

INFERTILITY OF EITHER SEX-PARADOX TO PARADIGM**Dr. Bishnupriya Mohanty^{1*}, Shravani Jathar², Prof. (Dr.) Sangram Keshari Das³**¹MD, PhD Professor and Head, Department of Sanskrit Samhita and Siddhanta,²Fourth BAMS Student,³MD, PhD Professor and Head, Department of Dravyaguna (Pharmacognosy & Pharmacology)

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Mohanty**MD, PhD Professor and
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Ayurved Mahavidyalaya
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Infertility is a common problem affecting one couple in six. It can be defined as the incapacity to fulfill pregnancy after reasonable time of sexual intercourse with no contraceptive measures taken. The evidence for changes in the prevalence of infertility is difficult to establish. In this study; infertile couple has been focused on different factors: ovulatory factor (present in about 20% of couples), utero tubal peritoneal factor (present in 30% of couples), semen migration factor (10% of cases) male factor (30% of couples).

INTRODUCTION

Inability to conceive after 12 months of having sexual intercourse with average frequency (23 times/week) without the use of any form of birth control. Infertility may be primary (couple has never produced pregnancy) or secondary (woman has previously been pregnant,

regardless of the outcome and now is unable to conceive).

Factors affecting fertility

- STI and other infections (gonorrhea, Chlamydia, mumps, Tb, malaria, leprosy).
- Intercourse just after ovulation maximizes the chances of pregnancy.
- Age of woman (after 40 the fertility rate decreases by 50% while the rate of miscarriage increases).
- Age of man (increased age affects co frequency and sexual function).
- Nutrition for women, weight 10% 15% below normal or obesity may lead to less frequent ovulation and reduced fertility.

- Use of toxic agents such as metals, pesticides, toxic fumes, alcohol, smoking reduces chances of conception and increased rate of fetal wastage. It reduces sexual drive and sperm count in men.

Causes of infertility affecting both male and female

Psychological factor like sexual behaviour may reflect couple's desire not to have children. Immunological incompatibility may cause sperm agglutination and several other unknown causes may lead to infertility.

Causes of infertility in female

Several anatomical and physiological anomalies affect female fertility. PID (Pelvic inflammatory disease) lead to blocked or damaged fallopian tubes that may interfere in fertilization and transport of ovum. Ovarian dysfunction leads to absent or diminished egg production and local factors in the uterus and cervix may interfere with implantation and women's ability to carry pregnancy to term. Luteal phase defect may lead to low production of progesterone leading to early miscarriage. Production of anti sperm antibody will interfere with fertilization.

Causes of male infertility

Conditions like varicocele, testicular failure, accessory gland infection, idiopathic low sperm motility affect quantity and quality of sperm thus causing infertility.

Evaluation of fertility

Fertility can be evaluated on the basis of- Gynaecological and obstetrical history including reproductive history, gynaecological history, Age of menarche, Menstrual periods (duration and interval), Previous contraceptive use, Previous testing and treatment for infertility etc.

General history includes Occupation and background, Use of tobacco, alcohol and drugs, History of abdominal surgeries, Earlier diseases or infections.

Sexual history includes sexual disturbances or dysfunctions such as vaginismus, dyspareunia or erectile dysfunction. Sexually transmitted infections are taken into consideration for evaluation of infertility.^[1-3]

Fertility evaluation procedure

Firstly the couple should be informed about different causes of infertility and tests and

procedures required to make a diagnosis. Then Couple's interview is conducted together as well as separately to Know the confidential information.

For Evaluation of female fertility various tests like -Urine test (level of LH in urine to check if and when ovulation has occurred), Basal body temperature chart(elevation of body temperature every morning before woman gets out of bed is indicative of ovulation), Progesterone test(progesterone level in blood is estimated on 21 or 22 day of 28 day cycle), Endometrial biopsy(done during pre menstrual phase to detect if endometrium undergoes expected changes)Examinations like Hysterosalpinogram (HSG) (for detection of blocked fallopian tubes, Laparoscopy(to detect for pelvic diseases(endometriosis) and check patency of fallopian tube.), Hysteroscopy(to evaluate condition of uterine cavity(polyps, cysts, fibroids))are to be conducted.^[4-6]

For Evaluation of male fertility semen analysis is done to know it's volume(1.5cc 5.00cc), Number of sperm present(>20 million/ml), Sperm motility(>60%) and Morphology (>60%normal forms) or for presence of any infection.

Other tests are conducted for Urine analysis(to rule out infections), to measure level of testosterone(Endocrine test), presence of anti sperm antibodies. Sperm penetration assay is conducted to establish ability of sperm to penetrate egg. Post coitaltest is done to establish ability of sperm to penetrate cervical mucous.^[7-8]

Treatment in female infertility

Female infertility is caused by various factors. Depending on its cause treatment is to be decided. In Ovarian disorders ovulation inducing drugs are used which act like FSH and LH hormones thus triggering ovulation.

Hyper prolactinaemia is a condition of elevated levels of Prolactin in blood. Such condition is treated by use of Prolactin suppressing drugs.

Uterine and tubal abnormalities (unicornuate, bicornuate, didelphic uterus, uterine septum, fibroids, polyps, cysts, blocked fallopian tubes, etc.) are treatment by surgical interventions.

Cervical mucus hostility like thick, dry or sticky mucus or altered mucus pH can lead to spermatozoal immobilization leading to difficulty in fertilization in such condition intrauterine insemination is to be adopted. Endometriosis is condition in which the tissue that

normally lines the uterus grows outside the uterus. In this condition suppressing hormones or surgical procedures are employed.

Treatment in male infertility

Surgical treatment is employed in condition like varicoceles, hydroceles, etc. In case of infertility due to erectile dysfunction, low sperm count, immotile sperms Intrauterine insemination can be performed either with patient's or donor's sperm.

Assisted Reproductive Technology - Invitro fertilization(IVF)

It Involves retrieving egg and sperm from female and male partners and placing them in a lab dish to enhance fertilization. Fertilized egg after attaining 8 celled stage is placed into uterus. Ovarian stimulation drugs are used prior to the procedure to retrieve several eggs and maximize successful fertilization rates.^[9-10]

Success rates are 20% of each retrieved egg.

Gamete Intra Fallopian Transfer(GIFT).

Zygote Intra Fallopian. Transfer(ZIFT).

Intra cytoplasmic Sperm Injection(ICSI).

In Ayurvedic Context infertility is referred to as 'Vandhyatva'.

In Sushruta Samhita Vandhyatva is mentioned in 20 types of yoni Vyapad. According to Acharya Charak and Vagbhata, Vandhyatva refers to defect of Beejamsa.

Vandhyatva is of following types- Vandhya(a condition in which woman never conceives), Apraja(woman conceives only after treatment), Sapraja(woman in her active reproductive age does not conceive after giving birth to one or more children).

Vandhyatva is caused due to defect in Ritu(period of fertility), Kshetra (reproductive organs), Ambu(nutrient fluid), Beeja(sperm and ovum). Abnormalities of Shadbhavas (Matrija, Pitruja, Atma, Satwa, Satmya and Rasa) are also a cause of Vandhyatva. All types of Yoni Vyapad if not treated further lead to infertility. Other factors like Beejadushti, Shukradushti, Artavadushti, Aharadosha, Viharadosha, Balakshaya, Akalayoga, Maansikabhitapa may cause Vandhyatva.

Probable Samprapti Ghataka(Pathological Networking) involved are

Dosha	Tridosha with vata predominance
Dhatu	Rasa, Rakta
Upadhatu	Artava
Srotas	Artavavaha Srotas
Srotodushti	Sanga
Udbhavasthana	Pakwashaya
Adhishthana	Trayavarta Yoni
Marga	Abhyantara

Treatment of Vandhyatva**Shodhana Chikitsa**

Snehana with Dashamula Taila.

Swedana with Dashamula Kwatha.

Virechan with Trivrutadi Leham. (Specially in case of PCOD)

Asthapana Vasti with Balapanchanga Kwatha.

Anuvasana Vasti with Bala Tailam.

Nasya Karma in Pumsavan Vidhi helps in conception and maintainance of pregnancy.

Nasya with Anu Tailam –To maintain Hypothalamus-Pituitary-Ovarian axis.

Uttara Vasti with Brahmi Ghrita, Shatavari Ghrita, Phala Ghrita helps in maintenance of Kshetra.

Shirodhara with Taila, Ksheera, Takra (as per Prakriti, Dosha dominance) regulates Hypothalamus-Pituitary-Ovarian axis.

Shamana Chikitsa

The therapeutic measures mentioned for Pradara, Raktatisara, Shonita Pitta can be adopted as Yoni Roga Chikitsa Rasayana and Vajikarana drugs are also useful for treating Yoni Roga.

Pathyapathya

Pathya Ahara-Habitual use of Lasuna, milk, Mamsa, Mamsa Rasa.

Pathya Vihara-Coitus during Ritu kala.

Apathya-Tikshna Aharaprayoga, alcohol, smoking, etc.

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