A PILOT STUDY OF EFFICACY OF GARBHAPRAD YOG IN ENDOMETRIAL THICKNESS

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ABSTRACT
Infertility is generally considered as one year of unprotected regular coitus without conception. Factors from either or both partners may contribute to difficulties in conceiving; therefore it is important to consider all possible diagnosis before pursuing treatment. The overall incidence of infertility has remained relatively unchanged over the past 3 decades. However the evaluation and treatment of infertility have changed dramatically during time. The main causes of female infertility includes ovulatory disorders, uterine factors etc. Basic investigation that should be performed before starting any infertility treatment is confirmation of ovulation and documentation of tubal patency. Uterine pathologies constitute the etiologic factor in infertility in as many as 15% of couples seeking treatment. Thin endometrial lining can be troublesome in such patients. Patients with thin endometrium is a challenging aspect. In Ayurvedic classic Harita has defined bandhyatwa as failure to achieve a child rather than pregnancy. Caraka and Vagbhatta have referred vandhya due to abnormality of bijamsa. Ayurvedic management with Garbhaprad yog in increasing the endometrial thickness showed significant results. Bhaishajya Ratnavali has reference of Garbhaprad yog. The article shows pilot study done on 5 patients in OPD of Prasuti tantra avum stree roga department in YMT Ayurvedic Medical College and Hospital and P.G Institute, Kharghar.

Keywords: Infertility, uterine factor, thin endometrium, Garbhaprad yog.

INTRODUCTION
Vandhyatwa is like curse to the women as it casts the physical and mental illness health and thereby affecting the social life of the women. In Ayurveda Garbhahdhan vidhi is explained by different acharyas which indirectly indicates importance of conception since that era. Acharyas have mentioned about the essential factors for conception in the classical text. Acharya Susruta equated germination of a seed with achievement of conception says that if rutu (rutukala), bija (ovum and sperms), ksetra (female reproductive system) and ambu (nourishing substances) assemble together, the conception will definitely occur. And the same is accepted indirectly by Charak acharya. Acharya Charak has specified special acts needed to perform for conception but with
healthy *sukra* (sperm), *artava* (ovum) and *garbhasaya* (uterus).

Infertility is a rising issue in today’s era. Female factors affecting the fertility are more than the male factors. In the female factors mainly the ovulation is being looked upon. Ovulatory cycle or anovulatory cycle is checked and the treatment is given accordingly. But in the follicular study there is also an important factor to look upon i.e. Endometrial thickness (ET). Endometrium is the innermost lining of the Uterus. Endometrium can be co-related with *garbhashayya* according to the classical texts. Endometrial thickness is necessary for the embryo implantation and for a successful pregnancy. Thus, having impact on the fertility. To rule out endometrial growth, USG follicular study plays an important role in follicular growth and endometrial thickness. It has become easy with follicular study to keep a tract of the growth. Less the endometrial growth leads to less the chance of implantation leading to non conception. Medical sciences are searching drugs to increase the Endometrium. Also research works are being conducted for Endometrial thickening. So I decided to work on endometrial thickness and *Garbhapradyog*. *Garbhaprad yog* reference is given in *Bhaishajyaratnavali*, *Yonivyapad rogadhikar*. *Garbhaprad yog* is also easily available and cost effective.

**AIM:** To evaluate the efficacy of *Garbhaprad yog* in Endometrial thickening.

**OBJECTIVES**

**Primary objective**-
To study the effect of *Garbhaprad yog* in Endometrial thickness.

**Secondary objective**-
1. To study complete literature available in text on Endometrium.
2. To study the effect of *Garbhaprad yoga* and it’s contents in management on Endometrial thickening.

**STUDY DESIGN**
An open, non-comparative clinical end point study to evaluate the efficacy of *Garbhaprad yog* in endometrial thickness.

**SAMPLE SIZE**
5 Patients

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**MATERIALS AND METHODS**

**DRUG REVIEW**

<table>
<thead>
<tr>
<th>SR. NO</th>
<th>DRUG</th>
<th>RASA</th>
<th>VEERYA</th>
<th>VIPAKA</th>
<th>GUNA</th>
<th>DOSHAGHNATA</th>
<th>KARMA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Pipalli</td>
<td>Katu</td>
<td>Anushsheet</td>
<td>Madhura</td>
<td>Laghu</td>
<td>Snegdha Tikshna</td>
<td>Vattakapha shamak</td>
</tr>
<tr>
<td>2</td>
<td>Shrungbera</td>
<td>Katu</td>
<td>Ushna</td>
<td>Madhura</td>
<td>Laghu</td>
<td>Snegdha</td>
<td>Pittakapha shamak</td>
</tr>
<tr>
<td>3</td>
<td>Marich</td>
<td>Katu</td>
<td>Ushna</td>
<td>Katu</td>
<td>Laghu</td>
<td>Tikshna</td>
<td>Vattakapha Shamak</td>
</tr>
<tr>
<td>4</td>
<td>Nagkeshar</td>
<td>Kashay Tikta</td>
<td>Ushna</td>
<td>Katu</td>
<td>Laghu</td>
<td>Ruksha</td>
<td>Kaphapitta shamak</td>
</tr>
<tr>
<td>5</td>
<td>Goghrita</td>
<td>Madhura</td>
<td>Sheeta</td>
<td>Madhura</td>
<td>Guru</td>
<td>Sheeta</td>
<td>Tridosha shamak</td>
</tr>
</tbody>
</table>

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MATERIALS

Contents of Garbhaprad yog

<table>
<thead>
<tr>
<th>SR. NO</th>
<th>CONTENTS</th>
<th>LATIN NAME</th>
<th>PART USED</th>
<th>PROPORTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Pippali</td>
<td>Piper longum Linn.</td>
<td>Phala, Mool</td>
<td>1 Part</td>
</tr>
<tr>
<td>2</td>
<td>Shrungbera</td>
<td>Zingiber officinale Rosc.</td>
<td>Phala, Pushpa, Tvaka</td>
<td>1 Part</td>
</tr>
<tr>
<td>3</td>
<td>Marich</td>
<td>Piper nigrum Linn.</td>
<td>Phala</td>
<td>1 Part</td>
</tr>
<tr>
<td>4</td>
<td>Nagkeshar</td>
<td>Mesua ferrea</td>
<td>Punkeshar</td>
<td>1 Part</td>
</tr>
<tr>
<td>5</td>
<td>Goghrita</td>
<td>As per requirement</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

INCLUSION CRITERIA

1. All married patients age group 18yrs to 40yrs.
2. All patients with primary and secondary infertility.
3. All patients with PCOD.
4. All patients with ovulatory and anovulatory cycle.

EXCLUSION CRITERIA

1. Patient with known case of uterine fibroid, endometrial tuberculosis.
2. Patient with IUCD in situ.
3. Patient with DUB and menorrhagia.
4. Patient with pre and post menopausal syndrome.
5. Patients with known case of systemic disorder like DM, HTN, TB, Asthma, Congenital abnormalities etc.

DOSE OF DRUG

½ Karsh = 5.75 grams approx.6 gms  
*Apana kala* Once a day (before food)  
*Rutukaal* Anupaan – Goghruta

MODE OF ADMINISTRATION: Orally  
DURATION OF STUDY: 2 menstrual cycles per patient.

STUDY CENTRE

Dr.G.D.Pol Foundation’s Y.M.T Ayurvedic Hospital & P.G Institute, Kharghar, Navi Mumbai.

STATISTICAL ANALYSIS

With final result and conclusion, the data generated during the study was subjected to statistical analysis using Paired “t” Test.

INVESTIGATION

USG Follicular study.

ASSESSMENT CRITERIA

USG Follicular study was done, during which the Endometrial growth was observed and compared with before and after treatment reports.

FINAL ASSESSMENT

NO IMPROVEMENT- ET remains the same compared to previous report.

IMPROVED- ET increases than the previous report.

RESULT

The observation and result are tabulated below.

<table>
<thead>
<tr>
<th>SR NO</th>
<th>PT NAME</th>
<th>ET DAY 9TH/10TH BEFORE</th>
<th>AFTER</th>
<th>ET OVULATION/DAY 18TH BEFORE</th>
<th>AFTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SSP</td>
<td>9mm</td>
<td>11.2mm</td>
<td>9mm</td>
<td>11.2mm</td>
</tr>
<tr>
<td>2</td>
<td>SVM</td>
<td>6.6mm</td>
<td>8.1mm</td>
<td>10.7mm</td>
<td>10.1mm</td>
</tr>
<tr>
<td>3</td>
<td>PSK</td>
<td>5.2mm</td>
<td>8mm</td>
<td>8.5mm</td>
<td>9.2mm</td>
</tr>
<tr>
<td>4</td>
<td>AAS</td>
<td>4.9mm</td>
<td>7mm</td>
<td>5.4mm</td>
<td>9.2mm</td>
</tr>
<tr>
<td>5</td>
<td>SAM</td>
<td>6mm</td>
<td>8mm</td>
<td>8mm</td>
<td>11.2mm</td>
</tr>
</tbody>
</table>

ET= Endometrial thickness  
PT= Patient
DISCUSSION

To evaluate the efficacy of Garbhaprad yog in endometrial thickness, paired t-test was applied

<table>
<thead>
<tr>
<th>Applied statistics Table no 4</th>
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</thead>
<tbody>
<tr>
<td></td>
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<tr>
<td>-------------------------------</td>
</tr>
<tr>
<td>ET 9/10 Day</td>
</tr>
<tr>
<td>Before</td>
</tr>
<tr>
<td>After</td>
</tr>
<tr>
<td>ET Ovulation</td>
</tr>
<tr>
<td>Before</td>
</tr>
<tr>
<td>After</td>
</tr>
</tbody>
</table>

Effect of Garbharprad yog on individual parameter

1. **Endometrial thickness**

There was improvement in the endometrial thickness with t value 3.588, the result was statistically significant.

2. **Ovulation**

There was no improvement seen on ovulation with t value -1.906, the result was statistically not significant.

The Endometrium continues to proliferate till ovulation occurs. Glands become hypertrophied and their lumina are increased. We can compare that with raja sanchaya. The stroma is dense and is composed of round or oval cells. The spiral arterioles are more coiled. The number of collecting veins and arteriovenous anastomosis is also increased. The Endometrium progressively increases in thickness. This is the normal physiology of Endometrium growth according to modern.

According to the classical texts rutu kala and rutavateete kala describes the endometrial growth. Rutu kala is kapha pradhan and rutavateete kala is pitta pradhan. Thus in this phase kapha and pitta are the doshas resembling the endometrial growth. Also we know for regeneration and growth kapha is essential, as vata causes retardation of growth. Thus the Ayurvedic physiology of kapha-prakopa and vatashama during rutu kala is self explanatory for the changes in Endometrium.

Garbhaprad yog includes pipalli, shrungbera, marich and nagkeshar choorna. Pipalli is katu in rasa and vrushya in karma. It is also anusheet in virya thus guru in guna which will help in proliferation. Shrungbera is snegdha in guna and uttejak will help endometrial growth. Pipalli and Shrungbera are madhura vipak thus are guru in guna which increases kapha.
Marich is ushna virya and uttejak and aartavjanan. Pilpalli and marich both are pitta vardhak, vata shamak which will help in regeneration. Thus according to the doshas, pitta vardhan helps endometrial growth.

Nagkeshar is laghu and vajikaran. These qualities will help in endometrial growth, leading to healthy Endometrium. This healthy Endometrium will help in implantation of the embryo.

After the pilot study of 5 patients, all showed marked improvement. Thus this pilot study reflects the true efficacy of Garbhaprad yog when used for increasing the Endometrium. The action of Garbhaprad yog showed improvement in such cases.

CONCLUSION
Bald endometrium is a major issue in the present era. For implantation of the embryo endometrium plays a very important role. The modern treatments have also failed in the endometrial growth. This pilot study of Garbharprad yog shows encouraging results in improvement of the endometrial thickness. As a result this study has good scope of clinical study on large scale to prove the efficacy of Garbhaprad yog in endometrial thickness.

REFERENCES

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Conflict Of Interest: None Declared