

IMPORTANCE OF MODERN TECHNIQUES IN DIAGNOSIS OF VANDHYATVA W.S.R TO FEMALE INFERTILITY

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ABSTRACT

Difficulty for conceiving a child is major Social and Psychological burden in female life. It is estimated that female factor and male factors both are responsible for infertility. Infertility is an inability of a couple to achieve pregnancy over an average of one year. According to Ayurveda, *Garbh-hotpatti* occurs due to *Ritu, Shetra, Beeja, Ambhu*. If any of these 4 *Garbhotapattikarbhava* is disturbed then there is no *Garbhnirmiti* and the condition called *Vandhyatva*. So this *Vandhyatva* or Infertility has various causes. For evaluation of these causes there are number of diagnostic tools used now a days. USG, Laparoscopy, Hysteroscopy, Endocrine system tests all this is used for diagnosis of female infertility. According to diagnosis, treatment changes and for this Modern Diagnostic Techniques are important. So with this study, we know how important are Modern Diagnostic Technique in female infertility. Details of this study will be given at the time of Paper presentation.

Keywords: *Garbhotpatti, Ritu, Shetra, Beeja, Ambhu, Garbhnirmiti, Vandhyatva.*

INTRODUCTION

Female Infertility is a disease of reproductive system involves the families to achieve a clinical Pregnancy. God has blessed women with the ultimate gift of being mother. Infertility is the main obstacle to be blessed with that. Infertility affects women of reproductive age group all over the world. The desire of women for child is sometimes stronger than self-interest and may be stronger than the claims of carrier. Infertility has become the major health problem now days. This condition had made deep impact on women physical and mental health and disturbs her family life also. Infertility has stated to Ayurveda as *Vandhyatva*. Ayurveda suggested imbalanced in *Aratavvahstrotas* as principal constructive facts of *Vandhyatva*¹. It is mentioned as independent disease as well as *Upadrava of Yonidosha*². The word *Yoni* refers to entire Repro-

ductive system

Inability to produce offspring is called Infertility. It is inability to conceive a child by natural process or the inability to carry a pregnancy till the completion of time. It is fact that infertility is increasing & the major causes of disease are described in modern science as tubular block, PCOD, STD³.so in this present era when everything is going to be super specialized it is essential to know the exact cause of *Vandhyatva*. For Diagnosis of infertility many Diagnostic techniques are available now. So, the study of Diagnostic techniques used in Diagnosis of *Vandhyatva* is very important for happiness of women life as a child conceiving purpose.

Aim

To Study the Importance of Modern Techniques in Diagnosis of *Vandhyatva* w.s.r

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to Female Infertility

Objective

1. To Study Factor responsible for Vandhyatva.
2. To Study Factor responsible for Female Infertility.
3. To study Various Modern Techniques for Diagnosis of Vandhyatva as well a Female Infertility.

Material & Methods

1. All the literature of Vandhyatva was studied from the Classical Ayurvedic text.
2. Literature regarding the modern diagnostic technique in the female infertility was studied.
3. The modern diagnostic technique was try to correlate in the diagnosis of Vandhyatva.

Review Literature

The women in whom there is interruption of any kind to the normal process of conception called Vandhya. Acharya Charaka had not mentioned Vandhyatva but he says that Bijadushti is the reason for not conceiving child by couple⁴. Acharya Sushruta had mentioned Vandhyayonivyapad in 20 Yonivyapad which is Nastartava⁵.

In Harit Samhita, Acharya Harit has described 6 types of Vandhya⁶

Balya-Delayed puberty

Kakavandhya-One child Sterility

Anapatya-Primary Sterility

Garbhastravi-A case of repeated abortion

Mrutavasta-A case of still birth

Balakshaya- power of fertility loss due to dhatushaya

This 6 type also has described by Acharya Yograthnakar in 17th Century⁷. Vadhya are of 9 types had told in Rasratnasamucchay⁸.

Infertility can be primary or secondary.

Primary -If there is no incidence of acquiring pregnancy despite cohabitation for period of 2 years, it is called primary infertility.

Secondary -If a couple fails to conceive following a previous pregnancy despite cohabitation for a period of 2 year, it is termed as a secondary infertility.

Factor Responsible for Vandhyatva

In Sushrut Samhita, Acharya Sushruta explain in Sharir Sthan Garbhhotpatti Adhyay, there are 4 Garbhhotpattikar bhav which are in Prakrut Avastha responsible for Garbha Dharan.

“ध्रुवचतुर्णोसान्निध्याद्गभेःस्याद्वोधिपूवेकः। ऋतुक्षेत्राम्बुबीजानासामग्र्यादकुरोयथा॥ सु.शा.२/३५”

These are Ritu, Kshetra, Beeja & Ambhu

Ritu-Rajah Kala, appropriate time for conception i.e. Appropriate Ovulation Period

Kshetra - Healthy uterus and Vagina of Mother. Anatomically & Physiologically reproductive organ should be proper

Ambu - As Nutritional of diet and Ovum of parents. Ambhu can be estimated as Hormones, its level should be normal as well as it should have to do proper work. Also Ambhu will be correlated cervical mucus.

Beeja – Healthy Sperm and Ovum

Any deformity in this factors cause Vandhyatva. If above factors are fulfill, yet pregnancy not occurs then cause will be Atmaj and Satva-ja bhavaas explained by Acharya charaka in Six Garbha hetu⁹ or this condition known as idiopathic.

Factor Responsible for Female Infertility

Following Factors are Responsible for Female Infertility¹⁰

1. Ovulatory Dysfunction - Anovulation or Oligo- Ovulation, Decrease Ovarian reserve, Luteal phase defect (LPD), Luteinized unruptured follicle.
2. Tubular and peritoneal factors - .Peritubular adhesion, Endosalpingeal damage, Polyp etc.
3. Uterine factor - Fibroid uterus, Endometriosis, Congenital malformation, unicornuate, bicornuate, septet uterus
4. Cervical factor-Cervical canal enlargement, Cervical polyp, Cervicitis, Presence of Antisperm antibody

Other than this also there are various factors for female infertility. All these factors have to

evaluated and treated then only women can achieve Pregnancy.

Modern Diagnostic Techniques use in Female Infertility

There are various procedure helps us to evaluate causes and Diagnosis of female infertility. Diagnostic techniques for Female Infertility will be discussed here.

Sr.No	Modern Diagnostic Techniques	Use in Diagnosis
1.	Basel Body Temperature	Helps in Determine Ovulation Helps the couple to determine most fertile period, if cycle is irregular, For Diagnosis of Luteal Phase Defect (LPD), Helps to determining timing of post-coital test, endometrial biopsy, cervical mucus and vaginal cytology.
2.	Hormone Monitoring	For Ovulation study To Diagnose PCOD, Endometriosis, fibroid, To know the cause of DUB & Recurrent miscarriage, Luteal Phase Defect (LPD)
3.	Endometrial Biopsy	For Diagnosis of Luteal Phase Defect (LPD) Evidence of secretory activity of endometrial gland For Ovulation study To know the cause of Dysfunctional uterine Bleeding
4.	Cervical Biopsy	Used to know presence of any precancerous conditions warts, polyp, cancerous changes in cervix
5.	Ultrasonography	For follicular study (folliculometry), Ovulation study To detect Ectopic Pregnancy, Pelvic Mass (Uterine Fibroid, ovarian mass, Endometrioma, Tubo-ovarian mass), Recurrent miscarriage
6.	Hysterosalpingogram	Assessment of tubular patency Detection of uterine malformations (unicornuate, bicornuate, septate uterus) Diagnosis of Cervical incompetance, uterine synechia Incidental diagnosis of submucous fibroid or a uterine polyp or hydrosalpinx or nodular tube is an additional gain.
7.	Hysteroscopy	To evaluate cause of irregular uterine bleeding, uterine polyp, sub mucous fibroid, congenital uterine septum, intrauterine adhesions
8.	Salpingoscopy	By using this can observed tubal lumen by playing attention in adhesion, loss of mucosal fold, rounded edges of mucosal fold, debris, foreign body and abnormal vessels.
9.	Follapocopy	Used in study of tubal ostia, mucosal pattern, Diagnosis of intratubular polyp
10.	Laparoscopy	Diagnosis of Peritubal adhesion, Chromopertubation, Minimum endometriosis

		Ovulation stigma of the ovary Nature of a pelvic mass- fibroid Ovarian cyst Diagnosis of Acute salphangitis Diagnosis of Ectopic Pregnancy To detect pelvic endometriosis, pelvic adhesions, and Tubo-ovarian adhesions, the laparoscope is usually necessary
10.	Post-Coital Test	To evaluate the interaction of sperm, semen, and cervical mucus.
11.	Sperm Antibody Evaluation	test for sperm cervical mucus interaction
12.	Cervical and vaginal smear	Used for screening cervical cancers,for cytoharmonal study and used in sex cromatin study
13.	Chlamydia test	Chlamydia is an STD that can affect fertility
14.	Computed Tomography scan	CT most useful in Diagnosis of lymph node metasta- sis, depth of myometrial invasion in endometrial cancer, ovarian mass and myomas. Used in ovarian cancer detection.
15.	Magnetic Resonance Imaging	Used to detect accurately the parametrial invasion of cervical cancer., adenomyosis, myomas and endome- trial cancer, used in evaluation of metastatic lymph nodes or recurrent pelvic tumors & Developmental abnormalities, Ovarian masses & uterine masses, Endometriosis, Dermoids, PCOD etc.
16.	Positron Emission Tomography	Used to measure difference between the normal tis- sue and cancerous tissue, detection of metastatic dis- ease and recurrence of ovarian or cervical malig- nancy.
17.	X-ray Pelvis	Used to locate an IUCD or to look for shadow of teeth or bone in benign cystic teratoma.
18.	Genetic testing	Genetic testing helps determine whether there's a genetic defect causing infertility.

DISCUSSION

There are various Modern Techniques for Di-
agnosing the Cause of Female infertility. Ac-
cording to Ayurveda There are 4 factors which
cause Garbhadharana called *Garbhotppatikal
bhav* and any disturbance on those bhava cau-
se *Vandhyatva*. So, for diagnosing any distur-
bance of those *Garbhotppatikal bhav*, Modern
Diagnostic Techniques help now a days. Such
as

Ritu- BBT, Hormonal Monitoring, Endometri-
al Biopsy, Post Coital test

Kshetra- Hormonal Monitoring, Endometrial
Biopsy, Cervical Biopsy, Hysteroscopy, Sal-
phingoscopy, Follapscopy, USG, MRI, PET,
X-ray, CT-scan, Leproscopy, HSG

Beeja- Leproscopy, USG, MRI, PET,X-ray,
CT-scan

Ambhu- Hormonal Monitoring, Sperm Anti-
body Evaluation, Cervical and vaginal smear.

So this Modern Techniques help to Diagnosed what is the actual factor responsible for *Vandhyatva*. Hence with this Techniques Diagnosis of *Vandhatva* will be easy.

CONCLUSION

Infertility has become a major health problem in current scenario. Since incidence of infertility increasing day by day due change in life style, because of infertility in both partners are various. According to *Ayurveda Ritu, Kshtra, Beeja, Ambhu* are responsible factor of *Vandhyatva*. In Classic *Ayurvedic* Text there are no diagnostic Techniques available as that in modern text.

But now Modern Techniques are available which help to diagnose specific factor for *Vandhyatva*. In female infertility, specific cause is necessary to evaluate for treatment of infertility and these various diagnostic techniques explain about are help us not only Diagnosis but also in Treatment. So with this study we say there is importance of Modern Technique's in Diagnosis of *Vandhyatva* w.s.r. Female Infertility.

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