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**EXPLORING KASHMARYADI GHRITA AND YAVAKSHAR UTTARBASTI
WITH BALADI GHANAVATI IN ADDRESSING FEMALE INFERTILITY: A
CASE STUDY ON ENDOMETRIAL FACTOR**

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ABSTRACT

The impact and management of thin endometrium is a common challenge for patients who are trying to conceive naturally or undergoing assisted reproduction. The prevalence rate of uterine factor infertility is around 5- 10% whereas infertility due to thin endometrium falls around 2.5% as well as in ovarian stimulation cycles, the incidence of thin endometrium can reach 38–66%; in most studies, the incidence of thin endometrium during IVF is between 1% and 2.5%. A thin endometrium also significantly hinders IVF cycles. As a result, having a thin endometrium should be considered a separate predictor of getting pregnancy.

A 28-year-old female patient presented at the outpatient department of Parul Ayurved Hospital, reporting a 1.5-year history of primary infertility and 1 years of dysmenorrhea. The patient underwent for evaluation before and after receiving *Uttar Basti* treatment, which resulted in significant improvement in endometrial thickness observed via ultrasonography, along with relief from dysmenorrhea symptoms. According to Applebaum's USSR (Uterine Scoring System for Reproduction-Total Score-10 to 19) criteria, there was a noticeable improvement (CET-4 mm to 10 mm) on 12th day of menstrual cycle after two *Uttar Basti* cycles, along with an increase in endometrial thickness. *Vata-Shamana*, *Agniideepana*, and *Dhatuposhana* were

the recommended therapy protocols for *Dhatukshaya Vandhya*. This infertility can be caused by a thin endometrium. Throughout the course of treatment, no negative effects were discovered.

Keywords: *Ayurveda, Baladi Ghanavati, endometrial infertility, Dhatukshaya Vandhya, Kashmaryadi Ghrita, Yavakshar, primary infertility*

INTRODUCTION & BACKGROUND

In the past ten years, most of the research aimed at increasing reproductive medicine's success rates has been devoted to comprehending and improving embryo quality. However, the emphasis has switched to evaluating the unique condition of the endometrium due to the rise of personalized medicine in ovulation induction and embryology.

Perfect synchronization between a viable blastocyst, the receptive endometrium, and adequate communication between them results in successful embryo implantation in the maternal endometrium [1]. Research has shown that endometrial origin accounts for 25% of cases of repeated implantation failure [2], which is consistent with the clinical significance of endometrial receptivity in successful pregnancy [3].

Ayurveda addresses the management of *Vandhyatva* for a variety of reasons, and in this instance, the treatment plan for *Dhatukshaya Vandhya* [4] was chosen since ayurveda can effectively control thin endometrium without the need for hormonal therapy.

Charaka identified several factors, including abnormality of *Yoni*, psychology,

Shukra, Asrika, food and lifestyle, coitus at the wrong time, and loss of *Bala*, as reasons why an otherwise fertile or *Sapraja* woman would not conceive quickly.

When a lady with a *Vata Prakruti* copulates with her spouse, she becomes infertile. Psychology factor has traditionally placed the utmost emphasis on reaching conceptions [5].

According to Acharya Sushruta, there are four factors responsible for creation of *Garbha*. i.e.

1. *Ritu* (Fertility Period)
2. *Kshetra* (reproductive tract including Uterus, Fallopian tube, Ovary), it should be in healthy and normal condition.
3. *Ambu* (Nutritive fluid for fertilized ovum)
4. *Beeja* (*Shukra & Shonita* i.e., Sperm & Ovum)

A 28-year-old female patient presented at the outpatient department of Parul Ayurved Hospital, reporting a 1.5-year history of infertility and 1 years of dysmenorrhea.

Chief complaints with durations

1. Unable to conceive since 1.5 years

2. Pain during menstruation since 1 year

Past medical history- No history of any chronic illnesses

Family history – no family history of any chronic illnesses

PERSONAL HISTORY

Diet: Mixed
 Appetite: Good
 Bowel: Regular and well formed
 Micturition: 4-5 times/ day, 0-1 times/ night
 Sleep: Sound
 Dietary habits: *Viruddhashana*
 Physical activity: Active

MENSTRUAL & OBSTETRICAL HISTORY

Age of menarche: 13 years

LMP: 23/11/2023

Duration: 3 days
 Interval: 28-35 days
 Regularity: Regular
 Color: Blackish red
 Consistency: Watery
 Amount: 2-3 pads per day
 Odor: No foul smell
 Pain: Present

G0- Nulligravida

CONTRACEPTIVE HISTORY- no history of contraceptive use.

GENERAL EXMINATION

Height: 159 cm

Weight: 41 kg
 BMI: 16.26
 Cyanosis: Absent
 Pallor: Absent
 Icterus: Absent
 Lymph nodes: No palpable lymph nodes
 Clubbing: Absent
 Blood pressure: 110/70 mm of hg
 Pulse rate: 90/ minute
 Temperature: Afebrile

SYSTEMIC EXAMINATION

Respiratory: No scar mark or discoloration, Bilateral airway entry clear, no added sounds
 Cardiovascular system: No discoloration/precordial bulging, dull note over precordium, S₁S₂ normal, no added sounds
 Per abdomen: Soft, no discoloration or tenderness
 CNS: Patient conscious and well oriented
 Loco-motor: Normal range of motion in all joints,
 Psychological status: Anxious

Asthavidha pariksha:

Nadi: Vatapradhan Kapha

Mala: Prakruta

Mutra: Samyak

Jihwa: Saama

Sabda: Spashta

Sparsha: Sheeta

Drik: Samyak

Akriti: Madhyama

GYNECOLOGICAL AND LOCAL EXAMINATION

Inspection: No discoloration or scar mark present, Normal growth pattern of pubic hair.

PS examination: Cervix healthy with pinhole os, mild thin white discharge present, no foul smell.

PV examination: Uterus anteverted, normal size, freely mobile and non-tender. Fornices non tender.

DIAGNOSIS: *Vandhyatwa*

TREATMENT

Patient was given *Panchkola Phanta* for 5 days, *Sadyovirechana* was given with 5 gm *Swadishta Virechana* after which *Uttar Basti* for two consecutive cycles with *Kashmaryadi Ghrita* 5 ML and *Yavakshar* 3 gm from 8th day of menstrual cycle, *Yoni Pichu* with *Kashmaryadi Ghrita* was introduced intravaginally after *Uttarbasti*, oral *Baladi Ghanavati* 500 mg 2 tablets BD.

OBSERVATION & RESULT:

Significant improvement was observed in endometrial thickness, grading based on USSR (Applebaum's Uterine Scoring System for Reproduction) [6].

Table 1: Endometrial thickness, grading based on USSR (Applebaum's Uterine Scoring System for Reproduction)

| Parameter | Determination | Score | 01/12/23 (BT) | 14/02/24 (AT) |
|----------------------------|---------------|-------|---------------|---------------|
| Endometrial thickness (mm) | <7 | 0 | 0 | 3 |
| | 7-9 | 1 | | |
| | 10-14 | 2 | | |
| | >14 | 3 | | |

Table 2: Investigations

| S. No. | DATE | INVESTIGATION | IMPRESSION |
|--------|-----------------------------------|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. | 01/12/2023 Before Treatment | USG Abdomen+ Pelvis | Uterus- 36×50×78 mm Endometrial Thickness- 4 mm Left Ovary- 13× 22 mm Right Ovary- 14 × 20 mm |
| | | Hemoglobin | 11.4 gm% |
| | | Random Blood Sugar | 102 mg/dl |
| | | HIV | Non-reactive |
| | | HbsAg | Non-reactive |
| | | VDRL | Non-reactive |
| | | Urine analysis | Pus cells 1-2/HPF |
| 2. | 14/02/2024 After Treatment | USG Abdomen+ Pelvis | Uterus- 63×40×41 mm Endometrial Thickness- 10 mm Left Ovary- obscured Right Ovary- 28 × 14 mm Minimal free fluid present in cul-de-sac. |

Menstrual History after treatment

LMP- 02/02/2024

Duration: 4-5 days

Interval: 30-32 days

Regularity: Regular

Color: Dark red

Consistency: Watery

Amount: 2-3 pads per day

Odor: No foul smell

Pain: Absent

DISCUSSION:

The four most significant elements for conception are *Ritu*, *Kshetra*, *Ambu*, and *Beeja* [7]. A receptive endometrium that is sufficiently thick is crucial for implantation. Given that the cause of infertility was a thin endometrium, the situation was classified as *Dhatukshaya Vandhya*. The purpose of establishing *Sthanika* and *Shamana Chikitsa* was to rectify the *Vata* and *Agni Dosha* functions. *Agnideepana*, *Vata Shamana*, and *Dhatuposhana* were the prescribed therapy protocols because thin endometrium is caused by increased *Ruksha Guna* of *Vata* in conjunction with *Dhatvagni Mandya*.

It is well recognized that patients with a thin lining express less vascular endothelial growth factor (VEGF), which impairs vascular development and, eventually, results in abnormal placentation [8].

The Likelihood of *Garbhashayagata* (Uterine) *Uttarbasti* to act the following mechanism is theoretically one way that the drugs could enter the uterus:

1. Passive direct diffusion in tissues.
2. Transit through the cervical lumen from the vagina to the uterus.
3. Transport of blood via the lymphatic or venous systems.

Concurrent vascular exchange, which involves the diffusion of arteries and veins in the uterus and vagina. Bypassing the first pass effect, the medication enters the uterus directly and begins to act. *Uttarbasti* and

Vatashamana: It enters because of *Uttarbasti Ghrita* have *Sukshmaguna* and thus it enters Microchannels, *Srotasa*. The medicated *Ghrita* enters the uterine cavity through the microchannels, and as a result of its *Snigdha* it causes *Vatashamana*.

With its scraping, penetrating, uterine cleansing, wound healing, *Kapha-Vata* alleviating qualities, *Vata* alleviation, localized action on tubes, and direct flushing of obstruction, *Kshara* removes blockage of microchannels. Because of its reviving and calming properties, it also dissolves adhesions and helps the tubes and endometrium operate normally [9].

Panchkola Phanta helps in *Deepana*, *Pachana* as well as *Vatanulomana* causing *Rasa Rakta Vishodhaka* and *Aampachaka*. *Kashmaryadi Ghrita* does *Brimhana* of endometrium and resulting in increased thickness of endometrium. Since the proliferative activities are the secretory function of *Kapha* and the *Karma* of *Vata*, the medications *Aampachana*, *Vataanulomana*, and *Brimhana* actions are verifiable [10].

Baladi Ghanavati has *Balya*, *Brimhana*, *Vayasthapak*, *Jeevaniya*, *Pumsavana*, *Vrishya* Properties. Drugs in this formulation helps to remove doshas from female reproductive system and improves strength and promote conception. It also has *Rasayana* property through which it

improve qualities of *Dhatu* and improve rejuvenation.

CONCLUSION:

Finally, the use of *Yavakshar Uttarbasti* and *Kashmaryadi Ghrita* in combination with oral *Baladi Ghanavati* shows a significant improvement in endometrial variables that lead to female infertility. As demonstrated by ultrasonography, this combined therapy approach has demonstrated good outcomes in improving endometrial thickness and reducing related symptoms like dysmenorrhea. These results emphasize the need for more study to confirm and refine this therapy approach for better reproductive outcomes in afflicted persons and underline the potential effectiveness of *Ayurvedic* therapies in treating endometrial factor infertility.

Conflicts of Interest: None declared.

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