Role of Phalagruta Uttarabasti in the management of female infertility (Follicular Defect): A single case study

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Abstract
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%. According to Ayurveda, Vata is considered as a physiological force as it is responsible for the normal functioning of body systems. Infertility being a vat Aja disorder, demands basti karma which is having local oleation and nourishing action. A 32 year female patient of infertility was taken for the present study after proper clinical and laboratory investigations, and the cause of infertility was traced out and treated with Phalagruta Uttarabasti successfully.

Keywords Phalagruta, uttarbasti, infertility, female infertility, unprotected coitus

1. Introduction
Female infertility is a major issue in the current era due to the growing number of incidences as a result of combination of various unwholesome environmental, social, psychological and nutritional factors [1]. In Ayurveda, Vata is considered to be the root cause behind all the disorders related to female reproductive system including female infertility [2]. Uttarabasti is a unique therapy for the management of gynaecological disorders, wherein medicated oil or ghee is administered directly into the uterine cavity. Uttarabasti contributes in the all-round treatment of the female factors causing infertility, as it exerts direct local action and also systemic effect on reproductive system. Stree bandhyatwa or female infertility a gynaecological disorder is not fatal, but hinders the of progeny. The aetiological factors include the defect in the union of sperm and ovum during fertile period [3]. Defect in uterus, cervix and fallopian tube, defect in ovulation and defect in hormonal function. (Defect in Ritu. Kshera, Ambu and Beeja) [4]. The formulations used in uttarabasti i.e. medicated oil or ghee are endowed with properties such as cleansing the uterus and increasing the strength and vitality of reproductive organs. Due to the local action and the quick penetrating and spreading properties of the drugs, it enters the minute channels and is absorbed easily. It is the best medium for the drug to cleanse the uterus, to reach the tubal lumen and remove the blockage, to strengthen and activate the endometrial receptivity and to stimulate the hormonal receptivity for normal function of reproductive system.

2. Case
2.1 Report
A 32 years female Patient was diagnosed based on signs and symptoms like anovulation, PCOD etc. Analysis was done before and after treatment with USG.

Investigations
- Blood: CBC, Blood grouping, RBS.
- Thyroid profile (if necessary)
- Urine Routine
- Abdomen and Pelvic USG with follicular study
- HSG

3. Aims and Objectives
1. To observe the follicles throughout the study.
4. Material and Methods
Single patient was randomly selected from the OPD of Dept. of Prasootitantra and Shree Roga, in our hospital.

4.1 Name of the Ingredient in Phalagruta
Manjistha - Rubiicardifolia
Kushtha - Saussurealappa
Tagara - Valerianawallichi
Sharkara - Sugar
Vacha - Acoruscalamus
Haridra - Curchuma longa
Darurahidra - Berberisaristrata
Madhuka - Glycirlhizaglabra
Meda - Polygonatumcirrhifolium
Triphala - Haritaki, Vibhitaki, Amlaki
Dipyaka - Trachyspermumroxburghianum
Katurolhini - Picorrhizakurroa
Payasya - Ipomeamauritiana
Hingu - Asafoetida
Kakoli - Roscoaepercor.

4.2 Assessment Criteria
4.2.1 Table number 1 shows follicular size and grade

<table>
<thead>
<tr>
<th>SN</th>
<th>Follicular size</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>8mmto12mm</td>
<td>0</td>
</tr>
<tr>
<td>2.</td>
<td>13mmto16mm</td>
<td>1</td>
</tr>
<tr>
<td>3.</td>
<td>17mmto19mm</td>
<td>2</td>
</tr>
<tr>
<td>4.</td>
<td>20mmto22mm</td>
<td>3</td>
</tr>
</tbody>
</table>

5. Observations
5.1 Table number 2 shows before and after size of follicle

<table>
<thead>
<tr>
<th>SN</th>
<th>B.T(Follicular size)</th>
<th>A.T(Follicular size)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>0</td>
<td>-dropout-</td>
</tr>
<tr>
<td>2.</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>3.</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>4.</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>5.</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>6.</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>7.</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>8.</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>9.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>10.</td>
<td>0</td>
<td>3</td>
</tr>
</tbody>
</table>

5.2 Discussions
Uttara Basti protocol
- Before Uttarabasti, Amapachana with Hingvastaka Churna - 2.5g, 2times with hot water before food.
- Kostha Shodhana with Haritaki Churna 5gm at bed times with hot water for three days.

6. Uttarabasti Procedure
6.1 Purvakarma
- Uttar Basti was carried out after admitting the patient in the IPD. Vitals were recorded and patient was instructed to empty the Bladder before the procedure.
- Abhyanga was carried out by Dhanwantara Taila on lower back region, lower Abdomen and limbs followed by Nadi Sweda for 15 min just before main procedure [5].
- After that Yoniprakshalana with 1000ml of Panchwalkala Kwatha [6] was given maintaining all aseptic condition in MOT.

6.2 Pradhana Karma
Patients were taken in lithotomic position and cervix was visualized through Sims’s speculum and anterior wall retractor
- Anterior lip of the cervix was with the help of Allis forceps.
- After that measurement was taken with uterine sound. Intra uterine Uttarabasti was administered through IUI cannula with 5ml of Phalagruta slowly pushed into uterus.
- Maintaining the patients head in lower position.
- After completion of the procedure hot water bag was kept on lower abdomen for 20 min with head in lower position.

6.3 Pashatkarma
- After Uttarabasti Phalagruta Pichu was administered
- Patient in crossed leg position for 30 minutes.

6.4 Mode of Action
Hingvastaka Churna acts as Amapachana, Haritaki Choorna acts as vata anuloma relives constipation. Phalagruta Uttarabasti activates the normal function of Vata and stimulates the ovarian hormone.
- Ovaries contain receptor which receives the hormone secreted from hypothalamus and pituitary gland, it stimulates the receptors. So that Maturation of follicles and ovulation occurs in cycle. It also increases tubal potency.
- It will give normal function of the cilia by its regulating and soothing effects. Uttarabasti causes local uterine contraction which stimulates the endometrial and ovarian receptors, which stimulates the receptors and HPO axis regulating; the normal menstrual cycles with ovulation will appear. Endomertrium acts as a bed for Fertilized Ovum where it gets embedded for further development; Unresponsive endometrial may cause implantation failure or abortion in early stage.
- Grutha directly gets absorbed by cervical epithelial cells acts locally on the tissue. Its passive diffusion across the membrane nourishes and regenerates the epithelial cells and normalizes the cervical secretion and cervical mucosa gets more active.
- Pushpadhanwa Rasa and Dashamoola Arista these 2 Yoga are very beneficial in infertility management.

7. Conclusion
Phalagruta Uttarabasti in management of Female Infertility is more beneficial and increases ovulation factor. It gives tubal potency. In Endometrial factors it increases the blood circulation, helps in proliferation increases the receptive activities of endometrial and cervical mucus secretion. Uttar Basti is a great contribution in Ayurvedic field in management of female infertility.

8. References
2. Tiwary PV. A text book of Ayuvediya Prasuti Tantra
Evam Stree Roga, Part-2, Page No 297-300.