

## IVF INFERTILITY MANAGEMENT V/S SUPRAJAJANANAN AYURVED LITERATURE REVIEW

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### ABSTRACT

In vitro fertilization (IVF) is the most common and most advanced type method in management of infertility. It is an assisted reproductive technology to help women to become pregnant. Still success rate of IVF is less than 50%. Causes of IVF failure are abnormal embryo, implantation failure, poor ovarian response, treatment stress etc. There is also premature rise of progesterone in stimulated IVF cycles and emerging evidence suggests that it negatively affects the outcome of IVF. In this treatment mainly all drugs are used for ovarian stimulation then multiple follicles generation and maintenance of transferred embryo in womb by giving high doses of progesterone supplements and many more medicines. It seems like artificially created embryo getting nourished in an artificially created environment. That means it is only producing offspring not the *Supraja*. Ayurveda takes conception as physical, emotional and spiritual phenomenon. For healthy child male and female should be physically and mentally healthy so that they produce healthy sperm and ovum. In this article an attempt is made to explain how principles of Ayurveda and therapies will be effective for management of infertility and achieving *supraja janan* Vs IVF from pre to post conception.

**Keywords:** IVF, Supraja, Infertility

### INTRODUCTION

The field of reproductive medicine has changed forever with the birth of Louise Brown in 1978 by IVF. Today IVF is one of the most important methods for treatment of infertility. IVF refers to the process of conceiving an embryo in a test tube or watch glass, in a substance with similar characteristic to the inside of a women's uterus. The past decades has witnessed dramatic changes in the treatment protocol of IVF one such change was natural cycle to superovulation pro-

ocol. IVF is an increasing popular treatment for those who are having lots of trouble in conceiving, elderly women's, male with sperm abnormalities and many more. Infertility and its management is very well explained in *Ayurveda*. It take conception as by choice not by the chance. If we planned conception as per the way described by ancient *Acharya* there may be a ray of hope for creating a good progeny as life begins with conception.

## MATERIAL AND METHODS

1. Literary information is compiled from *Ayurveda* texts *Brihad Trayi*.
2. References collected from scientific publications and research papers related to subject
3. Information also collected from local IVF centres in Nanded city.
4. Scientific analysis of collected references was done and rearranged

## DISCUSSION ON LITERATURE:

Common indications of IVF are <sup>1</sup>

### In female-

- Bilateral tubal block
- Long standing infertility with 3 IUI
- Premature ovarian failure
- Ovulation disorders
- Advanced maternal age
- Endometriosis, etc.

### In male

- Long standing infertility with normal semen analysis.
- Poor sperm motility
- Abnormal morphology ( Asthenozoospermia)
- Azoospermia
- Oligospermia, etc.

### Principle steps involved in IVF are-<sup>1</sup>

- Down regulation using GnRH agonist
- Controlled ovarian stimulation
- Monitoring of follicular growth
- Oocytes retrieval
- Fertilization in vitro
- Transfer of gamete or embryo
- Luteal support with progesterone

### Drugs used for IVF<sup>2,3</sup>

Drugs used in IVF are designed to regulate and stimulate the production of hormones or to trigger ovulation these are -

hMG

FSH

hCG

GnRH agonist

GnRH antagonist

Progesterone

Metformin

Low molecular wt heparin

Ecosprin

Clomiphene citrate

Letrozole

Estrogen, etc.

### **Garbhadhana in view of Ayurveda<sup>4</sup>**

Pregnancy should be by choice and not by chance. In *Ayurveda* texts *acharya* have explained the *garbhadhan vidhi* in detail. According to *Ayurveda* 4 factors are essential for conception namely *Ritu* (fertile period), *Kshetra* (reproductive tract), *Ambu* (nutrition), *Beeja* (oocyte and sperm)<sup>5</sup>. *Archaryas* have described specific protocol for bringing a healthy pregnancy. The objective of the protocol is to make both male and female physically, mentally and spiritually healthy for conception. The process starts 3 months before conception and continues even after birth of baby. *Ayurvedic* Texts has clearly described the adequate age for marriage and also for conception<sup>6</sup>. They have even mentioned days of coitus for healthy child<sup>7, 8, and 9</sup>. *Caraka* and *Kasyapa* have described *Putresti yajna* in detail<sup>10, 11</sup>.

Before conception the process for purification of body by *panchkarma* therapy is mentioned<sup>12, 13</sup>. It eliminate impurities and balance *Doshas*. *Acharya* have described *rasayana* (Rejuvenation) and *vajikarana* (Aphrodisiac) *chikitsa* in detail<sup>14, 15</sup>. In today's modern world due to unhealthy food and eating habits, stressful life style *Ayurvedic* purification processes and *Raejuvenation* therapies are even more important. *Acharyas* have mentioned *rajaswala charya*<sup>16, 17, 18</sup> (adaptations during menstrual days), *garbhini paricharya*<sup>19, 20, 21</sup> (antenatal guidelines), *Sukhaprasav Vidhi*<sup>22, 23</sup> (intrapartum care), *Sutikagar*<sup>24</sup> (maternity ward), *Sutika Paricharya*<sup>25, 26, 27</sup> ( puerperal care), *Jat-matra masanumasik Paricharya*<sup>28, 29</sup> ( neonatal care). Even *archarya* have described month wise *chalit garbha* (threatened abortion) *chikitsa*<sup>30</sup>, *garbhupaghatkar bhavas*<sup>31</sup> ( factors responsible for bad obstetrics outcomes) are also mentioned. *Garbhasthapaka dravyas*<sup>32</sup> (drugs for maintenance of pregnancy) are described by *Charka*. *Kasyapa* has prescribed a type

of mantra *Varanbandh* treatment for preventing abortion<sup>33</sup>. It is also believed that couple can invite divine souls to take birth.

We can divide these into preconceptional, antenatal, postconceptional and preventive guidelines as follows-

#### **Preconception**

1. *Rajaswala charya* (care during menstrual days),
2. *Rutumati charya*
3. *Putresti yajna*

#### **Antenatal guidelines**

1. *Garbhini Paricharya*
2. *Garbhini masanumasik paricharyas* (antenatal guidelines),
3. *Garbhupaghatkar bhavas(do's and do not's during pregnancy)*
4. *Sukhaprasava Vidhi* (comfortable and safe delivery),
5. *Asthapana basti* in 8<sup>th</sup> month
6. *Vaginal oil tampon with anuvasana basti* in 9<sup>th</sup> month

#### **Postnatal guidelines for mother and child**

1. *Sutikaagara*(maternity ward),
2. *Sutika Paricharyas*( puerperal care),
3. *Breastfeeding*,
4. *Jatmatra Paricharyas* (newborn care).

#### **Preventive guidelines such as**

1. Management of BOH by month wise *chalit garbha*(threatened abortion) *chikitsa*,
2. *Garbhopaghatkar bhavas* ( factors responsible for bad obstetrics outcomes)
3. *Garbhasthapaka, Prajasthapaka dravyas* (drugs for maintenance of pregnancy)
4. *Kasyapa* has prescribed a type of mantra *Varanbandh* treatment for preventing abortion.

So if we planned the pregnancy as per these protocols we can bring physically, mentally and spiritually healthy progeny from physically, mentally and spiritually healthy parents.

#### **Side effects of IVF<sup>34</sup>-**

IVF though popular ART (Assisted Reproductive Technology) but associated with many side effects.

There are number of short term and long term risk associated with IVF.

The premature LH rise that refers to a rise in serum progesterone occurs after 5 to 7 days of stimulation and it negatively affects the endometrial advancement. Prolonged use of GnRh agonist induces menopause like state characterised by low estradiol levels and common side effect such as hot flushes and moodiness.

There is increased risk of multiple pregnancies; the birth wt. of babies born is lower than the babies born through natural conception.

There is increasing evidence that ART conceived children may be at greater risk of perinatal outcome.

OHSS (Ovarian Hyper Stimulation Syndrome) is a medical complication that is both completely iatrogenic and unique to stimulatory infertility treatment.

Increased miscarriage, multiple pregnancy and ectopic, heterotopic pregnancy have been observed.

Patient exposed to high dose or long duration treatment may warrant closer attention as they may have risk of having ovarian breast cancer.

IVF couple is on more stress than couple conceived naturally, stress may affect outcome. In country like India infertile couple are already in mental, physical and family, society and economical stress.

In India success rate varies and depend on many factors and is between 30 to 35%. In India there is no centralised data, so clinics can claim whatever they want<sup>35</sup>.

*Susruta* opines that what so ever type of diet, behaviour and conduct is followed by the couple at the time of coitus, born child possesses similar characters<sup>36</sup>. In IVF embryo is not created naturally, an environment is created by bombardment of medicines for the growth of embryo; couple is already in lot of mental, physical, economic and social stress. So, all these conditions will definitely have its impact on foetus.

For achievement of conception, proper functioning *vayu* (nervous system), normal psychology, healthy and properly functioning female reproductive system, well prepared uterus, healthy sperms and ovum are essential factors. *Ayurveda* treated infertility for several thousands of years without help of modern diag-

nostic tools. *Ayurveda* through its medicines, diet and lifestyle modifications and panchkarma raises a new hope for creating good progeny. It may enhance the success rate of artificial reproductive techniques. It regularise metabolism of the body, purify reproductive organs and maintain hormonal equilibrium, improve endometrial lining and receptivity, increase egg and sperm quality and relieve stress.

## CONCLUSION

Though IVF is very popular ART technique for many couples but it has its own benefits and hazards. *Ayurveda* takes conception as physical, mental and spiritual phenomenon. Life begins with pregnancy because it gives birth to another life. Everybody wants that their children should inherit good and moral qualities. So it is need of current modern era to follow the principles of *Ayurveda* for healthy conception which ultimately leads to the birth of a child who is handsome, endowed with goodness, have long life, repay the debts of parents and are excellent. So it is a need of time to combine the *Ayurveda* protocols in IVF procedure for generating good progeny. Further more research is needed to overcome side effects of IVF and how principles of *Ayurveda* can be implemented for better outcome through IVF for *Supraja janan*. There is a need of further research in this topic for its worldwide acceptance.

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