



## Case Study

### ROLE OF *RASAYANA CHIKITSA* IN THE MANAGEMENT OF FEMALE INFERTILITY W.S.R. HYPOTHYROIDISM- A CASE STUDY

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#### ABSTRACT

Ayurveda is the Ancient system of Medicine which gives equal importance to preventive and curative aspects of treatment. *Rasayana Chikitsa* plays a key role in the treatment of all the diseases (both in curative and preventive). There is nothing painful and stressful to women, for not being conceived. In the present modern era, female infertility is raised to the alarming extent due to diet & lifestyle modifications. Couples suffering from the infertility are approaching the infertility centres and going for the artificial reproductive techniques (IUI, IVF, ICSI-ET, Sarogasy). Ayurveda, through its unique line of treatment approaches, paves the way for fertility management through the medicines along with diet & lifestyle modifications. The Commonest cause for fertility being the Hypothyroidism in females (in this present study, I have considered hypothyroidism as *Rasa pradosaja vyadi*), clinical study was done at OPD, DR. BRKR Govt Ayurvedic College, Hyderabad and treated the patient with *Dipana, Pachana, Rasayana Chikitsa* and the patient conceived. In this present article an attempt is made to review and understand the concept of *Rasayana chikitsa* in the management of infertility with special reference to hypothyroidism (*Dhatupradosja vyadi*).

**KEYWORDS:** Female Fertility, Hypothyroidism, *Rasa Pradosaja Vyadi, Rasayana Chikitsa.*

#### INTRODUCTION

*Ayurveda* is the ancient, traditional system of medicine, which has got unique line of treatment for the female infertility. Infertility is defined as the inability of a sexually active, non contraceptive couple to achieve pregnancy in one year.<sup>[1]</sup> Or Infertility also is a condition with psychological, medical implications resulting in trauma, stress, particularly in a social set-up.<sup>[2]</sup>

Infertility is an alarming global health issue, not only affect the psychological condition of an individual but the whole family. Ayurveda treatment approach for the management of female infertility includes one or combination of *Shamana Chikitsa, Shodana Chikitsa, Rasayana Chikitsa* depending upon the cause involved.

In Ayurveda, various references on *Vandhyata* (infertility) are available. *Vandhya* is included as one of the *Yoni vyapat*. *Vandhya* word is used as a symptom rather than a disease in our classics. Failure to achieve pregnancy has been referred under various conditions that is coitus with an young or old diseased woman, coitus in abnormal posture etc and the need of four important factor for *Garbhaotpatti*.<sup>[3]</sup> After observing the description

about *Vandhyata* in Ayurveda, it can be concluded that the definition of infertility i.e. failure to conceive in modern science is a part of definition of *Vandhyatva* in Ayurveda. This means *Ayurveda* has much broader approach regarding this subject.

**Incidence:** Conception depends on the fertility potential of both male and female partner. The male is directly responsible in about 30-40 %, the female in about 40-50 % and both are responsible in about 10 % cases. The remaining 10%, is unexplained inspite of through investigations with modern technical knowhow.

#### Causes for Infertility in Brief are

1. Hormonal Imbalance
2. Hyperprolactinemia
3. Ovarian functional problem
4. Tubal factors
5. Uterine factors
6. Thyroid disease
7. Sexually transmitted disease
8. Structural obstruction

## Hypothyroidism (A Cause for *Vandhyata*- Female Infertility)

Undiagnosed and untreated thyroid disease can be a cause for infertility i.e., *Vandhyata*. Both these conditions have important medical, economical, and psychology impact in our society. Thyroid dysfunction can affect fertility in various ways resulting in anovulatory cycles, luteal phase defect, high prolactin (PRL) levels, and sex hormone imbalances. Therefore, normal thyroid function is necessary for fertility.

The comprehensive thyroid evaluation should include T<sub>3</sub>, T<sub>4</sub>, thyroid stimulating hormone (TSH), and thyroid autoimmune testing such as thyroid peroxidase (TPO) antibodies, thyroglobin/antithyroglobin antibodies, and thyroid stimulating immunoglobulin (TSI).

Thyroid dysfunction is a common cause of infertility which can be easily corrected by the appropriate levels of thyroid hormones. It has been recommended that in the presence of raised TSH along with raised the treatment should be first to correct the hypothyroidism Hormone therapy with thyroxine is the choice of treatment in established hypothyroidism. It normalizes the menstrual cycle, PRL levels and improves the fertility rate.

If we try to have a keen insight to the pathogenesis of hypothyroidism according to the principles of Ayurveda, we find that it is basically caused due to dysfunctioning of the *Agni*. *Jatharagni mandhata*, which in turn, affects *Dhatvagni*, eventually, brings out pathogenesis & ultimately, the *Vyadi* is developed. According to *Acharya Vagbhata*, Looking in to its *Doshika* dominance, *Kapha* associated *Pitta Dushti* with vitiation of *Vata* due to *Margavarana* and predominantly *Rasa-vaha*, *Medo-vaha* and *Mamsa-vaha Srotodushti* can be considered as cause of the disease.<sup>[4]</sup>

There are multiple causes for the female infertility, 1. Ovulation problems may be caused by one or more of the following: A hormone imbalance, A tumor or cyst, Eating disorders such as Alcohol or drug use, Thyroid gland insufficiency, obesity, Stress, Intense exercise that causes a significant loss of body fat, menstrual irregularities.

2. Damage to the fallopian tubes or uterus can be caused by one or more of the following: Pelvic inflammatory disease, infection, Polyps in the uterus, Endometriosis or fibroids, Scar tissue or adhesions, Chronic medical illness, previous ectopic (tubal) pregnancy, birth defect, DES syndrome (The medication DES, given to women to prevent miscarriage or premature birth can result in fertility problems for their children).

### Causes of Hypothyroidism: Modern Prospective

Primary hypothyroidism (95% of cases)	Secondary hypothyroidism (5% of cases)	Other causes
Idiopathic hypothyroidism	Pituitary or hypothalamic neoplasms	Drug therapy (e.g., amiodarone, lithium, interferon)
Hashimoto's thyroiditis	Congenital hypopituitarism	Infiltrative diseases (e.g., sarcoidosis, amyloidosis, scleroderma, hemochromatosis)
Irradiation of the thyroid subsequent to Graves' disease	Pituitary necrosis (Sheehan's syndrome)	
Surgical removal of the thyroid		
Late-stage invasive fibrous Thyroiditis		
Iodine deficiency		

### Rasayana Chikitsa

According to *Sharangadhara*, the word *Rasayana* is defined as, that which ameliorates *Jara* (Senility) and *Vyadi* (underlying disease)<sup>[5]</sup>

According to *Acharya Charaka*, while explain the *Prajasthapana Dravya*, describes four factors which are responsible for the conception and maintenance of healthy pregnancy. Four essential factors are *rithu* (timing), *Kshetra* (place/field), *Ambu* (Nutrition), *Beeja* (quality of sperm/ovum)<sup>[6]</sup>

In this context, *Ambu* includes *Rasadhatu*, *Rakta Dhatu* and *Ojus*, which has its plays key role. *Rasa pradosaja vyadi*, hypothyroidism being one of the cause for the infertility, *Rasapradosaja vyadi chikitsa* i.e., *Deepana*, *Pachana* and *Rasayana Chikitsa* is adopted in the treating this particular case.

Hence in the present clinical study of *Vandhyatva* (Infertility) 1. *Trikatu churnam* 3 gm two times daily before food, 2. *Asoka arista* 10 ml three

times daily and 3. *Kanchanara Guggulu* two vati three times daily after the food, which are having *Deepana*, *Pachana*, *Rasayana Garbhasthapak guna* along with *Vatapittashamaka* qualities to prove its efficacy scientifically.

### Aim of the Study

To evaluate the therapeutic efficacy of *Rasayana Chikitsa* in the management of Infertility (*Vandhyata*) secondary to patient suffering from Hypo thyroidism.

### Materials & Methods

A Female patient aged about 31 years, with 5 years of successful married life, a diagnosed case of primary infertility, is selected from the OPD no 4, Dr BRKR Govt Ayurveda College, Hyderabad for the present study (OP.NO11694).

### Criteria followed for the Selection

Patient's history was taken according to description given in Ayurvedic and modern science. Vaginal examination was done by vaginal palpation and inserting vaginal speculum.

### Clinical Examination

#### Physical examination

- ❖ General condition- Average Build- average body built
- ❖ Height- 5'2"
- ❖ Weight- 70 kg
- ❖ Pulse rate- 68/min
- ❖ Respiratory rate- 17/min
- ❖ Blood pressure-130/70 mm of hg
- ❖ Lymphadenopathy- Not detected during examination.

#### Systemic examination

- ❖ CVS- S1 S2 normal, no any abnormal sound present.
- ❖ Respiratory System -trachea centrally placed, b/l equal air entry, no any added sound present.
- ❖ GIS- Soft, non-tender, no any organomegaly present
- ❖ Uro- genital System - NAD
- ❖ Menstrual history- Heavy menses, MC occur at 20-25 days of interval and lasting for 3 days.
- ❖ CNS- Higher function and orientation normal for time, place and person

### Personal history

- ❖ Diet: mixed dietary habit
- ❖ Appetite: poor
- ❖ Bowel habit: constipated with hard stool.
- ❖ Micturition habit: normal in quantity and frequency.
- ❖ Sleep: regular and sound in nature
- ❖ Marital status: Married
- ❖ Addiction: no addiction

**Family history:** No any detectable family history present.

**Past history of treatment/disease:** No any past history related to treatment and disease, which provoke chances of hypothyroidism.

### Laboratory Investigations

Laboratory profile at beginning of the treatment

#### Blood examination

TLC- 8600/cmm DLC-N-64%, L-23%, E-7%, M-2%, B-0% Hb- 11gm/dl

Thyroid profile: T3-0.79 ug /dl T4-7.92 ug/dl TSH- 6.2 ug/dl

Ultra Sound Abdomen: PCOD

### Chikitsa /Line of Treatment

*Rasa pradosaja chikitsa* i.e., *Deepana*, *Pachana*, *Rasayana* i.e., with 1. *Trikatu churnam* 3 gm two times daily before food, 2. *Asoka arista* 10 ml three times daily and 3. *Kanchanara guggulu* two Vati three times daily after the food. The same treatment is followed for 9 months with monthly follow up.

### Observations & Results

It is observed that there is gradual improvement in clinical symptoms in respective follow ups. After nine month of therapy following observation were made in parameters (subjective & objective) pertaining to hypothyroidism.

1. Improvement in Menstrual Irregularities-100%.
2. Body weight is reduced from 78 kg to 70kg.
3. Improvement in appetite is 100%.
4. Improvement in constipation is 75%.

Beside improvement in clinical symptoms, remarkable changes are observed in thyroid profile at the end of third follow up.

**Table Showing: Results of Treatment (Subjective & Objective Parameters) Every 3months**

Parameters	At the beginning of the treatment	After 3 months of treatment	After 6 months of treatment	After 9 months of treatment
Weight	78kg	76kg	72 kg	70 kg
Menstrual irregularity	Present (often used hormones for correcting menstrual	Partially corrected (dependency on hormones reduced)	Corrected (no hormones are used)	Pregnancy confirmed.

	irregularities)			
Appetite	Less	Improved	Improved	Improved
Constipation	Constipated	Improved	Improved	Improved
TSH Levels	6.2 with usage of 50 mcg of thyroxin	5.6 with usage of 50 mcg of thyroxin	4.8 with usage of 25 mcg of thyroxin	5.2 with the usage of 12.5 mcg of thyroxin
Pregnancy confirmation	Negative	Negative	Negative	Positive

At the end of the 3 months, menstrual irregularity is partially (dependency on the hormones reduced) corrected, weight was reduced 2 kg and level of TSH is 5.6. Same treatment is followed for another 3 months along with thyroxin hormone is reduced to the dose of 25 mcg once daily.

At the end of the 6 months, menstrual irregularity is corrected, weight was reduced 4 kg and level of TSH is 4.8. Same treatment is followed for another 3 months along with thyroxin hormone is reduced to the dose of 12.5 mcg once daily.

At the end of the 9 months, menstrual irregularity is corrected, weight was reduced 2kg and level of TSH is 5.2 and the patient is conceived spontaneously.

Subjective and Objective parameters are obtained before and after treatment were recorded and analyzed.

## DISCUSSION

*Shareera* is composed of *Dosha*, *Dhatu* and *Mala*, among which *Dhatu*s are more important structurally as they hold the body and perform specific functions. Any type of disease / *Vikara* is generated when vitiated *Dosa* reside in *Dhatu* / *mala* or in both. When vitiated *Doshas* are attached to a particular *Dhatu* and produce any kind of malformation in the production or alter the functions of the related *Dhatu*, which is termed as *Dhatupradosaja Vyadhi*.

Hypothyroidism (here, I am considering as *Dhatu pradosaja vyadhi*) where there is hyposecretion of thyroid hormones. As discussed earlier, infertility not only affects the physical health but also it has impact on psychological and social well being of the couple, present study throws light on female infertility with a new prospective.

*Rasayana chikitsa* plays a key role in the treatment of all the diseases (both in curative and preventive). *Deepana*, *Pachana*, *Rasayana chikitsa* is given to the patient for the patient with a review of every 3 months and Subjective and Objective parameters are obtained before and after treatment were recorded and analyzed.

Healthy lifestyle modifications also help to promote fertility in present scenario. Few of them are-

1. Maintain a healthy weight. Being overweight or significantly underweight can cause hormonal imbalance
2. Prevent sexually transmitted infections, leading cause of infertility for women.
3. Avoiding the night shifts. Women working in the night shift might risk of infertility, possibly by affecting hormone irregularities.
4. Practice Stress relieving techniques, eg yoga, meditation, going out for a holiday etc.

## CONCLUSION

This humble trial is conducted in single case study with limited parameters. There is a need for further research in large sample with more parameters for analyzing its efficacy of *Rasayana chikitsa* in the management of female infertility secondary to hypothyroidism, which will be beneficial to the humanity at large. The given drugs are safe, cost-effective, having no adverse reaction and side effects during the full course of treatment.

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