



# ORIGINAL RESEARCH PAPER

Ayurveda

## BALADI CHURNA IN MANAGEMENT OF ANOVULATORY FACTOR OF INFERTILITY (AVARANATMAK APANA VATA DUSHTI): A CASE REPORT

KEY WORDS:

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### ABSTRACT

Anovulation or inability to produce a fertile ovum is an important reason among woman facing infertility and still it is a growing problem due to changing life style faulty food habits environment, stress provoking jobs. In such patients ovulation induction is a rescuer. But all these modalities of modern medicine are associated with many complications. A female patient visited our O.P.D on 12-09-2019 with complaining of unable to conceive. On further examination reveals anovulation associated with Avaranatmak and Sanga type Srotodushti. The subject was planned to give mridu shodhana and shaman Chikitsa with Baladi Churna (Bala, sita, Atibala, Madhuka, Vatashung, Nagkesar), A formulation mentioned in Bhavprakash in Vandhya Chikitsa Prkaran. After administration of Baladi Churna for 3months with consecutive ovulation for three months patient conceived on February 2020.

### INTRODUCTION

Fertility or Fecundity is the probability of achieving a live birth in one menstrual cycle<sup>1</sup>. Infertility is defined as a failure to conceive within one or more years of regular unprotected coitus<sup>2</sup>. According to FIGO manual causes of female infertility are: Tubal and Peritoneal factors (25-35%), Ovulatory factors (30-40%) and Endometriosis (1-10%). In which Ovulatory factor encompass; Anovulation or Oligo-ovulation, Decreased ovarian reserve, Luteal phase defect, Luteinised unruptured follicle<sup>4</sup>.

Anovulation or inability to produce a fertile ovum is an important reason among woman facing infertility and still it is a growing problem due to changing life style faulty food habits, environment, stress provoking jobs. In such patients ovulation induction is a rescuer. Over the past few decades modern medical field developed modalities like Clomid therapy, Letrozole, Insulin sensitizing drugs, Ovarian drilling, hCG injections, Gonadotropin therapy But all these modalities are associated with many complications like Ovarian Hyperstimulation Syndrome (OHSS), Multiple Pregnancy etc. Considering all these drawbacks an appropriate management of anovulation is required.

In Ayurveda; proper functioning of four factors viz. Ritu, Kshetra, Ambu and Beeja is the prime requisites for Garbha (conception)<sup>5</sup>. Beeja most essential part among the four has been considered as antahpushp, i.e. ovum. so anovulation can be included under Beejadosh. Anovulation is quoted as the result of vitiation of doshas in reproductive system of a woman suffering from menstrual disorders. Vata dosha is controller of any type of movement in the body and regeneration and growth are facilitated by Kapha<sup>6</sup>. Lower part of the body is seat of vata<sup>7</sup>. When vata is vitiated by its aggravating factors or vitiated due to the occlusion or obstruction by kapha it cannot govern its normal functions, and anovulation state persists.

Among the three Doshas, Vata plays a major role in physiology and pathology of reproductive tract, As described in Bhavprakash in the treatment of Vandhyatva women who takes Baladi Churna gives birth to a good progeny without doubt<sup>8</sup>. It was planned to evaluate the role of Baladi Churna in Anovulatory factor of infertility and conception.

### AIMS AND OBJECTIVES

To see the Efficacy of Baladi Churna<sup>9</sup> (mentioned by Bhavprakash in the context of Vandhyatva) on Anovulatory Factor arises due to Avaranatmak Apana Vata Dushti.

CASE REPORT: A 28 years old married, nulliparous female patient having 5 years married life reported to infertility O.P.D. on date 12-09-2019, complaining of irregular menstrual

cycle since 4 years and unable to conceive since 3 years. Patient had menarche at 15 years of age At present her last menstrual period was 6-09-2019. While cohabiting with her husband with adequate coital frequency she was unable to conceive. She has history of allopathy treatment for irregular menses and infertility for 2 years.

Hematological reports, Hormonal assay, HSG reports were normal but Follicular Study shows Anovulation.

**FAMILY HISTORY:** No history of same illness in any of the family members.

**MENSTRUAL HISTORY:** Menarche at 15 years of age  
Menstrual Cycle-2-3/45-60 days  
No. of Pads -2-3 pads in first 2 days  
LMP-6-09-2019

O/H-Nulliparous

### GENERAL EXAMINATION

BUILT- Medium built  
NOURISHMENT-moderate  
PULSE-86 beats/min, Regular  
BP-120/70 mmHg  
TEMPERATURE-Afebrile  
RESPIRATORY RATE-18/min  
HEIGHT- 5feet 2 inch  
WEIGHT-55 kg  
TONGUE-Coated  
PALLOR/ICTERUS/CYANOSIS/clubbing/oedema/lymphadenopathy-Absent

### SYSTEMIC EXAMINATION:

CVS-S1, S2 normal, No murmur  
CNS- Well oriented, Conscious  
RS-B/L Chest clear, no added sound  
P/A- Soft, Non-tender  
ASHTAVIDHA PAREEKSHA:  
Nadi-Pittaja, sama  
Mala- Constipated  
Mutra-Normal  
Jihva-Amayukta, pale  
Shabda-Normal  
Sparsha-Samsheetoshna  
Drika- Avil - netrata  
Akriti-Heena

### DASHAVIDHA PAREEKSHA:

Prakriti-Vata-Pittaja  
Vikriti- Prakriti Sam Samveta  
Bala-Madhyam  
Sara-Avara

Samhanana-Avara  
Satmya-Madhyam  
Satva-Pravara  
Pramana-Madhyam  
Ahara Shakti-Madhyam  
Jarana Shakti-Avar  
Vyayaama shakti-Madhyam  
Vaya-Madhyam

Srotas Pariksha: Rasavaha Srotodushti Lakshana as Mandagni, Gaurav, Tandra was present in patient with Shukravaha Srotodushti Lakshana as decrease in libido and Artavavaha srotas Dushti As Avrita vata.

On Per-speculum examination discharges was nil, cervix was healthy and nulliparous .On Per-Vaginal examination Uterus size is small, anteverted anteflexed, all fornix clear.

#### INVESTIGATIONS:

HSA- TSC-80 million/ml, with 70% motility, and 70% normal forms, pus cells was nil  
CBC with ESR: Hb-10gm%, ESR-20  
Blood Group-B positive  
TFT-T3-1.07ng/ml, T4-9.66mcg/dl, TSH-2.45mIU/ml  
HIV- Non-Reactive  
HBsAG-Non-Reactive  
VDRL-Non-Reactive  
LFT-WNL  
KFT-WNL  
Urine routine-WNL  
USG-Normal study

HSG-B/L patent tubes with free peritoneal spillage of dye, Uterine contour normal.

Follicular study- Unruptured follicle of 38.5 cm diameter on 19th day from left ovary with ET of 6 mm

Hormonal Assay-Sr.FSH-5.8mIU/ml, Sr.LH  
-11.59mIU/ml, Sr.Prolactin 3.42ng/ml, Sr.Estradiol-52pg/ml.

#### TREATMENT

Step 1- Deepan and Pachana with Agnitundi Vati for 7-8 days  
Step 2- Eranda Taila 30ml with Luke warm water at night for Koshtha Shodhana for 7-8 days.

Step 3- Baladi Churna (Bala, Sita, Atibala, Madhuka, Vatashung, Nagkeshar) 3gm BD with Honey and Ghrita with Anupana of Milk, at Empty Stomach Twice a day after stoppage of menses for 3 months.

Date of intervention	Therapy	Drug
20-09-2019 to 28-09-2019	Deepan and Pachana	Agnitundi Vati
29-09-2019 to 6-10-2019	Koshtha shodhana	Eranda taila 30ml with Luke warm water at night
10-10-2019 to 25-10-2019 8-11-2019 to 25-11-2019 10-12-2019 to 28-12-2019	Oral drug	Baladi Churna (Bala, sita, Atibala, madhuk ,Vatashung, Nagkesar) 3gm BD with honey and Ghrita with Anupana of Milk at empty stomach after stoppage of menses for 3 months.

#### DISCUSSION:

##### Discussion on Drug

Baladi Churna has five plant origin ingredients as Bala, Atibala, Madhuka, Vatashunga and Nagkesar. Bala and Atibala have madhura rasa with guru, Snigdha guna, sheeta veerya perform action of Vata pitta shaman and work as Balya, Vrishya, Oja vardhak. Madhuka have Madhura Rasa, Guru, Snigdha guna, Shita veerya, Madhur vipak and Vatapitta

shamak by these properties it acts as Brinhana , Shukrala Nagkesar have Madhura, Kashaya rasa, Ruksha, laghu in guna, sheeta veerya, Kapha Pittanashaka act as Stambhan. Flower extract of M. ferrea has also been shown to possess estrogen and progesterone-like effects which were proposed to be helpful in the correction of hormonal imbalance during menstrual disorders Vatashunga have Kashaya Rasa, Guru, Ruksha in guna, sheeta virya, Katu Vipak and acts as Kapha pitta jita.

#### Analytical Study of Baladi Churna

##### 1. Organoleptic Parameters of Baladi Churna

Properties	Baladi Churna
Colour	Whitish brown
Odour	Fruity
Appearance	Fine powder
Clarity	---

#### Results of the drug analysis of on Physico-Chemical parameters of Baladi Churna

SR.NO	TEST	RESULT
1	LOSS ON DRYING	5.83%
2	ASH VALUE	9.83%w/w
3	WATER SOLUBLE EXTRACT	38.73% w/w
4	METHANOL SOLUBLE	22.66% w/w
	ACID INSOLUBLE ASH	2.52%w/w
5	PARTICLE SIZE	355 micrometer
6	pH	5.25

#### Discussion on action of Drug

Tridoshas have an impact over all the process involved in ovulation. Vata stands for proliferation and division of cells (granulosa and theca cells), rupture of the follicle etc. Pitta is associated with its conversion power, like conversion of androgens to estrogen in Graffian follicle, maturity of follicle by its function of Paka Karma. Kapha stands as a building and nutritive factor. It binds all the cells together and gives nutrition for growth and development of the cells. Among the three Doshas, Vata plays a major role in physiology and pathology of reproductive tract. Vata can cause agnimandya because one karma of vayu is (समीरणोऽग्नेः) Later on this agnimandya will lead to Dhatvagni mandya which lead to Ama formation, i.e. apakva rasadhatu.

So, it is clear that due to dhatvagnimandya, there will be formation of ama that will lead to Avrodhatmaka dushti, Sanga and Khavaigunya in Artavavaha srotasa. Due to improper rasadhatu, adequate nutrition will not be available for the formation of Artava. This will lead to poshanatmak dushti. Due to vatapitta prakopa, it leads to kshyatmak dushti and due to vatkapha prakopa, it leads to avaranatmaka dusht

These all ultimately leads to improper function of Beeja Granthi and produces "Viphal Artava" (Anovulation). As Acharya Charak mentioned the chikitsa sidhant of Avrutta apaan Vata as-

अपानेनाव्रते सर्वं दीपनं ग्राही भेषजं |  
वातानुलोमनं यच्च पक्वाशय विशोधनम् || 10

So for this type of conditions we need drug which have following properties-

- The drugs by which the obstruction (Sanga / Srotodushti) is removed
- Drugs increase the Dhatu and keep in normal balance.
- The drugs act as controller of Vayu by which Vata performs its function normally.

In Baladi Churna all ingredients are Balya, brinhan, shukral, vrishya. Bala is mentioned as best for vataja disorders-

बला संग्राहिकम् बल्यं वातहराणाम् | (अय्य प्रकरण) 11

**RESULT:**

Primary Outcome:Ovulation  
 Secondary Outcome: Conception  
 Objective Parameters:Trans Vaginal Sonography was used to see the study outcome.

Objective parameters ofTreatment Outcome

Date	Investigation	Outcome
20-09-2019	TVS for Follicular Study (Before Treatment)	Unruptured follicle of 38.5 cm diameter on 19th day from left ovary with ET of 6 mm
14-10-2019	TVS for follicular Study	Ovulation occurs from left ovary at 14th day with follicle size of 18 cm, with ET-9.7mm
12-12-2019	TVS for Follicular Study	Ovulation occurs from Right Ovary at 21st day of follicle size 21cm, ET-10.6 mm
11-02-2020	USG early pregnancy	An Intrauterine gestational sac (6weeks 2 days) with good decidual reaction, FHR-124bpm, yolk sac seen

**Before treatment**

TVS for follicular Study shows Unruptured follicle of 38.5 cm diameter on 19th day from left ovary with ET of 6 mm

**During Treatment**

After 1 month of course:  
 TVS shows Ovulation from Left Ovary at 14th day with follicle size of 18 cm and Endometrial Thickness was 9.7mm

**After 3 months of course**

TVS showed Ovulation from Right ovary at 21st day with Follicle Size of 21 cm and Endometrial thickness was 10.6mm

**After 5 months of Course**

USG Reports Showed An Intrauterine gestational sac (6weeks 2 days) with good decidual reaction, FHR-124 bpm, yolk sac seen

REPORTS OF THE PATIENT



FIGURE 1:TVS (follicular Study) report before treatment.



FIGURE 2: Follicular study after 1 month of oral drug administration

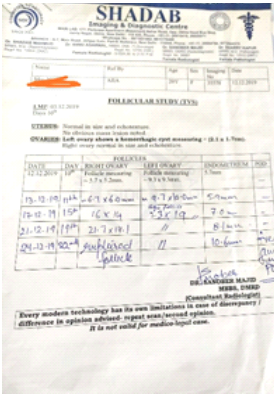


FIGURE 3:Follicular Study after 2 months of oral drug administration

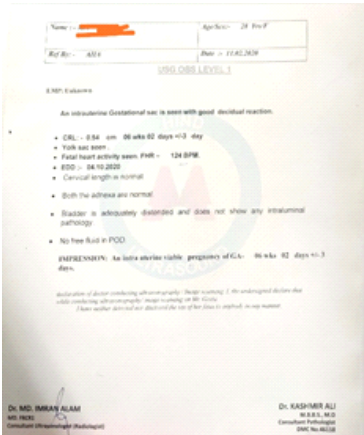


FIGURE 4: USG Early Pregnancy (After 3 months of oral drug administration)

**CONCLUSION:**

The Case report demonstrate successful management of a case of Infertility associated with Anovulation by oral Administration of Baladi churna contains 6 ingredients which are having brinhan,balya and vrashya properties .This case successfully explain the modern concept that LH only acts on FSH primed follicle which indicates The follicle which have proper anatomical and functional growth in the follicular phase only than it can ovulate properly by the action of LH.

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