markedly improved	1	14.29	0	00.00	1	7.14
Moderately improved	2	28.57	4	57.14	6	42.86
Improved	4	57.14	3	42.86	7	50.00
Unchanged	0	00.00	0	00.00	0	00.00

**Table 2: Effect of therapy on factors of cervical mucus.**

No.	Factors of cervical mucus	Group A			Group B		
		BT	AT	%	BT	AT	%
1.	Amount	0.29	1.57	81.53	0.43	1.86	76.86
2.	Viscosity	1.57	2.86	45.10	1.43	2.86	50.00
3.	Spinnbarkeit	1.14	2.43	53.09	1.29	2.57	49.81
4.	Ph	6.64	7.07	17.70	6.71	8.43	20.40
5.	Cellularity	0.43	1.14	62.28	0.28	2.57	89.11

**Dr. Chetna M. Kodinariya (2008):**<sup>[14]</sup>

In this study 14 patients were treated, 7 patients in each groups. In Group A (n=7) *Shatavari Ghrita Uttarbasti* 5 ml for 6 days for 2 months. In Group B *Go Ghrita Uttarbasti* 5 ml for 6 days for 2 months was given. This

study showed in patients 7.14% Complete cure, 35.71% Marked improvement, 50 % Moderate improvement, 7.14% Improvement. Author concluded that *Shatavari Ghrita Uttarbasti* showed better results than *Go-Ghrita*.

**Table 3: Overall effect of therapy.**

	A	%	B	%	Total	%
Completely Cured	0	00.00	1	14.29	1	07.14
Markedly Improved	4	57.14	1	14.29	5	35.71
Moderately Improved	3	42.86	4	57.14	7	50.00
Improved	0	00.00	1	14.29	1	07.14
Unchanged	0	00.00	0	00.00	0	00.00

**Table 4: Effect of Therapy on Factors of Cervical Mucus.**

No.	Factors of cervical mucus	Group A			Group B		
		BT	AT	%	BT	AT	%
1.	Amount	1.14	2.86	60.00	1.57	2.71	42.00
2.	Viscosity	1.00	2.86	56.00	1.26	2.71	53.00
3.	Spinnbarkeit	1.14	1.86	38.00	0.86	2.14	60.00
4.	Cellularity	1.00	2.43	59.00	0.86	2.43	65.00
5.	Ferning	1.86	3.00	38.00	1.86	2.57	28.00

**Dr. Pandya Neha (1999):**<sup>[15]</sup>

In this study 13 patients were treated. In Group A (n=7) *Shatavari Ghrita Uttarbasti* 5 ml for 6 days for 2 months. In group B *Go Ghrita Uttarbasti* 5 ml for 6 days for 2 months were given. This study showed in patients 7.14% Complete cure, 35.71% Marked improvement, 50 % Moderate improvement, 7.14% Improvement. Author concluded that oral use of *Phala ghrita* is more effective than *Uttarbasti*.

**Table 5: Overall effect of therapy.**

	A %	B %
Completely Cured	28.57	16.66
Markedly Improved	14.28	33.33
Moderately Improved	42.85	50
Improved	14.28	0
Unchanged	0	0

**Table 6: Effect of therapy on factors of cervical mucus.**

No.	Factors of cervical mucus	Group A			Group B		
		BT	AT	%	BT	AT	%
1.	Amount	0.86	2.29	62	0.83	2.67	68
2.	Viscosity	1	2.71	50	1.33	2.83	53
3.	Ferning	2	2.86	30	2.17	2.67	18
4.	Spinnbarkeit	1	2.29	56	1.5	2.83	46
5.	Cellularity	0.57	2.14	73	1.17	2.33	50
6.	Sperm Density	0.14	1	86	0.14	1	86
7.	Sperm Motility	0.14	0.86	82	0.67	1.67	54

**Dr. Lipsa Pandya (1997):<sup>[16]</sup>**

In this study 11 patients registered. In Group A *Garbhprada Vati* (Bh.Pr.M.Kh) 4 tablet 3 times with Ghee or milk before meal and IUUB of 5 ml *Phalaghrita* for 3 days for 3 month, and Group B Only IUUB 5 ml

*Phalaghrita* for 3 days for 3 months. *Garbhprada Vati* contains *Bala, Nagakesara, Yastimadhu, Vata Jata, Sarkara* Author concluded that Combined therapy is more effective in all the properties of cervical factor.

**Table 7: Overall effect of therapy.**

	No. of Patient. Group A	No. of Patient. Group B	Group A %	Group B %
Complete Cure	3	2	27.27	22.22
Markedly Improved	3	3	27.27	33.33
Moderately Improved	5	3	45.45	33.33
Improved	0	1	0	11.11
Unchanged	0	0	0	0

**Table 8: Effect of therapy on factors of cervical mucus.**

No.	Factors of cervical mucus	Group A			Group B		
		BT	AT	%	BT	AT	%
1.	Amount	0.81	2.0	63.5	1.33	2.44	45.5
2.	Spinnbarkeit	1.27	2.72	53.3	1.66	3.00	44.3
3.	Cellularity	1.63	2.81	38.8	1.66	3.00	44.3
4.	Sperm Density	0.27	1.72	84.3	0.55	2.33	75.9
5.	Sperm Motility	0.09	2.18	95.8	0.22	2.55	91.4
6.	Ferning	1.54	2.81	45.2	2.22	3.00	25.7

**Dr. Jasmina Dave (2000):<sup>[17]</sup>**

In this study patients were treated with Group A *Phala Ghrita Uttarbasti* 3 ml for 6 days for 2 month and Group B *Phala Ghrita Uttarbasti* 3 ml for 6 days and *Prajasthapana Yoga* 4 tablet 2 gm 3 times a day orally

with warm milk for 2 month. *Prajasthapana yoga* (*Shatavari, Atibala, Amalaki, Nagakesara, Vata Ankura, Durva*). Author concluded that combined therapy had good anabolic effect on the whole body as well as Uterus.

**Table 9: Effect of therapy on factors of cervical mucus.**

Cervical mucus properties	Group A			Group B		
	No. of patients		Relief %	No. of patients		Relief %
	B.T.	A.T.		B.T.	A.T.	
Amount	6	1	83.33	6	0	100
Viscosity	6	0	100	6	1	83.33
Ferning	6	5	16.67	6	3	50
Spinnbarkiet	6	1	83.33	6	1	83.33
Cellularity	6	5	16.67	6	2	66.67
Density of sperm	6	2	66.67	6	2	66.67
Motility of sperm	6	4	33.33	6	6	0

**Table 10: Overall effect of therapy.**

	Patient		%	
	A	B	A	B
Complete cure	0	2	00	33.33
markedly improved	4	3	66.67	50
moderately improved	2	1	33.33	16.67
Improved	0	0	0	0
Unchanged	0	0	0	0

## DISCUSSION

Though occurrence of infertility due to cervical factor is less but it is very important causative factor due to its adverse effect on sperm penetration. On reviewing the these works, It say that *UTTARBASTI* contributes very important role in treating infertility because it has direct local action in reproductive system. It also helps to increase receptivity of genital tract to entry of sperms. In cervical factor, drug administered locally in the cervix and absorbed by cervical epithelium due to *Sukshma* property of drug and altered cervical pH can be corrected by *Uttar Basti*. All works were targeted on *Uttar Basti* due to its best effect on *Vandhyatva*. The all *Ghrita* used has *Garbhashapaka* property.<sup>[18]</sup> *Phalaghrita* has anabolic and regenerative action on whole of the genital tract and correct the *Agni* and pacify the vitiated *Vata* and *Pitta* when it is given orally. Hence, *Phalaghrita* orally along with *Uttarbasti* is recommended for the patients of Infertility due to cervical factor. *Ruksha Guna* of *Vata* and *Usna* and *Tikshna Guna* of *Pitta* are the causes of Cervical factors. *Bruhana*, *Agnivardhaka*, *Vatanulomana* is the base of cervical factor treatment.

## CONCLUSION

This review summarizes and evaluates the evidence underlying the use of *Uttarbasti* for female infertility. *Aartava* is *Updhatu* of *Rasa Dhatu*. The *Aartva* is produced by proper action of *Rasa Dhatvagni* and secreted by *Anulomana Gati* of *Apana Vayu*. Cervical mucus is the part of *Aartva* so it is also a product of *Rasa Dhatu*. Likewise disorder *Aartava* may lead to cervical mucus disturbance and finally causes *Vandhyatva*. The *Uttarbasti* treats all kind of *Aartva Dushti*. *Yoni Dusti* can't be without *Vata Dushti*. *Uttarbasti* is the main line of treatment of *Vandhyatva* as it strengthens the *Garbhashaya* by applying proper drug through *Uttarbasti*. It subsides the *Kshetra Dushti* and improves the quality of cervical mucus. IUUB in infertility may highly beneficial due to *Vatashamaka* property. It has a lot of therapeutic potential.

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