



## Case Study

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

Parmar Meena<sup>1\*</sup>, Agrawal Trapti<sup>2</sup>, Parmar Gaurav<sup>3</sup>

<sup>1</sup>Medical Officer, <sup>2</sup>Assistant Professor, Department of Prasuti Tantra and Stri Roga, Chaudhary Brahm Prakash Ayurved Charak Sansthan, Khera Dabur, New Delhi.

<sup>3</sup>Clinical Registrar, Department of Shalya Tantra, Chaudhary Brahm Prakash Ayurved Charak Sansthan, Khera Dabur, New Delhi, India.

A female patient of 26 years old came into the OPD of Prasuti-Tantra at Choudhary Brahm Prakash Ayurveda Charaka Sansathan, 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 1year. On enquiry, she told that, she had miscarriage last year in January 2016 of gestational age 1month 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 Acharya Vagbhatta for the conception 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%<sup>1</sup>. Female factors are ovarian, tubal, uterine, cervical and endometrial factors (FIGO). Anovulation or oligo-ovulation, decreased ovarian reserve, Luteal Phase Defect and Lutenized Unruptured Follicle are the ovarian factors responsible for infertility. Ovarian dysfunction is likely to be linked with disturbed Hypothalamo-Pituitary -Ovarian axis. Thus, the the disturbance may result not only in anovulation but may also produce oligomenorrhoea or amenorrhoea<sup>2</sup>.

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 Reserve<sup>3</sup>.

The Ovarian Cycle consists of recruitment of groups of follicles, selection of dominant follicle and its maturation, ovulation, 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 atresia<sup>4</sup>.

In Ayurvedic classics, many formulations has been mentioned for infertility. *Phalasarpi* is one of the well Known medicine mentioned in Ashtanga Hridayama for the successful conception and Continuation of the pregnancy<sup>5</sup>.

**Selection of the drug:** In Ayurvedic classics, Intrauterine *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 results<sup>6</sup>. Drug selected in this case was *Phalasarpi* which is *Vatahara* and *Garbhda* as mentioned by Acharya Vagbhatta.

#### Case history

A female patient of 26 years old came into the OPD of Prasuti-Tantra at Choudhary Brahm Prakash Ayurveda Charaka Sansathan, 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 1year. 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 1month 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**

Diet	Vegetarian
Appetite	Normal
Micturition	Normal
Bowel habit	Regular
Addiction	None

**General Biodata**

Age- 26 yrs  
 Marital status -married  
 Occupation - house wife  
 Social Class- Middle  
 Address-Najafgarh, New Delhi  
 OPD No.7637/17  
 Registration date - 25/02/2017

**Family History:-**No relevant family history

**Menstrual 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**

G<sub>1</sub>P<sub>0</sub>A<sub>1</sub>D<sub>0</sub>  
 A<sub>1</sub>- (February, 2016)-G.A.-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 (S<sub>1</sub>S<sub>2</sub>): 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 fornices free, non-tender  
 The following investigations was done (21/12/16):

Hb-11.7gm%  
 TLC-8,000/mm<sup>3</sup>  
 DLC-N<sub>58</sub>L<sub>40</sub>E<sub>02</sub>M<sub>0</sub>B<sub>0</sub>  
 ESR-10 mm fall  
 ABORh-B+ve  
 FBS-96 mg/dl  
 Sr.TSH-3.56Ulu/ml  
 HIV, VDRL, HBsAg-Non-Reactive  
 Montoux Test-3mmx2 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.

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

After cessation of menstruation, intra uterine *Uttarbasti* with *Phalasarpi* 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.

**Purvakarma**

**Deepana, Pachana and Anulomana** - For the purpose of *Deepan*, *Pachan* and *Anuloman*, drug dose and duration of administration was selected on the basis of *Prakriti*, *Kostha*, *Kala* and *Dosha avasta* 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 *Samyak swinna lakshana* was performed. For sterilization of peri vaginal and vaginal part *Yoniprakshalana* (vaginal douche) with *Panchvalkala Kasaya* was performed 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 3<sup>rd</sup> day of menstrual cycle in fourth cycle.

Trans Vaginal Sonography (07/7/17) (D3 of menses) – LMP-05/07/17

-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 Vagbhatta, *Phalasarpi* helps the woman to achieve conception and is best for curing all female genital tract disorders. It is *Vatahara*, *Balya* (tonic), *Brihniya* (nourishing), *Garbhada* (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 effect<sup>7</sup>. 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 circulation<sup>8</sup> 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 infertility<sup>9</sup>. 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.

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#### \*Address for correspondence

##### Dr Parmar Meena

Medical Officer, Department of Prasuti Tantra and Stri Roga, Chaudhary Brahm Prakash Ayurved Charak Sansthan, Khera Dabur, New Delhi.

Email: [takshu2009@gmail.com](mailto:takshu2009@gmail.com)

Contact no. 08750235896

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