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

**Dr. Ankita U. Mandpe¹ Dr. Swati R. Lanjewar² Dr. Trupti V. Kalyanshetti³**

Dr. G.H. Kodwani⁴

¹,²,³ MD Scholar, ⁴Professor;

Department of Rognidan & Vikriti Vigyan, Govt. Ayurved College, Nagpur, Maharashtra, India

## 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, Garbhotpatti occurs due to Ritu, Shetra, Beeja, Ambhu. If any of these 4 Garbhotapattikarbha 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 then self-interest and may be stronger then 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 Vandhyatva¹. It is mentioned as independent disease as well as Upadrava of Yoni-dosha². The word Yoni refers to entire Reproductive 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 to female infertility.
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 as 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 Vandhyatva. Acharya Charaka had not mentioned Vandhyatva but he says that Bijadushri is the reason for not conceiving child by couple. Acharya Sushruta had mentioned Vandhyayonivyapad in 20 Yonivyapad which is Nastartava.

In Harit Samhita, Acharya Harit has described 6 types of Vandhya:

1. Balya-Delayed puberty
2. Kakavandhya-One child Sterility
3. Anapatya-Primary Sterility
4. Garbhastravi-A case of repeated abortion
5. Mrutavasta-A case of still birth
6. Balakshaya- power of fertility loss due to dhatukshaya

This type also has described by Acharya Yogaratnakar in17th Century. Vadhyas are of 9 types had told in Rasratnasamuccay. 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 Garbhotpatti Adhayay, there are 4 Garbhotpattikar bhav which are in Prakrit Avastha responsible for Garbha Dharan.

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
Ambhu - 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 Savaja bhavas explained by Acharya charaka in Six Garbha hetu or this condition known as idiopathic.

Factor Responsible for Female Infertility
Following Factors are responsible for Female Infertility:
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, unicorneate, bicornuate, septet uterus

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.

<table>
<thead>
<tr>
<th>Sr.No</th>
<th>Modern Diagnostic Techniques</th>
<th>Use in Diagnosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Basel Body Temperature</td>
<td>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.</td>
</tr>
<tr>
<td>2.</td>
<td>Hormone Monitoring</td>
<td>For Ovulation study To Diagnose PCOD, Endometriosis, fibroid, To know the cause of DUB &amp; Recurrent miscarriage, Luteal Phase Defect (LPD)</td>
</tr>
<tr>
<td>3.</td>
<td>Endometrial Biopsy</td>
<td>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</td>
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<tr>
<td>4.</td>
<td>Cervical Biopsy</td>
<td>Used to know presence of any precancerous conditions warts, polyp, cancerous changes in cervix</td>
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<tr>
<td>5.</td>
<td>Ultrasonography</td>
<td>For follicular study (folliculometry), Ovulation study To detect Ectopic Pregnancy, Pelvic Mass (Uterine Fibroid, ovarian mass, Endometrioma, Tubo-ovarian mass), Recurrent miscarriage</td>
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<tr>
<td>6.</td>
<td>Hysterosalpingogram</td>
<td>Assessment of tubular patency Detection of uterine malformations (unicornuate, bicornuate, septate uterus) Diagnosis of Cervical incompatance, uterine synechiae Incidental diagnosis of submucos fibroid or a uterine polyp or hydrosalphinxor nodular tube is an additional gain.</td>
</tr>
<tr>
<td>7.</td>
<td>Hysteroscopy</td>
<td>To evaluate cause of irregular uterine bleeding, uterine polyp, sub mucous fibroid, congenital uterine septum, intrauterine adhesions</td>
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<td>8.</td>
<td>Salpingoscopy</td>
<td>By using this can observed tubal lumen by playing attention in adhesion, loss of mucosal fold, rounded ages of mucosal fold, debris, foreign body and abnormal vessels.</td>
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<tr>
<td>9.</td>
<td>Follapocopy</td>
<td>Used in study of tubal ostia, mucosal pattern, Diagnosis of intratubular polyp</td>
</tr>
<tr>
<td>10.</td>
<td>Laparoscopy</td>
<td>Diagnosis of Peritubal adhesion, Chromopertubation, Minimum endometriosis</td>
</tr>
<tr>
<td>No.</td>
<td>Procedure</td>
<td>Description</td>
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<tr>
<td>10</td>
<td>Post-Coital Test</td>
<td>To evaluate the interaction of sperm, semen, and cervical mucus.</td>
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<tr>
<td>11</td>
<td>Sperm Antibody Evaluation</td>
<td>Test for sperm cervical mucus interaction</td>
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<tr>
<td>12</td>
<td>Cervical and vaginal smear</td>
<td>Used for screening cervical cancers, for cytoharmonal study and used in sex cromatin study</td>
</tr>
<tr>
<td>13</td>
<td>Chlamydia test</td>
<td>Chlamydia is an STD that can affect fertility</td>
</tr>
<tr>
<td>14</td>
<td>Computed Tomography scan</td>
<td>CT most useful in Diagnosis of lymph node metastasis, depth of myometrial invasion in endometrial cancer, ovarian mass and myomas. Used in ovarian cancer detection.</td>
</tr>
<tr>
<td>15</td>
<td>Magnetic Resonance Imaging</td>
<td>Used to detect accurately the parametrical invasion of cervical cancer., adenomyosis, myomas and endometrial cancer, used in evaluation of metastatic lymph nodes or recurrent pelvic tumors &amp; Developmental abnormalities, Ovarian masses &amp; uterine masses, Endometriosis, Dermoids, PCOD etc.</td>
</tr>
<tr>
<td>16</td>
<td>Positron Emission Tomography</td>
<td>Used to measure difference between the normal tissue and cancerous tissue, detection of metastatic disease and recurrence of ovarian or cervical malignancy.</td>
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<td>17</td>
<td>X-ray Pelvis</td>
<td>Used to locate an IUCD or to look for shadow of teeth or bone in benign cystic teratoma.</td>
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<tr>
<td>18</td>
<td>Genetic testing</td>
<td>Genetic testing helps determine whether there’s a genetic defect causing infertility.</td>
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**DISCUSSION**

There are various Modern Techniques for Diagnosing the Cause of Female infertility. According to Ayurveda There are 4 factors which cause Garbhadharana called Garbhotppatikar bhav and any disturbance on those bhava cause Vandhyatva. So, for diagnosing any disturbance of those Garbhotppatikar bhav, Modern Diagnostic Techniques help now a days. Such as

- *Ritu-* BBT, Hormonal Monitoring, Endometrial Biopsy, Post Coital test
- *Kshetra-* Hormonal Monitoring, Endometrial Biopsy, Cervical Biopsy, Hysteroscopy, Salpingioscopy, Follaposcopy, USG, MRI, PET, X-ray, CT-scan, Leproscopy, HSG
- *Beeja-* Leproscopy, USG, MRI, PET, X-ray, CT-scan
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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CORRESPONDING AUTHOR
Dr. Ankita U Mandpe
Department of Rognidan & Vikriti Vigyan, Govt. Ayurved College, Nagpur, Maharashtra, India
Email: ankitamandpe1992@gmail.com

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