Reproduction is a large aspect of life for many cultures as the production of children is often highly socially valued and is vital for social security and health networks as well as for family income generation. Infertility in these societies often leads to social stigmatization, social and familial problems such as rejection or abandonment as well as personal psychological issues. In humans, infertility may describe a woman who is unable to conceive as well as being unable to carry a pregnancy to full term. In the present era of technological and industrial development the incidence of infertility cases is increasing to a level of appreciable concern. There are many biological and other causes of infertility, including some that medical intervention can treat. Studies suggest that worldwide between 8 – 10% of all heterosexual couples or women have an unresolved problem of infertility. Up to 20% of infertile couples have unexplained infertility. The fertility treatment options and programs are not available through public health sectors but only available through private health sectors and the treatment options offered are either not easily accessible or costly. Yoga Ratnakara, as the title itself suggests is a treasure book of gem like medicinal formulations is one of the most renowned treatises of Ayurveda. Some of the formulations mentioned in Yogaratnakara in the context of Yoni Vyapad Chikitsa are of vital significance in the field of female infertility. This described formulations not only for the purpose of making woman fertile but also suggested different measures to be adopted month wise during pregnancy for the maintenance of pregnancy through to full term and to prevent miscarriages and abortions.

Keywords: Yogaratnakara; Infertility; Yoni–vyapad; Garbhaprada Yoga; Abortion.

INTRODUCTION

Childbearing and rising of children are extremely important events in every human’s life and are strongly associated with the ultimate goals of completeness, happiness and family integration. It is widely accepted that human existence reaches completeness through a child and fulfils the individual’s need for reproduction. Infertility refers to an inability to conceive after having regular unprotected sex. Infertility can also refer to the biological inability of an
individual to contribute to conception, or to a female who cannot carry a pregnancy to full term.

Infertility is a disease that is currently defined as one year of unwanted non-conception with unprotected intercourse in the fertile phase of the menstrual cycle. There is reluctance to accept infertility as “disease” in many countries around the world. But The American Society for Reproductive Medicine (ASRM) has unambiguously defines infertility as a disease. Although a one year threshold is necessary to fulfill the definition of infertility and has become the “gold standard” for clinical purposes, the threshold was even longer in the recent past.

The term “infertility” covers disorders ranging from sterility to nearly normal fertility. Thus, its uniform use is misleading. Often, the term sub-fertility is employed, but the definition is basically the same. Typically speaking, an infertile couple is one that finds it impossible to conceive, or is unable to have a child. These definitions have been widely employed without gradations in between, which is what actually happens in clinical practice.

Infertility is a multidimensional problem with social, economic and cultural implications associated with geographical differences, which can take threatening proportions in countries with strong demographic problems. It is a global health issue affecting approximately 8-10% of couples. Up to 20% of infertile couples have unexplained infertility. This tendency is increasing for 3 main reasons:

- The first one, and probably the most important one, is due to social changes that have been happening in our society, such as a higher percentage of women in the workforce. This has resulted in a delay in childbearing, and age is a critical factor in fertility.
- The second reason is that several lifestyle factors affect fertility such as smoking, obesity, or stress.
- The third key reason is that there is a greater awareness about fertility clinics, and more information about treatment alternatives.

Though there have also been better outcomes with new developments in infertility treatments, the fertility treatment options and programs are only available through private health sectors and are often not easily accessible or costly and little or no treatment is available through public health sectors.

CAUSES OF FEMALE INFERTILITY:

As for the etiology of infertility in humans, we may say that the cause of infertility lies in both the male and female partners. The male partner is responsible for 30% of cases, the female another 30%, and in another 30% of the cases, there is a combination of male and female reasons for infertility. Since the introduction of assisted reproduction, we have found different situations in which the cause of infertility can be explained, reducing the actual incidence of couples with infertility of unknown etiology.

- The ovary is responsible for up to 50% of the cases of female infertility
- The second potential cause is Tuboperitoneal infertility, in which endometriosis is probably the main factor, altering the anatomy of the female reproductive tract and causing infertility.
There are also some cases involving the uterus as the main cause of female infertility.
Some cases are the consequence of an altered passage of the sperm through the cervical channel due to a cervical factor or immunologic infertility.
Age is the most important factor affecting female fertility.
Polycystic ovarian syndrome and its consequences.
Ovarian cysts may affect the anatomy of the internal genitalia and cause mechanical infertility.
Endometriomas are the most frequent finding.
Anovulation of central origin is not as frequent as the other causes.

According to Ayurveda, infertility occurs when a person’s reproductive tissue or Shukra dhatu, remains bereft of nutrition. This can be caused due to poor digestion and because of certain toxins in the body. Some of the other causes of infertility according to Ayurveda are:
- Anxiety
- Depression
- Insomnia
- Spicy and Salty food

Ayurveda takes a holistic view about health and treats the body as a whole instead of an individual ailment. The main focus of Ayurvedic treatment for infertility is to ensure the proper transformation of food into nutrients that can move to the ‘Shukra dhatu’.

CONTRIBUTION OF YOGA RATNAKARA FOR FERTILITY:

Yoga Ratnakara, the renowned text of Ayurveda has discussed infertility in the context of Yoni roga wherein he has dealt in detail about different measures and formulations to enable a woman to conceive and continue her pregnancy to full term. It has also mentioned certain treatment modalities to prevent threatened and habitual abortions apart from measures for easy and normal delivery. Different measures and modalities described in Yogaratnakara are given hereunder:

GARBHA PRADA YOGAS:

Single drugs:
- Aswagandha kshirapaka + Ghrita – given after Ritusnana
- Lakshmana moola churna + Goghrita --- Nasya (for male child)
- Lakshmana moola (Shape like Lanka) --- used as Garland
- Lakshmana moola + milk ---Nasya & Paana
- Matulunga beeja rubbed with milk - given after Ritusnana
- Palasha one leaf boiled with Gokshira
- Sweta Brihati moola + milk ---Nasya in left nostril (for male Child)

Simple recipes:
- Fine powders of Bala, Atibala, Madhuka, Vatankura, Nagakesara are taken in equal parts, mixed with honey & ghee if taken with Go kshira helps the woman to conceive a male child.
- Equal parts of Kuranta mola, Dhataki pushpa, Vatankura, Nilotpala processed in milk and given for Ritumati for conception.
- Parshva Pippali mixed with powders of Jiraka and Sharapunkha should be given for conceiving a male child.
- Paste of *Sukara shimbi* and pulp of *Dadhi phala* processed in milk if given the woman will conceive male child.
- *Ishwarlingi beja churna* taken along with milk helps in conceiving male child.
- Equal parts of *Eranda beja* and *Matulunga beja* processed in *ghrita* helps in conception.
- Equal parts of *Tila taila, Go kshira, phanita* (Concentrated *Ikshu rasa*), *dadhi*, *ghrita* are thoroughly mixed and added with *Pippali churna* helps in conceiving male child.

**Compound Formulations:**

- **Phala ghrita:**
  (10 gms. each of *Manjishta, Madhuka, Kushta, Triphala, Sarkara, Bala, Meda, Maha meda, Kshira Kakoli, Kakoli, Aswagandha mula, Ajamoda, Haridra, Daruharidra, Priyangu, Katurohini, Utpala, Kumuda, Laksha, Sweta & Rakta Chandana* are pounded to fine paste. This paste is added with 640 gms of Ghee and subjected to *Ghritapaka* by adding *Satavari swarasa* and *Go-Kshira* (2560 ml.).

- **Lakshmana Ghrita:**
  - Fine powder of *Lakshmana mula* (which is in the shape of Lanka) is duly mixed with *Go-Ghrita* and is used for *Nasya* to enable a woman to conceive.

**Month wise treatment for preventing threatened / habitual abortion:**

Systematic supervision of a woman during pregnancy is called *Garbhi paricharya* (Ante-natal care). Supervision should be of a regular and periodic nature and according to the need of an individual. The care should start from the beginning of pregnancy and till the birth of child. The following recipes are useful to prevent abortions in different months:

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Month</th>
<th>Drugs recommended for Kshirapaka</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>First</td>
<td><em>Madhuka, Shaka bejea, Kshirakakoli &amp; Suradaru</em></td>
</tr>
<tr>
<td>2.</td>
<td>Second</td>
<td><em>Ashamantaka, Krishna tila, Tamravalli &amp; Shatavari</em></td>
</tr>
<tr>
<td>3.</td>
<td>Third</td>
<td><em>Vrikshadani, Kshirakakoli, Utpala &amp; Sariva</em></td>
</tr>
<tr>
<td>4.</td>
<td>Fourth</td>
<td><em>Ananta, Sariva, Rasna, Padma &amp; Madhuka</em></td>
</tr>
<tr>
<td>5.</td>
<td>Fifth</td>
<td><em>Brihati dvaya, Kashmiri, shunga-twak of Kshira Vriksha &amp; ghrita</em></td>
</tr>
<tr>
<td>6.</td>
<td>Sixth</td>
<td><em>Prithakparni, Bala, Shigru, Svadamstra &amp; Madhuyasthi</em></td>
</tr>
<tr>
<td>7.</td>
<td>Seventh</td>
<td><em>Sringataka, Bisa, Draksha, Kaseru, Madhuka &amp; Sita</em></td>
</tr>
<tr>
<td>8.</td>
<td>Eighth</td>
<td><em>Kapitha, Bilva, Brihati, Patoli, Ikshu &amp; Nidigdhika</em></td>
</tr>
<tr>
<td>9.</td>
<td>Ninth</td>
<td><em>Madhuka, Ananta, Kshirakakoli &amp; Sariva</em></td>
</tr>
<tr>
<td>10.</td>
<td>Tenth</td>
<td><em>Sunthi + Kshirakakoli / Sunthi / Yashtimadhu / Devadaru</em></td>
</tr>
<tr>
<td>11.</td>
<td>To relieve complications like pain, burning sensation etc.</td>
<td><em>Kshirakakoli, Nilotpala, Manjisht &amp; Mulaka</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>Vidari, Kakoli, Kshirakakoli &amp; Mrinala</em></td>
</tr>
</tbody>
</table>
For preparing Kshirapaka, the coarsely powdered drugs are boiled in eight parts of milk added with 32 parts of water. The boiling is continued till all the water content is evaporated and milk alone is left. The end product is filtered and is taken internally.

Yogas for prevention of Garbhapata:

- Paste prepared with equal parts of Lajjalu, Dhataki pushpa, Utpala, Lodhra & madhu, should be administered orally. While consuming this medicine, woman should sit in the cold water tub.
- Mud of the pot maker’s hand should be collected, mixed with honey and taken orally along with Goat’s milk / sweta Aparajita churna + honey with Goat’s milk
- Powders in equal parts of sugar, Bisa and Tila + honey
- Equal parts of Venugranthi, Kulattha and Haridra should be decocted and given orally
- Equal parts of Hribera, Ativisha, Mustha, Mocharasa and Indrayava should be decocted and given orally
- Paravata mala mixed with fresh juice of Tambula (Nagavalli), taken internally for three consecutive days
- Wearing of Atibala mula over kati region, prevents garbhapata

The dosage of the finished product should be taken basing on the specific doses mentioned for each of the dosage forms as mentioned in Bhaishajya Kalpana.

DISCUSSION

Infertility is often spoken about in whispers. There is still a lot of stigma attached to this increasingly common medical issue. According to the literature, infertility seems to be a multi-dimensional health issue which occurs not only due to health problems related to the fallopian tubes, the ovaries, and the endometrium, but it may also be a result of the choices imposed by the modern lifestyle, like the higher average age of people who get married, stress, non-conducive legal framework for assisted reproduction, etc.

Ayurveda focus on identifying the right cause, involved dosha, its imbalance and its correction measures. These include different regimens of diet, life style, Panchakarma, Rasayana Chikitsa and medications to suit different etiology, constitutions and temperaments.

CONCLUSION

Childbearing and family are considered a right of every human being. Infertility is a health problem that requires appropriate treatment strategy. Modern medical science has developed advanced therapies to assist reproduction over the last 20 years. In the past, people had little control over their fertility and couples that could not get a child had no other choice but to accept the fact. In contrast, although today infertility is a relatively common problem
that touches deeply the soul of couples involved in this, medical science has increased the chances of giving solutions to the problem with the Assisted Reproduction. It gave hope to the infertile couples as it offered a possible solution to the problem. Infertility is medical problem and needs medical intervention.

_Yogaratnakara_ while discussing infertility in the context of _Yoniroga_ has comprehensively covered and dealt all the areas of infertility and their solution (including _Daiva Vyapara-sraya_ measures like _Chyavana Mantra & Udbhayatrimmsaka Yantra_) right from conception to induction of labour. These recommendations of _Yogaratnakara_ definitely deserve due consideration and adaptation in view of the escalating cost and inaccessibility of the infertility treatment modalities that are currently available in the market as on date.

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