

International Journal of Research Publication and Reviews

Journal homepage: www.ijrpr.com ISSN 2582-7421

An Ayurvedic Approach in the Management of Unexplained Infertility

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ABSTRACT -

Infertility is a growing public health issue with significant socioeconomic and health implications for both individuals and society. Unexplained Infertility is defined as the inability to conceive after a year, despite routine infertility studies revealing no abnormalities; the general rate of infertility is 10-30 %. Female infertility is referred to in Ayurveda as *Vandhyatva*, and the main factors responsible for conception are *Garbha Sambhava Samagri* (proper union of four factors such as fertile period, healthy reproductive system, nutrition, and healthy ovum and sperm) and *Manasika Abhitapa* (psychological and emotional factors). *Vata Dosha* vitiation, loss of appetite and lack of sleep has been discovered after a thorough evaluation. *Sadhyo-Virechana* (Purgation) can be followed by *Vatanulomana* (which pacifies *Vata Dosha*), *Deepana* (appetisers), *Pachana* (digestives), *Garbhasthapana* (which maintains pregnancy), *Rasayana Chikitsa* (which rejuvenates) and psychological certainty, which favours conception in this type of infertility.

Key words - Unexplained infertility, Vandhyatva, Ayurveda

Introduction -

Infertility is a growing public health issue with significant socioeconomic and health implications for both individuals and society. Infertility is defined as a failure to conceive within one or more years of regular unprotected coitus^[1]. Infertility is a prevalent problem affecting about 10- 12% of the couples worldwide. Unexplained Infertility is defined as the inability to conceive after a year, despite routine infertility studies revealing no abnormalities; the general rate of infertility is 10-30 % ^[2]. However, those percentages are from studies in which all the women had laparoscopy surgery to investigate the pelvic cavity for pelvic scarring and <u>endometriosis</u>. Laparoscopy surgery is no longer done as part of the routine fertility workup. Therefore, we are not finding all of the causes of infertility that we used to leaving many more couples in the unexplained category. The current rate of unexplained infertility is about 50% for couples with a female partner under age 35, and about 80% by age 40. In reality, there are probably hundreds of "causes" of infertility. There are a lot of things that have to happen perfectly in order to get pregnant and have a baby.

There are literally hundreds of molecular and biochemical events that have to happen perfectly in order to have a pregnancy develop. The standard tests for infertility barely scratch the surface and are really only looking for obvious factors, such as <u>blocked tubes</u>, abnormal <u>sperm counts</u>, <u>ovulation problems</u>, etc. These tests do not address the molecular issues at all. That is still for the future. The likelihood of a diagnosis of unexplained infertility is increased substantially in women 35 and over and greatly increased in women over 38. The reason for this is that there are more likely to be egg quantity and quality problems as women age. Since we do not have a standard category called egg factor infertility, these couples sometimes get lumped in to the unexplained infertility category. The duration of infertility is important. The longer the infertility, the less likely the couple is to conceive on their own. After 5 years of infertility and over 3 years of trying on their own, the cumulative pregnancy rate after 24 months of attempting conception without any treatment was 28%. This number was found to be reduced by 10% for each year that the female is over ³¹.

In *Ayurveda*, unexplained infertility equated with *Vandhyatva*. *Vandhya* referred to women who is infertile and *Vandhyatva* means status of the condition called *Vata Dosha*, *Ojobala (immunity)*, *Shadbhavas* like *Matruja* (mother), *Pitruja* (father), *Atma* (soul), *Satmya* (congeniality), *Rasa* (nutrition), *Satva* (mind) also plays an important role in fertility. *Sushruta* ^[3] has stated four factors like As per *Ayurveda*'s, important factors for conception arc considered as *ritu* (fertile period), *Kshethram* (uterus and reproductive organs), *Ambu* (Proper nutrient fluid) and *Bija* (healthy ovum and sperm), which is necessary for achieving the conception. *Aacharya Vagbhatta*^[4] has given more importance to psychological, emotional factors and mental health for *Garbhadharana* (conception).

Causative factors -

The *Ayurvedic* approach to Infertility "*Ayurveda* supports health by strengthening body's own self-healing and balancing mechanisms" and doesn't rely on intervention by any outside or foreign substance to replace or correct the hormones in the body ^[5] It focuses on the treatment of infertility holistically with an aim of improving the overall health and quality of life of the individual ^[6]. According to the *Charaka Samhita*, "the single most important factor in the build-up of *Aama* (toxin created when undigested food forms in the stomach) is the *Agni* and all the disease occurs due to imbalance in *Agni* (the power of digestion). Therefore, the treatment of *Aama* must always include the treatment of *Agni*, including the use of digestive *herbs* and spices, eating meals timely following a proper schedule and elimination of cold foods and drinks" ^[7]

As per *Charaka Samhita*, an integration and balance of mind, senses, body and the spirit is called "Ayus",^[8] which is believed to prevent illness and promote wellness^[9]. It defines a healthy person as one who is established in the Self (higher-self), who has, balanced *Agni*, balanced *Doshas*, properly formed *Dhatus*, proper elimination of *Malas* [wastes], well-functioning bodily processes, and whose mind, senses and soul all are full of bliss. The women suffering from *Vata* if copulates with husband, then also she does not conceive. (Ca. Siddhi. 11/34). The most easily disturbed *Dosha* is the *Vata* which causes functional defects in the egg, difficulties with implantation and is often responsible for infertility. An excessive bout of exercise, fear, anxiety or stress due to trauma, excessive fasting as is the case in eating disorders or diet including cold, light and dry substances can cause imbalance of *Vata* ^[10]. However, infertility rarely involves only one *Dosha*. People with *Pitta* nature may experience infertility resulting in scarring of the fallopian tube, inhibiting the ascent of the sperm or descent of the ovum. Excess heat may also be responsible for depletion of *Shukra Dhatu* ^[11]. On the other hand, *Kapha* people because of the dominant water element in their constitution that supports *Shukra Dhatu* experience the healthiest and the strongest reproductive system. Infertility in those with *Kapha* is initiated by a cold, heavy and oily diet along with a sedentary lifestyle. When *Kapha Dosha* is predominant, fallopian tubes may thicken; uterine fibroids may develop, and often involves *Pitta* and *Vata* displacement. Scar tissue is due to *Pitta* pushing *Kapha*.

Management approach through Ayurveda –

Fertility is important physiological activity of the reproductive organ. Infertility cases are increasing due to stress, obesity, lack of exercise and environmental pollution. Unexplained infertility ^[12] is earmarked to those couple who have undergone complete basic infertility work up and in whom no abnormality has been detected and still remains infertile. The recommended treatment for unexplained infertility is induction of Ovulation IUI; Super ovulation combined with IUI and assisted reproductive technology. Ovarian stimulation (Clomidpills, letrozole or femara, Injectable gonadotropins (shots of FSH hormone) and/or intrauterine insemination and/or assisted reproductive technologies and IVF. Several studies showed improved pregnancy success rates with injectable FSH plus IUI treatment as compared to no treatment. Most couples with unexplained infertility with a female partner under age 40 will try about 3 artificial inseminations and if not pregnant do IVF.^[13]

Ayurveda has been successful in treating infertility since several thousand years without the help of modern advances in medicine as it gives the ability to the infertile women or couples through treatment to become fertile, to improve the overall health of the women to be able to conceive naturally without the aid of western medicine ^[14] *Panchakarma (Ayurvedic* deep internal cleansing procedure), can also be utilized to eliminate *Aama*. Healthy *Agni* will also contribute to healthy *Ojas*. Evaluation of person's *Dosha* is very significant for prescribing the treatment and any blockages and weaknesses in body parts for which the treatment includes appropriate diet, body therapies, *herbs*, sensory therapies, and lifestyle and yoga therapies ^[15]

Herbal management -

The most commonly known and used herbs such as *Ashwagandha* (*Withania Somnifera*), *Shatavari* (*Asparagus Racemousus*), *Aamlaki* (*Emblica officinalis*), *Shatpushpa* (*Anethum Graveolens*) are extremely useful formulations which helps create the synergistic hormonal balance between the Follicle Stimulating Hormone (FSH) and the Luteinizing Hormone (LH)^[16]. Herbs can be used as per *Doshas*, increase fertility in women and also improve chances of conception and alleviates symptoms of premenstrual syndrome; regulate irregular menstrual cycle and heavy bleeding.

No individual *herb* alone is considered useful for promoting fertility. Therefore, a combination of *herbs* is used in the treatment of infertility with the purpose of correcting a organic or functional problem that caused infertility. ^[17] Medicated ghees and oils such as *Shatpushpa Tailam, Narayana Tailam, Phala Sarpis, Kalyana Ghrita, Kalyana Gulam, Dadimadi Ghrita* and commonly used^[18] The right combination of herbs helps in regulating menstrual cycles, enhancing general health and wellness, invigorating sperm (enhancing a man's sperm count, morphology and motility), reducing stress, enhancing sleep controlling anxiety and increasing energy level, balancing the endocrine system, increasing the chance of pregnancy for women undergoing in-vitro fertilization (IVF) and improving blood flow in pelvic cavity, thereby promoting fertility^[19]

Dietary management –

Diet plays a crucial and vital role in the prevention and cure of diseases and in maintenance of good health. Food has been compared to god, in the ancient Indian scriptures (*Annam Brahmam*) since it is the main factor for sustaining and nourishing life ^[20] As per *Ayurveda*, food affects the mind also by causing either an increase or decrease in the three qualities of mind, i.e., *Rajo-guna, Satva guna,* and *Tamo-guna*^[21]. It was believed in the ancient Indian literature that if dietetics is properly followed, medicine is not required but if dietetics is not observed, even medicines are not useful ^[22]. Dietary management involves strict compliance and adherence to *Ojas*-building foods and to avoid the substances which diminish the *Ojas*. This is important to

regulates ovulation and enhances fertilization ^[23] Eating whole foods provides all nutrients for the health of the body in addition to fiber that influences hormonal levels provides. Foods such as processed carbohydrates, excess starch, antibiotic and hormone laden meat and milk and canned produce destroy fertility^[21] *Ojas* building food include as milk, ghee, nuts, , sesame seeds, dates, pumpkin seeds, honey, saffron and avocados ^[24]Fresh, organic fruits and vegetables, protein from plant sources like beans, and peas, sweet, whole grains, juicy fruits such as mangoes, peaches, plums, and pears, asparagus, broccoli, spices such as ajwain powder, turmeric (improves the interaction between hormones and targeted tissues), cumin (purifies the uterus in women and the genitourinary tract in men) and black cumin boost fertility. Foods such as grains, root vegetables, watercress, garlic, onions and chives improve circulation and nourish the blood ^[25] It is believed that urad dhal which is cooked with equal parts turmeric, coriander, cumin and fennel or banana cooked in ghee, cinnamon and cardamom *build Shukra Dhatu.* Jaggery and Black sesame seeds are both rich in Iron and seeds are rich in vitamin E and the phyto-chemicals in the seeds modulate hormones causing changes in the female body ^[26].

Panchakarma –

Ayurvedic body therapies such as *Shirodhara, Abhyanga, marma therapy, Nasya, Basti*, They nourish the body, revitalize the mind and strengthen the immune system. *Rejuvenation* therapies are beneficial in reducing stress, nourishing all *Dhatus* of the body and pacifying *Vata*^[27]. *Panchakarma* is usually prescribed for infertile couples. *Rejuvenative* therapies are basically recommended for *Vata Dosha*, and cooling light therapies for *pitta Dosha*.

Fertility massage -

A sedentary lifestyle results in believed to stagnant lymph flow. If the body is too active, the body may not be able to carry away all the waste that is produced. Therefore, the deep tissues massage work to stimulate the flow of lymph. This bodily fluid carries wastes and impurities away from tissues and needs muscle contractions to move efficiently throughout the body. The massage can help in increasing the chances of conception by clearing blocked fallopian tubes. ^[28] Reflexology, is an effective technique of interrupting stress and returning the body to a state of equilibrium which involves massaging different areas of the hands and feet (to establish the tension level for the rest of the body) corresponding to those internal organs that may cause infertility ^[29] Acupuncture is yet another option that can be done on its own or along with other assisted reproductive technology (ART) procedures. Studies have proved the effectiveness of acupuncture for infertility^[30]

Discussion -

Sadhyo Virechana helps both couples for Shodhana (Cleanses the body) and also mentioned as a pre conceptional care^[31] in Ayurveda which helps in conception. Ashwagandha is Balya (strengthening), Brimhana (nourishing), Shukrala ((increases production of semen), Vrishya (aids in ejaculation). Ashwagandha improves energy and also memory by enhancing the brain and nervous function, shows anxiolytic effects has hepato-protective property, raises haemoglobin level and red blood cell count, improve energy level, has potent antioxidant activity, improve the cell mediated immunity, promotes vigour and vitality along with cheerful sexual life and reproductive equilibrium and act as powerful adaptogen. It is one of the best Rasayana (rejuvenator) and Vajikarana (aphrodisiac), Balya (Promote strength), Vayasthapana (Anti-aging) and is indicated for promoting fertility^[32] It is Vatahara (decrease Vata Dosha), Rasayana (rejuvenator), Vrishya (aphrodisiac) and Stanyajanana (helps in lactation). Shatavari is Anti-abortificient, Anti-inflammatory, Anti-viral and has positive influence on H-P-O axis. Shatavari is mainly known for its Phyto estrogenic properties ^[33] Dashmula is indicated in Vatavyadhi (disorders due to Vata Dosha), Kshaya (consumption), Mandagni (diminished appetite), Dhatukshaya (depleted Dhatus), Vandhya^[34](infertility) and it act as Deepana (appetizers), Pachana (digestives), Balaprada (strengthening) and Rasayana (Rejuvinative). Phalaghrita helps the woman to achieve conception and is best for curing all female genital tract disorders. It is Vatahara, Balya (provides strength), Brihmaniya (nourishing), Garbhada (fertilization), Rasayana (rejuvenator). Phala Ghrita significantly increased the serum Estradiol level and body weight. Probably Phala Ghrita stimulates the Pituitary - Ovarian axis indicates an increased gonadotropin secretion which is regulates the activity of enzymes involved in ovarian steroid genesis.^[35]

Conclusion -

Unexplained Infertility has increased tremendously in the past decade and this is due to the result of a combination of social, environmental, psychological, nutritional factors and affects millions of peoples of worldwide and has an impact on their family and communities. Ayurveda helps in regulating menstrual cycles, enhancing general health and wellness, revitalizing sperm, reducing stress, enhancing sleep, controlling anxiety and increasing energy level, balancing the endocrine system and improving blood flow in pelvic cavity, thereby promoting fertility.

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