A Critical Review of Uttarabasti in the Ayurvedic Management of Vandhyatva (Female Infertility)

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***Abstract*—Infertility is a common reproductive health concern affecting approximately one in six couples worldwide. It is clinically defined as the inability to achieve pregnancy after one year of regular unprotected intercourse. According to the Indian Society of Assisted Reproduction, infertility affects nearly 10–14% of the Indian population, with a higher prevalence in urban areas. Acharya Sushruta describes infertility as *Vandhyatva*, stating that a woman in whom *Artava* is destroyed is termed *Vandhya*, corresponding to infertility in modern medicine. According to Acharya Sushruta four essential factors necessary for conception: *Ritu* (ovulatory period), *Kshetra* (healthy endometrium/uterus), *Ambu* (appropriate hormonal environment), and *Beeja* (healthy ova and sperm). Any abnormality in these factors may result in *Vandhyatva*. A healthy *Yoni* and *Garbhashaya* are considered essential for conception, whereas a diseased or vitiated reproductive tract (*Dushita Yoni*) may lead to infertility or recurrent pregnancy loss. As per Ayurveda *Uttarbasti* (insertion of medicated oil or decoction through vagina and uterus) after *Shodhana*, is indicated for disorders involving uterus. *Uttarbasti* is a principal therapeutic approach in the management of *Vandhyatva*, as it helps nourish, strengthen, and restore the functional integrity of the *Garbhashaya*, thereby supporting conception.**

***Index Terms*—Vandhyatva, infertility, Uttarbasti,**

I. INTRODUCTION

Infertility is failure to conceive within one or more years of regular unprotected coitus. Female factor is directly responsible in 40-55% among which prevalence of infertility due to ovarian factor is 15-25 %, tubal factor 25-35%, uterine factor 10 % and cervical factor 5%.[1]

A woman who has any hindrance in the normal process of conception is called *Vandhya*. According to *Sushruta*, woman, in whom *Artava* has been destroyed, is termed as *Vandhya* [2]. Late marriage, stressful lifestyle, obesity, high junk food intake, smoking, alcoholism and drug addiction contribute to the problem of infertility ([3]). Ayurveda has been successfully treating infertility since ancient times, without the help of modern & advance medicine, as it provides ability to infertile women or couples through treatment of Ayurveda, to become fertile and also to improve the overall health of the women so that she can conceive naturally without the aid of modern medicine [4]. *Uttarbasti* is the main line of treatment for *Vandhyatva* (infertility) because it has *Vata-shamaka*, *Shodhana*, and *Ropana* properties [5].

Four Essential Factors Required for Conception [6]
1) *Rutu* (fertile period/Ovulation Phase)
2) *Kshetra* (Reproductive organs/Uterus/Endometrium)
3) *Ambu* (Hormones)
4) *Beeja* (Ovum)

II. TYPES OF INFERTILITY AS DESCRIBED IN CLASSICAL TEXTS

As per Harita Samhita: 6 Types [7]
1) *Kakavandhya*: Unable to conceive after one child.
2) *Anapatya*: Primary sterility where the lady never conceives.
3) *Garbhasravi*: Characterized by unsuccessful pregnancies due to repeated abortions.
4) *Mritavatsa*: Characterized by unsuccessful pregnancies due to repeated intrauterine death, still births and perinatal deaths.
5) *Balakshaya*: Infertility due to loss of *Bala* (strength) or *Dhatukshaya*.

6) *Balya*: If the coitus is done with a girl before her menarche it results in constriction of uterus and Bhaga and this woman does not conceive or conceives quite late with great difficulty.

There are many factors responsible for female infertility like ovulatory factor, tubal factor and cervical factor etc. Anovulatory cycle is the most common female infertility factor. Another commonest cause of infertility is salpingitis, where the lumen of the tube becomes adherent and the passage between the uterus and abdominal cavity is blocked. The cervical factor (Altered PH of cervix) is responsible for 5% cause of infertility[8]. Endometriosis and chronic ill health are the other causes of infertility[9]. .

III. DISCUSSION

Treatment Modalities of *Vandhyatva* by using Uttar Basti

Uttarbasti is a type of *Basti Upakrama* which has been highlighted in the classics for the management of most of gynaeco-logical disorders.

Time of Administration of *Uttarbasti* [10]

1. After completion of *Shodhana* procedures, *Uttarbasti* is given during *Ritukala* (follicular phase or immediately after menstruation), as orifices of uterus remain open in this period.

2. According to Acharya Charaka, *Ritukala* is the most appropriate time for administering *Uttarbasti*.

3. *Uttarbasti* should be given after 2–3 *Asthapana Basti* during *Ritukala*, because at this time the *Yoni* and *Garbhashaya* are free from obstruction (*Avarana Rahita*). This allows the medicated *Sneha* to enter easily and get properly absorbed.

Purava Karma[11]

1. *Uttarabasti* should be given after the administration of *Niruhabasti*, according to *Acharya Vagbhaṭa*, 2–3 sittings of *Niruhabasti* should be given before starting *Uttarbasti*..

2. *Abhyanga* and *Swedana Karma* should be done preferably over the lower back, abdomen, and groin region.

Pradhana Karma

1. The patient is lie down on her back. Then she is made to fold her legs at knee (lithotomy position).

2. Then, the *Uttarbasti Yantra* filled with the *Aushadha Dravya* (either *Kwatha* or *Sneha*) is taken, and the *Basti* is administered

3. *Netra* lubricated with *Sneha* is carefully introduced into the *Apathya marga*.

4. *Basti Putpaka* is compressed uniformelly, so that the *Dravya* can enter the *Yoni*.

5. It is practically observed that *Kwatha* returns immediately whereas *Sneha* is retained after some time.

6. Such *Uttarabasti* can be repeated 2-3 times, in a day and also must be given consecutively for 3 days.

7. Then the patient is advised rest for 3 days before giving another course of *Uttarabasti*.

Paschat Karma

1. Rest for some time is advisable.

2. As far as diet intake is concerned, *Acharya* suggest that after the *Pratyagamana* of *Uttarbasti*, at evening the patient should be given milk or *Yusha*.

Procedure of Uttara basti

Before administration of *Uttarbasti* previous infection should be cleared. After this, 2 to 3 *Asthapana Basti* should be given to the patient. The woman should be placed in supine position with flexed thighs and elevated knee. After that *Basti Netra* should be inserted in vaginal passage slowly with steady hand, following the direction of passage then drug should return after some time if not return then again *Niruhabasti* or *Varti* of purifying drugs should be used. *Uttarbasti* procedure should be carried out by an expert, under all aseptic precautions and sterilized instruments is to be used so there are not any chance of infection.

Instruments Required for Uttarbasti

1. Sponge holding forceps
2. Sim's speculum
3. Anterior vaginal wall retractor
4. Vulsellum /Allis forceps
5. Uterine sound
6. Cervical dilator (if necessary)
7. IUI cannula
8. 5 cc syringe
9. 9 Gauze pieces
10. Gloves
11. Towel clips
12. Good light source

Mode of action of *Uttarbasti* [12]

The effect of *Uttarbasti* largely depends upon several factors, such as the method of administration and the drugs used etc. If the medicine is administered into the cervical canal, it may act mainly on cervical factors. For conditions such as cervical stenosis, a *Katu-Ushna Taila*-based medication may be more beneficial, whereas for increasing mucus secretion from the cervical glands, a nutritive *Madhura-Shita Ghrita*-based medicine may be more effective. Similarly, the selection of drugs for ovulatory and tubal factors differs according to the condition. In ovarian disorders, the drug may act after absorption by stimulating the hypothalamic–pituitary–ovarian axis. In cases of tubal blockage, *Uttarbasti* acts locally. For ovulatory disorders, drugs having *Snehan* properties may be useful, while in tubal blockage, drugs possessing *Lekhana Karma* are considered more beneficial. *Uttarbasti* may also stimulate certain receptors in the endometrium, thereby helping to regulate the physiological functions of the reproductive system. Intravaginal *Uttarbasti* may further facilitate drug absorption because the posterior fornix has a rich blood supply and can also serve as a reservoir for the medicine.

In conditions of anovulation, *Uttarbasti* helps remove *Srotosangha* (obstruction in channels) and corrects *Artavagni*, thereby regulating the menstrual cycle and promoting ovulation. The ovaries contain receptors that respond to hormones secreted by the hypothalamus and pituitary gland. The medicines used in *Uttarbasti* may stimulate these receptors, helping proper ovulation to occur during each menstrual cycle.[13].

Uttarbasti works on all three features of *Artavakshaya* through its local and systemic effects.

It can be considered responsible for following three things: i) *Uttarbasti* with *Tikshna* drugs help to remove fibrosis (Due to the *Khara* and *Darun guna* of *Vata*) of the endometrium and thus helps in its rejuvenation. ii)After stimulating the endometrial receptors it stimulates the hypothalamus-pituitary-ovarian-uterine axis to restore the normal physiological neuroendocrine state and iii) After peritoneal spillage it can also directly stimulate the impaired functioning ovary with its potential drugs[14].

IV. CONCLUSION

Modern medicine has many options medicinal or surgical treatments for infertility, but it may cause side effects and are costly for patients. In Ayurveda, *Uttarbasti* is the main line of treatment for *Vandhyatva* (infertility) because it helps nourish and strengthen the *Garbhashaya* (uterus) by administering suitable medicated preparations directly through *Uttarbasti*.

In case of anovulation, it stimulates the process of follicular development and ovulation, in tubal blockage it relieves obstruction and establish the patency and normal function of the tubes, in endometrial factor it increases blood circulation, helps in proliferation and increases the receptivity of endometrium and in cervical factor it normalizes the cervical mucus secretion, increases the receptivity of genital tract to entry of sperms resulting in improvement of conception rates. So intra uterine *Uttarabasti* with appropriate drugs is effective in treating all the factors causing female infertility and is a great contribution to ayurveda gynecologist in the management of female infertility.

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