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Infertility-Holistic Ayurveda Approach: A Case Study

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Abstract
It is a blessing that allows for the passage of genes from one generation to the next, promoting evolution. A couple's ability to procreate or their current state of fertility is referred to as fertility. Due to the fact that a successful pregnancy is a series of interconnected occurrences, even if one of the events or conditions is not completed in the allotted length of time, the pregnancy may not proceed or give rise to a child. Vandhyatva (infertility) not only endangers a couple's bodily health but also negatively affects their psychological and social well-being. Infertility can result in severe emotional stress. A wide variety of therapy options are given in Ayurveda Samhithas. Ritu, Kshetra, Ambu, and Beeja are the four primary causes of infertility identified by Shamana and Shodhan Chikitsa. Because it assists in balancing Doshas and Dushyas, panchkarma has the highest effectiveness. Additionally prescribed for infertility, Uttarbasti with Yog basti (Dashmoola tail-kwath) aids in the cleansing of the reproductive system, balances Vata Dosha, and ultimately aids in the retention of Garbha. In this case report, the significance of Sodhan Chikitsa before Shaman Chikitsa in cases of infertility is stressed.

Keywords
Infertility, Dashamoola Tailam-kwath, uttarbasti, Ayurveda.

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INTRODUCTION:
Infertility primarily refers to the biological inability of a person to contribute to conception[1], 12 months is the lowest reference limit for the time to pregnancy.[2] Proper functioning of four factors viz. Rutu, Kshetra, Ambu and Beeja[3] is the prime requisites for Garbha (conception). Beeja, most essential part among the four has been considered as Antahpushpa, i.e. ovum. So anovulation can be included under Beeja Dushti. Ovarian factor contributes 15-25% and is the second common cause of infertility. Ovulatory factor is an important subset in infertility among women, accounting about 40% cases.[4] Over the past few decades, modern medical field developed modalities like hormonal therapy, in-vitro fertilization, embryo transfer, gamete intra-fallopian transfer, etc., but with minimal success rate. Additionally, these procedures are associated with adverse effects and are not affordable to all. Considering these inconveniencies, the population is turning towards traditional modalities like Ayurveda. Tridoshas have an impact over all the process involved in ovulation.[5] Vata stands for proliferation and division of cells (granulosa and theca cells), rupture of the follicle, etc. Pitta is associated with its conversion power, like conversion of androgens to estrogen in Graffian follicle maturity of follicle by its function of Paka Karma. Kapha stands as a building and nutritive factor. It binds all the cells together and gives nutrition for growth and development of the cells. Vitiation of vata leads to amenorrhea,

anovulation, malformed ovum, cessation of ovulation.[6,7,8,9]

Among the three Doshas, Vata plays a major role in physiology and pathology of reproductive tract and Basti is considered to be the best treatment for Vataja disorders. In addition to Basti Karma has been preferred in cases of Vandhyatva. Considering this, it has been planned to evaluate the significance and impact of Basti Karma in cases of infertility with special reference to anovulatory factor.

Causes of infertility-

Infertility has a wide range of causes. For instance, genetic disorders, anatomical flaws, and immunological and endocrinological dysfunction account for 5% of infertility cases. Some cases of infertility may also be related to exposure to environmental health pollutants, such as heavy metals, biological metabolites, and pesticides. Surgery, radiation therapy, and chemotherapy are all options for infertility. Smoking, significant weight fluctuations, and delayed childbearing are among lifestyle choices that might negatively impact fertility. Many Western women are deferring motherhood until they are of advanced reproductive age (35 years of age or more), at which point their fertility is often declining, due to personal, professional, and financial reasons. Smoking has detrimental effects on sperm motility, morphology, and production impacts follicles in development. Low body weight and obesity can lead to hormonal imbalances and ovulatory dysfunction, both of which have an impact on reproductive health.

Low sperm counts and issues with sperm motility, or the percentage of moving sperm, are the two most frequent causes of infertility in men. Fallopian tube obstruction and ovulation dysfunction are the most frequent reasons for infertility in women. Obstructed fallopian tubes can be caused by recurrent reproductive tract infections, particularly sexually transmitted infections, and unhygienic medical procedures, particularly in obstetrics and midwifery, following childbirth or abortion. Dysfunctional ovulation may be brought on by improper diet and exercise.

In addition to the forced mentioned, some people are infertile as a result of forced sterilization through surgery (a vasectomy for men and a tubal ligation for women).

A case report –

A 37-years female patient reported the OPD of Prasuti Tantra evum streeroga of Dr. D.Y. Patil Ayurveda Hospital with infertility on 2 July 2022.

Patient Detailed History:

C/o – Pt. willing to conceive.

H/O - Patient on medication for conceive from 3 to 4 years.

Ovulation study was done in 2021 and was normal.

Semen analysis of husband was done shows sperm count 60 million. (31/5/2021)

H/O Intercourse- 2-3 times /weekly, No problems during coitus.

Husband with habit of tobacco chewing.

- Past history – No any history of major illness like HTN, DM, Asthma.
- Family history – No any paternal or maternal history.
- Menstrual / Obstetric history –
  - Age of menarche – 13years
  - LMP-29 June 2022
  - Menstrual cycle – 3-4 days / 28-30 days
  - Menses regularity – Regular
  - Marital history – Before 4 years.
  - OB/H- Nulligravida
- H/O Contraception – NAD
- General examination –
  - Pulse rate = 76 / min
  - Blood pressure = 130/80 mm of Hg
  - Respiratory rate = 18 / min
  - Height = 155 cm
  - Weight = 68 Kg
  - Temperature = Afebrile, 98.6^0 F
  - Pallor = Mild
- *Ashtavidha Pariksha* –
  - *Nadi* = 76 / min
  - *Mala = Samyaka*
  - *Mutra = Alpa SadahaMutrata*
  - *Jivha = Alpa Saama*
  - *Shabda = Spashta*
  - *Sparsha = Anushna*
  - *Druka = Prakruta*
  - *Aakruti = Madhyama*
- *Dashavidha Pariksha* –
  - *Prakruti = Vatapittaja*
  - *Vikruti* = NAD
  - *Sara = Madhyama*
  - *Samhanana – Madhyama*
  - *Satva = Alpa*
  - *Satmya = Sarva Rasa Satmya*
  - *Pramana = Madhyama*
  - *Aahara Shakti = Madhyama*
  - *Vyayama Shakti = Madhyama*
  - *Vaya* = 37 years
- Examination of system –
  - RS = Clear, NAD
  - CVS = S_1 S_2 Normal, No murmur, No any abnormality
  - CNS = Conscious, Oriented, NAD
- Investigations –
  - HIV, HbsAg = Non-reactive

- CBC = Haemoglobin 10 gm/dl
- Blood group = A +ve (wife), AB+ve(Husband)

Blood Investigations done on 11th Jun 2022

Test name	Readings	Normal Value
HbA1c	5.1	>5.7%
T_3	1.00	80-220ng/dl
T_4	7.10``	5.4-11.5 mcg/dl
TSH	3.42	0.5-4.5mIU/L
AMH	0.61	2-6.8ng/ml
FSH	10.81	1.4-9.9MIU/Ml (Follicular phase) 6.2-17.2 mIU/Ml(ovulatory phase) 1.1-9.2(luteal phase)
LH	2.32	1.68-15IU/ML(follicular phase) 21.9-56.6IU/ML(midcycle peak)
Prolactin	9.2	>25ng/ml(Non pregnant women)

Hysterosalphingography – IMPRESSION-(7/7/22)

- **Bilateral Cornual Block**
- **Normal Uterine Cavity.**

Treatment schedule

Anuvasana basti -	Dashamoola Tailam
Niruha basti -	Dashamoola Qwatha
Uttar Basti	Phala Sarpi

Panchakarma therapy was starts after examining the patient & after confirms she is fit for panchakrma therapy (Panchakrma Arha). Yog Basti kram (8 days Basti Schedule) was designed for this patient.

METHODS:

Centre of study:-OPD attached to our hospital
Method of sampling: Simple randomized
Study design: Clinical Single Case Study.

Basti schedule-

Initially Purvakarma Snehan (til tail)– Swedana (petiswed) was Done on 1st day Anuvasana basti was given by dashmool taila followed by niruha basti by dashmoola qwath for the period of 8 days for 3 consecutive cycle. Uttarbasti given with phalaghruta 2ml for 3 days after completion of menstrual flow for 3 consecutive cycle.

RESULT:

The effect of yog basti with dashmoola tail and dashmoola qwatha including uttarbasti with phala sarpi after menses gives good results and patient get pregnant in novenber 2022 by Urine pregnancy test also confirmed with USG.
LMP- 7/10/2022
Result of USG after treatment –
A single live intra uterine pregnancy seen with gestational sac, yolk sac seen, cardiac activity normal. GA- 6 weeks 5 days, CRL- 8mm, cervical length 3.6cm.
EDD (by LMP) – 14/07/2023

DISCUSSION:

Basti & Uttarbasti Yog in infertility

The dashmoola Taila with its Katu, Tikta Rasa; Laghu, Ruksha Guna; Ushna Veerya and Katu Vipaka and Vata Kaphashamaka Doshaghnata ultimately leads to Karmas such as Deepana, Pachana, Vilayana, Anulomana & Srotoshodhana resulting Amapachana and Vatakaphashamana, which may remove Sanga and Avarana leading to proper function of Vayu regulating Beejagranthi Karma resulting in Beejotsarga (ovulation).
Phytoestrogens are plant derived substances whose structure results in chemical nature similar to endogenous estrogens of human. The main action of phytoestrogen is due to their adaptogenic activity. They may be beneficial in both hypoestrogenic and hyperestrogenic state in the body. Thus, they have mixed estrogenic and antiestrogenic action, depending on target tissues.
The drugs of Dashmoola Taila have Prajasthapana, Rasayana, Balya, Brimhaniya properties, which may correct the function HPO axis subsequently resulting in proper functioning of the Beejagranthi. The drugs of Dashamoola Taila possess anti-oxidant, adaptogenic, immune-modulatory, etc., properties, which may help in relieving stress, age-decline, etc., (causes of anovulation).

Probable mode of action of Basti in infertility case

Basti given through Guda (rectalroute) normalizes Apana Vayu leading to Vatanulomana and physiological functioning of Vata, which may help in

turn for the extrusion of ovum from the follicle and ovulation.

Basti Dravya spreads all over the body, pacifies the aggravated Dosha along with Vyana Vayu leads to Samyaka Rasa Raktadi Dhatu Nirmana. Sukshma Bhaga of Rasa reaches the Beejagranthi, which regularizes the Beejotsarga with the help of normal Apana Vayu.

Basti after absorption reaches into 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 which will affect GnRH release regularizing HPO axis regulating ovarian cycle and ovulation. Endogenous opioids are a group of peptides, which play an important role in the ovarian cycle through the inhibitory effect on GnRH secretion. Other pituitary hormones are also modulated by opiates. β-endorphin has been the best known of the opioid related to the reproductive system regulating a variety of pituitary hormones including gonadotrophins. β-endorphin has a role in the regulation of the normal ovarian cycle.

Basti - stimulates - the ENS - generates the stimulatory signal for CNS - causes stimulation of the hypothalamus for GnRH and the pituitary for Follicle Stimulating Hormone (FSH) and Luteinizing Hormone (LH) with the help of neurotransmitters. Ovaries and the rectum-S2, -S3, and -S4 supply. Parasympathetic activity is mainly responsible for the Apana Vayu activity. Basti given through rectum will stimulate this parasympathetic nerve supply, which in turn helps for the release of ovum from the follicle in the ovary.

Uttarbasti's benefits for reproductive issues

1. Uttarbasti offers advantages of a longer-lasting local effect.
2. A medication's delayed effects heal diseases by addressing their underlying causes.
3. It promotes mucus secretion in the cervical area.
4. Promote the mobility of sperm and eggs, increasing the likelihood of fertilisation.
5. Lekhaniya medications are used to treat dysmenorrhea in Uttarbasti.
6. Uttarbasti removes tube blockage, one of the main causes of infertility.
7. Uttarbasti aids in the process of the endometrial lining being repaired and rejuvenated.
1. Uttarbasti medications normalize ovulation processes.

CONCLUSION:

Ayurveda utilized the term Bandhytva and cited a number of causes, including anovulation, Abhighata, Sadbhavas Vikriti, and Artavahasrotas abnormalities. Ritu, Kshetra The main cause of the infertility problems is the aberrations of Beeja and Ambu. Along with other aspects, physical stress has an impact on reproductive capability. The treatment of female infertility according to Ayurveda included the use of Vatanulomana drugs, dietary modifications, yoga, and sodhana therapy, among other things. The data is in favor of using Yog basti along with Uttar basti to treat female infertility. In Ayurveda yoni vyapada has vata influence, so after best treatment for vata that is basti plan for the patient which gives results on Infertility. After only after Shodhana treatment for vata dosha, on 11th of Nov patient get positive UPT.

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