Case Study

ROLE OF PHALASARPI UTTARBasti IN THE MANAGEMENT OF LOW ANTRAL FOLLICLES: A CASE STUDY

Parmar Meena¹, Agrawal Trapti², Parmar Gaurav³

¹Medical Officer, ²Assistant Professor, Department of Prasuti Tantra and Stri Roga, Chaudhary Brahman Prakash Ayurveda Charak Sansthan, Khera Dabar, New Delhi.
³Clinical Registrar, Department of Shalya Tantra, Chaudhary Brahman Prakash Ayurveda Charak Sansthan, Khera Dabar, New Delhi, India.

A female patient of 26 years old came into the OPD of Prasuti-Tantra at Chaudhary Brahman Prakash Ayurveda Charaka Sansthan, Khera Dabar, New Delhi on dated 25/02/2017 with the complaint of wants to conceive since 3 years and scanty flow during menstrual cycle since 1 year. On enquiry, she told that, she had miscarriage last year in January 2016 of gestational age 1 month 6 days. Her menstrual cycle was irregular with duration of 3-5 days and interval of 28 to 32 days with scanty amount (1 pad/day) of menstrual blood and no other associated symptoms. She gave previous history of allopathic treatment. Her all Investigations regarding infertility had normal study except ultrasonography (USG) report which revealed Low antral follicles count. Aim of the management was to increase the Low Antral Follicles count as it is one of the cause of infertility and which represents poor ovarian reserve. So, the drug Phalasarpi as mentioned by Aacharya Vagbhatta for the concept of infertility was selected for Uttra Basti and Oral use as in-vivo effect of Phalasarpi in albino rat has revealed increased Gonadotropin secretion and regulation of the activity of the enzymes involved in ovarian steroidogenesis and stimulates serum estradiol level and proved to be successful in Anovulatory Infertility.

KEYWORDS: Antral Follicle, Ovarian reserve, Trans Vaginal Sonography, Phalasarpi, Uttarbasti.

INTRODUCTION

Infertility affects one couple in six and is a common problem. Infertility is defined as a failure to conceive within one or more years of regular unprotected coitus. Conception depends on the fertility potential of both the male and female partner. The major cause in infertility is female factor which is 40-55%¹. Female factors are ovarian, tubal, uterine, cervical and endometrial factors (FIGO). Anovulation or oligo-ovulation, decreased ovarian reserve, Luteal Phase Defect and Luteinized Unruptured Follicle are the ovarian factors responsible for infertility. Ovarian dysfunction is likely to be linked with disturbed Hypothalamic-Pituitary–Ovarian axis. Thus, the the disturbance may result not only in anovulation but may also produce oligomenorrhea or amenorrhea².

Antral Follicles are small follicles about 2-5mm of size that can be seen and measured and counted together from both ovaries with Trans Vaginal Ultrasonography. Antral Follicles are also called Resting Follicles. Antral follicle is a major factor in the diagnosis of Ovarian Reserve³.

The Ovarian Cycle consists of recruitment of groups of follicles, selection of dominant follicle and its maturation, corpus luteum formation and demise of corpus luteum. The cohort of the growing follicles undergoes a process of development and differentiation which takes about 85 days and spreads over 3 ovarian cycles. It is presumed that about 20 antral follicles (about 5-10 per ovary) proceed to develop in each cycle. The initial recruitment and growth of primordial follicles are not under the control of any hormone. After a certain stage (2-5mm in size) the growth and differentiation of Primordial follicles are under the control of FSH. Unless the follicles are rescued by FSH at this stage they undergo atresia³.

In Ayurvedic classics, many formulations have been mentioned for infertility. Phalasarpi is one of the well known medicine mentioned in Ashtanga Hridayama for the successful conception and Continuation of the pregnancy⁴. Selection of the drug: In Ayurvedic classics, Intruterine Uttarbasti is mentioned which plays a great role in gynaecological disorders. Chakrapani has mentioned Uttarbasti as Shrestanam Shrestagunataya which means it is the best and give best results⁵. Drug selected in this case was Phalasarpi which is Vatahara and Garbha as mentioned by Aacharya Vagbhatta.

Case history

A female patient of 26 years old came into the OPD of Prasuti-Tantra at Chaudhary Brahman Prakash Ayurveda Charaka Sansthan, Khera Dabar, New Delhi on dated 25/02/2017 with the complaint of wants to conceive since 3 years and scanty flow during menstrual cycle since 1 year. Patient took allopathic treatment for the same but the condition remained the same. On enquiry, she told that, she had miscarriage last year of gestational age 1 month 6 days. Her menstrual cycle was irregular with duration of 3-5 days and interval of 28 to 32 days with scanty amount (1 pad/day) of menstrual blood flow and no other associated
symptoms. Her all investigation regarding infertility had normal study except Ultrasonography report which revealed Low antral follicles count. with these complaints patient came here in Prasuti-Tantra and Stri-Roga OPD for proper consultation and management.

**Personal History**

<table>
<thead>
<tr>
<th>Diet</th>
<th>Vegetarian</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appetite</td>
<td>Normal</td>
</tr>
<tr>
<td>Micturition</td>
<td>Normal</td>
</tr>
<tr>
<td>Bowel habit</td>
<td>Regular</td>
</tr>
<tr>
<td>Addition</td>
<td>None</td>
</tr>
</tbody>
</table>

**General Biodata**

<table>
<thead>
<tr>
<th>Age</th>
<th>26 yrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marital status</td>
<td>-married</td>
</tr>
<tr>
<td>Occupation</td>
<td>house wife</td>
</tr>
<tr>
<td>Social Class</td>
<td>Middle</td>
</tr>
<tr>
<td>Address</td>
<td>Najafgarh, New Delhi</td>
</tr>
<tr>
<td>OPD No</td>
<td>7637/17</td>
</tr>
<tr>
<td>Registration date</td>
<td>25/02/2017</td>
</tr>
</tbody>
</table>

**Menstrual History**

No relevant family history

Menarche at the age of 12 years

Last menstrual period-01/02/2017

Past menstrual history: 4-5/28-30 days, amount - 2-3 pads/day with no associated symptoms

Present menstrual history (since 1year)- 3-5/28-32 days, irregular, scanty flow(1 pad/day) with no associated symptoms

**Obstetrical History**

LMP- 01/02/2017

The patient was admitted in IPD for Uttar Basti for 1 month 6 days, spontaneous bleeding per vaginum.

**General physical Examination**

Body Build- average Nutritional status- satisfactory Pallor- absent

No evidence of thyroid enlargement BP- 120/70mmHg Pulse- 74/min

Height: 162cm Weight: 51kg, Temperature: 98.4 Respiration rate: 20/min

**Systemic Examination**

**Cardio Vascular System:** Heart sounds (S₁S₂): Normal

No added sounds

H.R.- 74/min.

**Respiratory System:** B\L clear, air entry adequate, No added sounds

**GIT system**- Per abdomen- soft, non-tender and no organomegaly detected

**Genitourinary examination**

- Inspection-
  - Vulva-Normal, Healthy
  - Per Speculum-
  - Cervix-Normal in appearance

- Mucoid discharges (+)

- Palpation (per vaginum)-
  - Uterus- Anteverted, Normal size, Mobile, Firm in consistency

Fornices-Bilateral fornice free, non-tender

The following investigations was done (21/12/16):

- Hb-11.7gm%
- TLC-8,000/mm³
- DLC-N₅₅L₄₀E₀₂M₀₈
- ESR-10 mm fall
- ABORh-B+ve
- FBS-96 mg/dl
- Sr.TSH-3.56IU/ml
- HIV, VDRL, HBsAg-Non-Reactive
- Montoux Test-3mm2 mm (Normal)
- TORCH-IgG-CMV and Toxoplasmosis-2.76 (Positive)
- IgM-Negative
- Lupus anticoagulant and anticardiolipin antibodies-
  - Normal study

- Urine- Routine and Microscopic
  - Pus cells-Nil
  - Epithelial cells 1-2/hpf

- USG (Trans Vaginal Sonography) (05/03/17):
  - Uterus - normal in size, endometrial thickness -4.1mm
  - Ovaries – normal in size and echotexture
  - LMP - 03/03/17-(D3)
  - Antral Follicles In Left Ovary = 3
  - Antral Follicles In Right Ovary = 2
  - Total Antral Follicles Count = 5

**Impression:** Low Antral Follicles Count

**Treatment Protocol**

- Counselling of the couple was done to alleviate anxiety and to improve the psychology.

1. **Phalsarpi (orally)** - 1tsf (5ml) BD with milk for 3 consecutive months
2. **Uttarbasti (Intrauterine)**

   After cessation of menstruation, intra uterine Uttarbasti with Phalsarpi was administered after Niruha-Basti in morning hours with the consent of the patient. The dose was 5 ml for 3 days in each cycle for 3 consecutive cycles. The patient was admitted in IPD for Uttar Basti. The procedure was carried out in the O.T. with all aseptic precautions.

**Purvavkarma**

**Deepana, Pachana and Anulomana** – For the purpose of Deepan, Pachana and Anulomana, drug dose and duration of administration was selected on the basis of Prakriti, Kostha, Kala and Doshavasta of the patient.

**Sthanika snehana and Swedana** – Abhyanga (oleation) with Bala taila for 10 minutes followed by Nadi sweda with Dashamoola kwath on Kati, Parshwa, Prusthadhodara, Sakthi till appearance of Samyuk swina lakshana was performed. For sterilization of peri vaginal and vaginal part Yoniprakshalana (vaginal douche) with Panchvalka Kasaya was perfomed prior to the Pradhan karma.

**Paschat karma**

After the procedure, lower abdomen was fomented with hot water bag and patient was instructed to lie down for half an hour.

**Precautions**

Avoid consumption of excessive sweet, cold, spicy, pungent and fried food.
Avoid over eating
Avoid intercourse
Avoid heavy exercises, long journey, direct exposure to wind and heat.

Assessment of complications was done through
1. Lower abdominal pain
2. Per vaginal bleeding
3. Urogenital infection
Which were absent in patient.

Follow up
Monthly follow up advice

Assessment of therapy
Ultrasonography was repeated to check the antral follicles count at 3rd day of menstrual cycle in fourth cycle.
Trans Vaginal Sonography (07/7/17) (D3 of menses) –
- uterus normal in size and endometrial thickness is 4.8mm
- Both the ovaries normal in size and appearance.
- Antral Follicles In Left Ovary = 10
- Antral Follicles In Right Ovary = 4
- Total Antral Follicles Count = 14

DISCUSSION
Ayurvedic management is far better alternative to hormonal therapy in infertility. According to Vaghbhata, Phalasarpi helps the woman to achieve conception and is best for curing all female genital tract disorders. It is Vataharaka, Balya (tonic), Brihniya (nourishing), Garbhahara (fertilization) and Rasayana (rejuvenator). Uttarbasti has local as well as systemic effect. Prior to the administration of Uttarbasti, Niruhabasti is given. As the water poured to the root nourishes the whole tree, in the same manner Niruhabasti (medicated enema) through its potency get absorbed and provide systemic effect7. Probably osmotic pressure may be created by Niruhabasti which enhance the absorption of drug administered through Intrauterine Uttarbasti and desired effect is thus obtained. Through the endometrium the active principle may get absorbed which by the internal iliac vein passes into the systemic circulation8 and exerts positive influence on Hypothalamus- Pituitary-Ovarian axis and thus promotes the growth and differentiation of primordial follicles under the control of Follicular Stimulating Hormone (FSH). Study reports in-vivo effect of Phalasarpi (Ayurvedic Medicine) in Animal Model (female Albino rat) significantly increased the serum estradiol level and body weight of the rats. Probably Phalasarpi stimulates the Pituitary-Ovarian axis. This experiment which shows rise in the value of estradiol after administration of Phalasarpi, indicates an increased gonadotropin secretion, as both plasma FSH and LH regulate the activity of enzymes involved in ovarian steroidogenesis and proved to be successful in Anovulatory infertility9. Hence, Ayurvedic medicine Phalasarpi showed increase in the Antral Follicles Count due to its effect on Hypothalamo-Pituitary-Ovarian axis.

CONCLUSION
Thus, the management through Intrauterine Uttarbasti with Phalasarpi is highly effective to increase the ovarian reserve and better alternative to hormonal therapy. Moreover, it is cost effective and non-surgical procedure. But to establish this fact, further study of longer duration and on large sample is required.

REFERENCES
2. Ibid; p-188.