

INFLUENCE OF KSHETRA AND BEEJA IN INFERTILITY - AN OBSERVATIONAL STUDY

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ABSTRACT

In today's era infertility is one of the burning issues, because of unhealthy food habits and lifestyle. In *Ayurveda*, the cause of infertility can be explained under *Garbha sambhava samagri* which means the factors essential for conception. These are essential factors to provide optimal health to mother and offspring. The understanding of *Garbha sambhava samagri* and its applied knowledge can be used definitely to diagnose and treat the infertile couples. This study will help to know the normal and abnormal features of *Garbha sambhava saamagri* and also help to know about the cause of infertility. **Objectives:** 1. Conceptual study of *Garbha sambhava saamagri* depicted by *Acharyas*. 2. To evaluate the influence of *Kshetra* and *Beeja* on infertility. **Materials and Methods:** an observational study consisting of 110 volunteers diagnosed with infertility fulfilling all the inclusion and exclusion criteria were selected. The question related to *Kshetra* and *Beeja* were included. **Result:** The study showed that there is a positive influence of *Kshetra* and *Beeja* on infertility. It was seen that the incidence of *Beeja Dushti* in females was high. **Conclusion:** From the present study it can be concluded that both *Kshetra* and *Beeja* are influencing infertility.

Keywords: Garbha sambhava saamagri, Kshetra, Beeja Infertility.

INTRODUCTION

Every creature in this universe tries to keep up its progeny. In order to fulfill this achievement, it is essential that both the parents should be fertile. Infertility is defined as a failure to conceive within one or more years of regular unprotected coitus¹. One in every four couples in developing countries had been found to be affected by infertility. In the present era infertility is the most burning issue in the society and one of the main causes of infertility is today's lifestyle such as career-oriented life, unhealthy lifestyles, unhealthy food habits, etc. In 2010, an estimated 48.5 million couples worldwide were infertile. There are various causes of male and female infertility. In *Ayurveda*, the matter related to concepts of *Garbha* and *Garbha sambhava saamagri* is described systematically. *Acharya* has explained four important factors as *Garbha sambhava saamagri* that is *Ritu*, *Kshetra*, *Ambu*, and *Beeja*². These factors are essential for conception. Infertility may occur if there is any abnormality in *Garbha sambhava saamagri*. *Ritu* means *Ritukala*, *Kshetra* indicates *Garbhashaya*, the term *Ambu* represents the nourishment and *Beeja* is nothing but the *shukra and artava*. If all these are proper ultimately the better offspring will get. Developmental anomalies of the foetus are also possible due to the abnormalities in these factors. Among the four *saamagri* explained, *Kshetra* and *Beeja*³ carry the prime importance as the other two factors i.e., *Ritu* and *Ambu* can be included under the *Kshetra* and *Beeja* itself. This study will help to know the normal and abnormal features of *Garbha sambhava saamagri* and also help to know about the cause of infertility. In this study, an attempt has been made to assess the influence of *Kshetra* and *Beeja* on infertility.

Objectives:

1. Conceptual study of *Garbha sambhava saamagri* depicted by *Acharyas*.
2. To evaluate the influence of *Kshetra* and *Beeja* on infertility.

Methodology

Materials And Method

In the present study, 110 infertility patients were selected and their *Kshetra* and *Beeja* were assessed.

Study Design: Observational study.

Survey study-For the analysis of infertility, a questionnaire based on *Ayurvedic* classics was prepared. A proforma based on the infertility case sheet pattern.

Study Design:

110 volunteers diagnosed with infertility fulfilling all the inclusion and exclusion criteria were selected. The question related to *Kshetra* and *Beeja* were included. For the study visits to OPD of Alva's Ayurveda Medical College and Sitaram Ayurveda Specialty Hospital, Trissur were done to obtain infertility patients fulfilling the criteria.

Inclusion Criteria:

- Couples ranging from; male 23 to 40 years, female 20-40 years were included.
- Couples included irrespective of caste, religion, and socio-economic status were included.

Exclusion Criteria:

- STD.
- Secondary CA of the male and female reproductive system.
- Chronic Systemic Disorders (Diabetes, Hypertension).

Assessment Criteria: A special case sheet was prepared including consent and investigation of the patients.

Females:

USG (abdomen and pelvis), Blood test (FSH, LH, Serum Progesterone, Prolactin test, Thyroid Function test)

- **Males:** Semen analysis

Statistical tests used were as follows:

- Average was found using the median.
- Comparison between *Kshetra* and *Beeja* was done by using Mann-Whitney rank-sum test were used for analyzing the data with the aid "Sigma Stat 3.1" software.

Discussion On Observational Study

AGE: Among 110 infertility patients, in females, 60.9% belong to the age group of 25-29 and in males, 49.1% belong to the age group of 30-34. This shows the increase in the incidence of symptoms in the middle age group. This may be because the most couple

wants their progeny during this age group. OCCUPATION: 57% were an employee. The reason for maximum incidence in this group may be due to the stress and strain faced by working couples. SOCIO-ECONOMIC STATUS: 53% were from the upper class both couples are employees. The reason for maximum incidence in this group may be due to different lifestyles including lack of exercise, and high-calorie food habits. Previous work done by Dr. Sini.R⁴ on PCOS in *Ekadoshaja Prakruti*, also quoted the same. DOMICILE: 64% were from the urban class. The reason for maximum incidence in this group may be due to a sedentary lifestyle. RELIGION: Among 110 infertility patients, 60% were Hindus. May be due to the Hindu dominant area where the study was conducted. REGION: Among 110 infertility patients, 40% were in Karnataka because my study was conducted predominantly in Karnataka. MARRIED LIFE: 21.8% had 3 years of marital life because they were well educated to start treatment for infertility at the earliest. TYPE OF INFERTILITY: In the present study, 97.3% had primary infertility because, in secondary infertility, the couple's average age was higher.

FAMILY HISTORY: In this study, 80.9% of cases were having a negative family history because most of the infertility was caused by a sedentary lifestyle and junk food habits. EXERCISE: In females, 78.2% were not exercising whereas in males 43.6% were not exercising. Women with PCOS often have irregular or amenorrhea because they rarely ovulate. For overweight and obese women with PCOS, regular exercise can increase the frequency of ovulation which leads to a more regular menstrual cycle. As ovulation becomes more frequent, the chances of conceiving increases. Similarly, in males, 56.4% were regularly doing exercise, and their reports showed normal. DIET: 85.5% of females and 87.3% of males were having a mixed diet. Intake of non-vegetarian food like red meat, fried items, eggs, etc often leads to hormonal imbalance which is the probable cause of infertility. HABIT: 54.5% of females are having habits like intake of coffee, and junk food items like pizza and burgers, which leads to an increased chance of infertility. Most of them had the habit of taking bakery items made with

Maida as well as ice creams and chocolates. These are *Guru* and *Snighda* types of *Aharas*. This may lead to *Kapha Vridhi* and *Apana vayu Vaigunya* ultimately resulting in *Artava Nasha*. Previous work done by Dr. Hafsa on PCOS mentioned the same. Of males, 36.4% were habituated to smoking, alcohol, and tobacco. People with these habits showed a regular pattern of sperm defect.

MENSTRUAL HISTORY: 57.3% had an irregular menstrual cycle. The cyclic rise and fall of hormones resulting in ovulation and subsequent menstruation is the result of the intricately coordinated axis. Any disturbance at the axis level means a disturbed hormonal level affecting both the ovarian and menstrual cycles. So, patients with PCOS have menstrual irregularity. The physiological state of the woman is also disturbed which causes stress, anxiety, depression, etc. which causes vitiation of *Vata*. Vitiating *Vata* and *Kapha* cause *Avarana* of *Artavavaha Srotas* leading to *Artavanaasha* and *Vandhyatva*. SEXUAL HISTORY: 84.5% of females and 91.8% of males have a satisfying sexual history. 15.5% of females, who have ovarian cyst have unsatisfied sexual history because of dyspareunia, which is the anatomical reason. 8.2% of males have unsatisfied sexual history because of sperm defects. In this study low sex drive in male, due to erectile dysfunction may be due to hormone imbalance. BMI: out of 110 female patients registered 52.7% were overweight. Central obesity was more common among patients and is augmenting severe menstrual disorders, chronic anovulation, etc. increased waist to hip ratio. Obesity has detrimental influences on the reproductive system. In obese women, gonadotropin secretion is affected because of the increased peripheral aromatization of androgens to estrogen. Also increased basal and post glucose load, blood insulin levels, and reduces insulin sensitivity. Thus, the neuro-regulation of the hypothalamic-pituitary-gonadal (HPG) axis deteriorates. These alterations may explain the impaired ovulatory function and so reproductive health. According to *Ayurveda* in *Sthoulya* the main *Doshavruddhi* is *Kapha*. Among *Dhatu Medo Dhatu* is often one of the first along with *Rasa Dhatu* to reflect *Kapha* aggravation. In

male patients 18.2% were overweight. DIAGNOSIS: in this study out of 110 female patients, 66.4% were having PCOS and 21.8% were normal. The remaining 5.8% ovarian cyst and 1.8% uterine disorders such as fibroid, septate uterus fallopian defect, and adenomyosis. In 110 male patients, 75.5% were normal, 21.8% semen defect and remaining 2.7% were varicocele. In male patients in this study, noticed that abnormal sperm i.e., low or azoospermia, less motility, ejaculation issues, and structural abnormalities. The main causes here noticed working stress and lifestyle. Most of them had the habit of alcohol use, smoking, and tobacco chewing. Also, they had an unsatisfied sexual history. Reaming cause is varicocele, in this condition also reduced the quality of sperm.

DISCUSSION

Monica Woosely. R. D⁵; a leading nutrition expert who termed PCOS "The perfect endocrine storm". The prevalence of PCOS in Indian adolescents is 9.13%. women with PCOD present clinically with a variety of irregularities like; oligomenorrhoea, secondary amenorrhoea, DUB, and infertility. Associated presentations are; android obesity, acne, hirsutism, acanthosis nigricans. The long-term consequences of PCOD include infertility due to anovulation, endometrial cancer due to an increase in the concentration of unstopped estrogen, increased risk of myocardial infarction, and breast CA. According to the American Cancer Society (2017), PCOS contributes to an increased risk of breast CA, because of excess estrogen and too much testosterone. The etiological factors indulge in *Mithya ahara viharas*. Eating junk food, soft drinks, Maida products like cakes, biscuits, pizza; oily snacks like chips, fried food, etc. with lack proteins, fibers, and vitamins and *Virudhaahara* can be included under *Mithya ahara*. The inactive lifestyle along with excessive diet and physiological factors such as stress, anxiety points to the *Mithya vihara* of modern society. *Pradushtarthava* which includes abnormality of HPO axis, and *Beeja Dushti* are also central contributors to the development of PCOD. The concept of the early origin of PCOD strongly supports the role of environmental factors influencing gene patterns later in life.

Results: The results on *Kshetra* and *Beeja* in infertility shows a statistically significant result with a p-value <0. 001. Which shows a positive influence of these

two factors. I.e 96.3% of the study showed *Beeja Dushti* had more influence on infertility. In *Beeja Dushti*, the study showed that incidence of *Beeja Dushti* in females was high i.e 73.6%.

CONCLUSION

Based on this study, sedentary lifestyle, career-oriented life, stress, etc are found to be the main cause of infertility. In the present study, *Beeja Dushti* followed by *Kshetra Dushti* was the reason for infertility. *Pumbeeja Dushti* was less compared to *Stree Beeja Dushti*, with PCOS as the main reason. So, it can be concluded that both *Kshetra* and *Beeja* are having an influence on infertility, and compared to *Kshetra*, *Beeja* is having more influence on infertility.

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