

**Conceptual Study of *Garbhasambhav Samgri*****with respect to lifestyle factors****Smita M. Mekhale<sup>\*1</sup>, Pramod A. Budruk<sup>2</sup>**

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**\*Corresponding Author: Mob. :** 8097627311, **Email:** [mekhalesmita@gmail.com](mailto:mekhalesmita@gmail.com)**Abstract:**

**Introduction** - In the present era for upholding the identity of *Ayurveda*, it is necessary to substantiate that the knowledge available in *Samhita* is undeniably true with respect to modern science. Human body is a miracle of the nature.

In *Ayurveda* it has been cited that in order to fulfil the achievement of *Garbha* the four fertility factors i.e *Rutu*, *Kshetra*, *Ambu*, *Beeja* (*Garbhasambhav samgiri*) must be adequate.<sup>1</sup>

To treat infertility understanding *Garbhasambhav Samgri* i.e *Rutu*, *Kshetra*, *Ambu*, *Beeja* in Female is of its critical importance.

**Aim** - Conceptual study of *Garbhasambhav Samgri* in Female with Modern Aspects and lifestyle risk factors.

**Objectives** - To Review *Garbhasambhav Samgri* in Both *Ayurvedic* and Modern text.

**Material and Methods** - All the *Ayurvedic* and Modern literature and contemporary texts including websites will be reviewed.

**Discussion** -The review of *Garbhasambhav samgri* from the purview of modern Aspect will be discussed.

**Conclusion** - The Proper conclusion related to the Conceptual Study of *Garbhasambhav Samgri* with respect to lifestyle factors will be drawn.

**Key Words:** *Garbhasambhav samgri*, *Rutu*, *Kshetra*, *Beeja*

**Introduction:** Understanding the reasons for infertility and development of new techniques for its treatment is one of field within medicine which has undergone a



dramatic development during the last two decades.<sup>2</sup>

About 40% of infertility cases are due to female factors, 30% are due to male factors, 20% are a combination of both and in about 10% the cases are unknown.<sup>3</sup>

There are various reasons / causes for female infertility but most of these are related to anatomical and physiological abnormalities.

In *Charakchikitsasthan* there is an entire chapter devoted to the theoretical and applicable aspect of *Vajikaran* (Aphrodisiac). Description of *Vajikaran* is divided into four *padas* (divisions) involving numerous medicinal formulations.

*Charak* explained Woman is most lovable object for man. *Dharma* (Righteousness), *Artha* (Wealth), *Lakshmi* (Auspiciousness) and the entire universe (*loka*) are established in a woman.<sup>4</sup>

*Sushrut* in *Sharirsthan* explained harmony of *Garbhasambha Samgiri* (*Rutu*, *Kshetra*, *Ambu*, *Beeja*) is of at most important as far as Fertility of Woman is concerned.

This shows importance of well-being of Women health in the Process of reproduction and Child bearing.

But natural formation of foetus/progeny is impossible without union of normal sperm and normal ovum. Hence the role of sperm and ovum is of equal necessity and importance.

This study is an attempt to assess the Anatomical and Physiological causes of Infertility in Female with *Garbhasambhav Samgiri*.

The knowledge of this will throw light on *Ayurvedic Treatment Principles of Vandhyatva*.

Certain factors which are worth a mention are listed here:

1. Preconception – *Sukra* and *shonita* present in the *garbhashaya* combined with *Atma*, *Prakrti* and *Vikara* is known as *Garbha*. Preconception care begins with the selection of the appropriate partners. It was clearly mentioned in *Ayurveda* that for marriage and conception, the partners should be of same community and should not be of same clan (*Atulyagotriya*)<sup>5</sup>. The reason for this might be to reduce the risk of hereditary diseases and to avoid congenital anomalies. According to *Charak* and *Sushruta* the appropriate age of conception is 25 years for a male and 16 years for a female. At this age all the *dhatu*, the reproductive systems are fully formed and mature.

2. *Garbhasambhav Samgiri* –

*Sushrut* *Sharirsthan* in *Dalhan* commentary explained in *Shukrashonitashuddhi Sharir Adhyay* Coming together in the proper way the four things give rise to the formation of foetus surely, just like *Rutu*(Season), *Kshetra*(Field), *Ambu* (water) and *Beeja* (Seed) coming together give rise to the sprout.<sup>6</sup>

a. *Rutu*- Proper and compatible climate. *Rutu* means an ideal climate for seeding and for the plant to grow. The same rule is applicable to *Garbha* also. For *garbha* to be formed, an ideal climate should prevail in the *garbhashaya* (uterus and fallopian tubes) for the sperm to fertilize the

ovum. This coincide with the fertile period of Female.<sup>7</sup> *Acharya Sushrut* explained first *Artava* is a product of *Rasadhatu*, which comes out from the female genitalia every month between 12<sup>th</sup> and 50<sup>th</sup> years of age.

He mentioned Psychological state of *Rutumati stree* (Woman) in that stage which is favourable period of Conception and also explained about *Rutuvyatita kala* just as the lotus closes at the end of the day so also the yoni contracts after period of conception is over.

According to modern science, the day of ovulation in women is 14<sup>th</sup> day and period between 12<sup>th</sup> to 16<sup>th</sup> days is called the fertile period.

The sperms, in the availability of suitable environment within the uterus (as created by hormonal changes before ovulation), can stay active for couple of days, whereas the ovum has lifespan of 24 hrs after ovulation. If it is not fertilized by a sperm within this time, the ovum gets destroyed.

*Rutu* covers an ideal environment provided by uterus so as to welcome the sperms and have them in active state until ovulation, the days around ovulation, the timing of planning coitus and the preparedness of woman to receive the Sperm.

- b. *Kshetra*– *Kshetra* means fertile land, ideal for the plant to grow. The same rule is applicable for the formation of *Garbha*. Here the land correlates to a disease free and healthy uterus, the womb of the woman or *Garbhashaya*. For healthy implantation and growth of *garbha*, the *kshetra* or *Garbhashaya* and other parts (*Beejavahini*, *Dimb granthi*, *Yoni*) must be in a healthy

condition. It should be devoid of any disease or infection. An unhealthy womb will not allow proper implantation and growth of the child. The point of caution is to find out any disease related to uterus and treat it before conception.

- c. *Ambu* – *Ambu* means water. For plant to sprout from its seed and for the seed to shape into a plant, the most essential element or ingredient needed is water. The same rule is applicable for the *garbha* also. For the *garbha* (*Shukra-shonita* or fertilized ovum) to grow properly nutrition is needed. *Variyar* explained at just beginning of conception nourishment of *garbha* is done by nutrients present in beeja.<sup>8</sup> Nourishment to the foetus is offered through the *Ahara rasa* of Mother through the foetal circulation. This nutrition is essential for the foetus to develop and grow in the womb properly and proportionally. This also contributes to the *Rasaja bhavas* qualities due to the nutritive essence obtained from mother in intrauterine life in the child which is unique for each child. Smooth run of this mechanism throughout the intra uterine life of the child is mandatory for healthy child to be born.
- d. *Beeja*– *Beeja* means seed. For healthy *garbha* to be formed, its seed i.e. Sperm and Ovum from which it is derived should be healthy in terms of quality and quantity, enriched with good qualities. A diseased, contaminated or mutilated sperm and ovum cannot produce a healthy offspring. Thus *Beeja* (the seed Sperm of man and Ovum of Woman), healthy and disease free in adequate quantity



(Sperm Semen) and exemplary quality is necessary to beget a healthy foetus.

*Charak* explained in *Sharirasthan* in *Garbhavkranti Adhyay* because of the defect in the factors responsible for the production of foetus, i.e. in Mother (Ovum), Father (Sperm) then there is no birth of the child, if they are excessively defective then there is destruction of foetus. In the cases of their minor defects there is only delay in delivery which is explained by in terms of *Bija* (*dosha* afflict ovum and Sperm which is responsible for production of particular organ i.e. Chromosome) and *Bijabhaga* (Part of *bija* or ovum/sperm) and *Bijabhaga Avayaya* (A fraction of part of *bija* i.e. Ovum/Sperm)<sup>9</sup>.

### Modern Aspect –

Ovulation problems may take one of two basic forms –

1. Anovulation: Anovulation refers to the complete absence of ovulation. Anovulation can occur in pre-menopausal women due to psychological stress, problems with the hypothalamus, eating disorders, and low BMI (body mass index).
2. Oligoovulation: Oligoovulation refers to irregular ovulation. Women who suffer from oligoovulation experience infrequent ovulation in which their eggs are released sporadically. It is difficult for women with oligoovulation to determine their periods of fertility.

### Most Common Causes of ovulation problems

- Polycystic ovary syndrome

- Problems with the hypothalamus
- Luteal Phase defect
- Excess Prolactin
- Tumors<sup>10</sup>

### Causes of fallopian tube damage or blockage can include:

- Pelvic inflammatory disease, an infection of the uterus and fallopian tubes due to chlamydia, gonorrhoea or other sexually transmitted infections
- Previous surgery in the abdomen or pelvis, including surgery for ectopic pregnancy, in which a fertilized egg implants and develops in a fallopian tube instead of the uterus
- Pelvic tuberculosis, a major cause of tubal infertility worldwide
- Endometriosis - May block fallopian tubes and keep an egg and sperm from uniting, can also affect the lining of the uterus, disrupting implantation of the fertilized egg.

### Uterine or cervical causes:

- Benign polyps or tumors (fibroids or myomas) are common in the uterus
- Endometriosis scarring or inflammation within the uterus can disrupt implantation.
- Uterine abnormalities present from birth, such as an abnormally shaped uterus, can cause problems becoming or remaining pregnant.
- Cervical stenosis, a narrowing of the cervix, can be caused by an inherited malformation or damage to the cervix.



- Sometimes the cervix can't produce the best type of mucus to allow the sperm to travel through the cervix into the uterus

### Unexplained infertility:

Sometimes, the cause of infertility is never found. A combination of several minor factors in both partners could cause unexplained fertility problems.<sup>11</sup>

**Aim** - Conceptual study of *Garbhasambha Samgri* in female with modern aspects and lifestyle risk factors.

### Objectives –

1. To review *Garbhasambhav Samgri* from Ayurvedic text
2. To study modern factors related to *Garbhasambhav Samgri*

**Materials and methods:** All the *Ayurvedic* and modern literature and contemporary texts including websites about the disease are reviewed and documented in the study. Several Research works were also reviewed for this discussion purpose.

### Discussion –

#### Lifestyle disorder Risk Factors:

Certain factors may put you at higher risk of infertility. The review of *Garbhav samagri* From the Purview of Modern aspect can be describe according to following Points-

#### A. Rutu –

**1. Age-** The quality and quantity of a woman's eggs begin to decline with increasing age. In the mid-30s, the rate of follicle loss speeds, resulting in fewer and poorer quality eggs. This makes

conception more difficult, and increases the risk of miscarriage. The average age of the menopause and the end of a woman's reproductive life is around 52 years of age. However even a decade or so before she may experience fertility problems, as her cycles become less regular and the quality of her eggs decline.<sup>12</sup>

**2. Obesity-** Very overweight Female it is very likely that menstrual cycle will be or become irregular. The delicate balance of female hormones is affected when you are overweight and this in turn decreases ovarian function, meaning that female are likely to experience irregular ovulation.<sup>12</sup>

**3. Smoking** - Smoking ages your ovaries by 10 years and smoking can adversely affect the ease in which the egg travels down the fallopian tubes to meet the sperm.

**4. Alcohol** - Alcohol is incredibly damaging to ovarian health this may increase female risks of developing PCOS.<sup>12</sup>

**5. Hormonal Contraception** - Some methods of birth control may delay the return of female fertility for a short while. After stopping the combined contraceptive pill or the injection it can take a few months for ovulation to return and for your fertility to get back to normal.

**6. Stress-** Perceived stress can certainly alter hormone levels and ovulation. Stress increases the levels of stress hormones, such as adrenaline and cortisol. This in turn inhibits the release of gonadotropin releasing hormone, which is responsible for the release of the female sex hormones.





Subsequently this may suppress ovulation.<sup>12</sup>

**7. Excessive exercise** - Exercising too much can have a negative impact on ovulation.

## **B. Kshetra -**

**1. Thyroid disease** - Thyroid disorders can contribute to ovulation problems as well as increasing the risk of miscarriage.

**2. Low body weight** - a very low body weight can affect your ability to conceive. A healthy body mass index (BMI) is required to optimise your ability to conceive

**3. Medical conditions** - Certain medical conditions such as PCOS, endometriosis, fibroids and autoimmune disorders such as lupus can make it more difficult to conceive.<sup>12</sup>



## **C. Ambu -**

**1. Caffeine** -Caffeine has been shown to affect foetal heart rates and awake time (Foetus grow when sleeping). Leads to Premature Delivery, Risk of miscarriage and low weight babies.<sup>13</sup>

**2. Alcohol** - Alcohol can pass from the mother's blood into the baby's blood. It can damage and affect the growth of the baby's cells. Brain and spinal cord cells are most likely to have damage<sup>14</sup>

**3. Involuntary smoking/second hand tobacco smoke:** Cigarette smoke contains hundreds of poisonous chemicals that reach the foetus through the mother's bloodstream.

- The carbon monoxide in cigarette smoke hampers delivery of oxygen to the fetus
- Nicotine crosses the placenta, and reduces blood flow to the placenta and the uterus
- Non-smoking pregnant women who inhale tobacco smoke might be at a higher risk of miscarriage, premature labour and stillbirth

**4. Long working hours** - when an expectant mother deprives herself of adequate sleep and rest, she exposes herself to the risk of preterm labour and other complications and may even spend longer hours in the labour room.

## **5. Junk food or convenience food –**

- Eating fatty and sugary food causes the mother to gain excess weight which puts her at a higher risk of developing hypertension and gestational diabetes. Being overweight has also been known to increase the risk of miscarriage, premature delivery and still birth.
- It has been found in several cases that exposure to artificial food colouring and chemical additives in the womb could lead to learning disabilities in children
- Some studies have also shown that a pregnant woman's preference for junk foods may be passed on to the baby, which would surface as an innate liking for unhealthy foods in the child's early years<sup>13</sup>

## **D. Beeja –**

1. **Age** - Women are 'warehouses' of eggs whereas men are 'factories' of sperm. A couple trying to get pregnant has approximately 20pc chance per month when the woman is 30 but only 5pc chance per month when she is 40.

2. **Thyroid gland** - Autoimmune issues such as thyroid problems, Addison's Disease or pernicious anaemia, which target the endocrine system, affect the quality of the egg, the sperm and the hormonal environment in which the fertilisation process is taking place, resulting in problems with fertilisation, implantation and maintenance of pregnancy.

3. **PCOS** - Polycystic Ovary Syndrome is a common endocrine system disorder amongst women of child-bearing age. PCOS is a potential factor in infertility but it is not always the cause however, that the condition can lead to diminished ovarian reserve, which in turn means egg numbers can be low and this will further affect fertility.

4. **Occupation** - Increases the scrotal temperature and can in turn affect the quality of the sperm. The biochemistry of the sperm produced in the testicles is temperature sensitive. Therefore, if Men are in a sedentary position for a long period of time, the testes are pushed toward the core body temperature, which is higher than the temperature the testes should be.

5. **Smoking** - Smoking affects the genetic integrity of the sperm, with the many different chemicals having a negative effect when burned. Sperm simply bumps into the egg, opens and releases its cargo of DNA but when Men are smoker or have

a poor diet or lifestyle it can have a negative effect on the structure of your DNA.<sup>15</sup>

### Conclusion -

After review of *Garbhasambhav Samgri* it can be concluded that *Rutu, Kshetra, Ambu, Beeja* these four factors have major importance in *Garbhadharana* and also for good progeny. These can be correlated with modern lifestyle factors. The development of healthy progeny depends upon the thorough understanding of the minute aspects of the *Garbhasambhav samgri* and its review from the purview of modern aspects. This will help in the right interpretation of the various problems linked to *Vandhyatva*. The identification of the *hetu* (cause) and the *Samprati* (Pathogenesis) of disease is instrumental in implementing the right kind of treatment.

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