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**Review Article** 



## Women's infertility-A Unani Prospective

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### **ABSTRACT**

Reproduction is the noblest and most reverent of all human powers. God has given this precious gift to the woman. Motherhood is the cherished desire deep down in the heart of every woman. Failure to achieve conception is known as Uqr (Infertility). Even in the computer age, it is estimated that nearly 10-15% of couples are infertile in India. The ancient system of Unani medicine advocated variety of medication, which provides good results without any harmful effect. Reasons such as weight, diet, smoking, other substance abuse, environmental pollutants, infections, medical conditions, medications and family medical history could affect conception in couples. Infertility can arise from either of the partners. In men, infertility is usually because of low numbers or poor quality of sperm and occurs in a woman when she does not produce eggs regularly or because her fallopian tubes are damaged or blocked and the sperm cannot reach her eggs. ART (Assisted Reproductive Technology) has been carried out such as IVF, ICSI but common people cannot afford the cost of such procedures. There are number of herbal drugs mentioned in Unani literature which are useful in infertility. In this regard the present review is aimed to provide all the necessary information regarding the effective method for treatment of female infertility in Unani system of medicine.

**Key words**: - Infertility, Unani system of medicine, herbal drugs, *Uqr* 



## INTRODUCTION

Children are the pleasant fruits of the tree of life. People who do not have children are considered as unlucky. If a person has all the blessings of world like health, richness, pleasure, power, etc. & does not have a child then all these things are worthless & useless for him or her. [1] Infertility has been defined as failure to conceive after frequent unprotected sexual intercourse for one or two years in couples in the reproductive age group. [2, 3, 4] Infertility can be primary, in couples who have never conceived and this group excludes women who have conceived but not carried the pregnancy full term. [5] Secondary infertility is related to couples who have previously conceived and have difficulty in conceiving again. This group includes full term pregnancy and also miscarriages, abortions etc. However it excludes couples who have had change of partners. Sub fertile means less fertile than a typical couple with fecundability rate of 3-5% and these are couples who have unsuccessfully tried conception for a year or more. Unexplained fertility pertains to those couples who have no physiological anomalies and are pathologically healthy yet do not conceive. Almost 26% suffer from unexplained infertility. [6] Unani system of medicine gives elaborate description of female infertility by the name Uqr. It is mentioned as an independent disease. It disables the women to conceive due to some specific diseases of reproductive organs or due to some other complications of general diseases.

Classification of infertility: Infertility is divided into primary and secondary. Definitions of primary infertility vary between studies, but the operational definition, put forth by the WHO, defines primary infertility as the "Inability to conceive within two years of exposure to pregnancy (*i.e.*- sexually active, non-contraception, and non-lactating) among women 15 to 49 yr old."[7]Secondary infertility refers to the inability to conceive following a previous pregnancy. Globally, most infertile couples suffer from primary infertility.[8]

Causes of infertility: According to the modern medicine, infertility has a wide range of causes

stemming from three general sources: physiological dysfunctions, preventable causes, and unexplained issues. Anatomical, genetic, endocrinological and immunological problems can all cause or contribute to infertility. [9]

Female infertility can be due to:

- 1. Anovulation
- 2. Endocrine- amenorrhea, hypothyroidism, hyper prolactinaemia, hyper androgenism, premature menopause
- 3. Pathological defects tight/tender hymen, cervical stenosis, intracervical fibrous obstruction cervical polyp, hypoplasia of the uterus, anomaly of the uterus submucous fibroid/polyp or endometrial polyp., T.B. endometritis, inflammatory tubal block, endometriosis, chocolate cyst, turner syndrome
- 4. Systematic -age, obesity, tobacco, psychological [10]
- 5. Immunological presence of anti-sperm antibodies in the cervical mucus

There can be secondary causes such as scars and adhesions in the reproductive system, endometrial tuberculosis, pelvic endometriosis, vaginal and cervical stenosis, post MTP corneal block and tubectomy. [11]

Consequences of infertility: Infertility is a prevalent problem affecting about 8-10% of couples within the reproductive age world-wide and has significant consequences for individuals, families and the wider community. [12, 13] Infertility interferes with one of the most fundamental and highly prized human activities and thus presents a major life challenge to those who desire children. [14] The condition brings up issues related to the health and well-being of individuals, couples and society as a whole. Infertility almost always leads to decreased levels of personal well-being and for many individuals it causes significantly more severe consequences. [14] where treatment is available uncomfortable, painful or life-threatening medical interventions. [14, 15] In most areas of the world, women's wellbeing appears to be more seriously affected by infertility than men's. [16]

Diagnostic evaluation of infertility: Tests for male infertility attempt to determine whether the testicles produce enough healthy sperm, and the sperm ejaculate effectively into the woman's vagina. Investigation of fertility in men is based on general physical examination that involves examination of medical history, illnesses and disabilities, medications, and sexual habits; semen test that measures the quantity and quality of the sperm; hormone testing to determine the level of

testosterone and other male hormones; and transrectal and scrotal ultrasound for evidence of conditions such as retrograde ejaculation and ejaculatory duct obstruction. [17]

In women, the following are checked - frequency of menstrual cycle, basal body temperature, cervical mucus after sexual intercourse (post-coital blood tests to measure (progesterone, gonadotropins, thyroid, prolactin) levels and ovulation, ovarian reserve to check for number of remaining eggs. High levels of gonadotropins may mean compromised fertility. Tests are further done to screen for an infection called Chlamydia trachomatis (chlamydia), pelvic inflammatory disease or endometriosis (a condition where cells like those in the lining of the womb are found in other areas of the pelvis, usually causing pain and damage), and fallopian tubes blockage. A special examination of the womb known as a hysteroscopy (done by putting a small microscope a hysteroscope through the cervix and into the womb) is sometimes done to improve the chances of getting pregnant. [17]

### Various Treatment of Female Infertility:

**Fertility Drugs:** Fertility drugs are often used alone as initial treatment to induce ovulation. If they fail as sole therapy, they may be used with assisted reproductive procedures, such as in vitro infertilization, produce multiple eggs, a process called superovulation. According to the American Society for Reproductive Medicine, fertility drugs can be divided into three main categories:

- 1. Medications for Ovarian Stimulation. Clomiphene (Clomid, Serophene); letrozole (Femara), follicle stimulating hormone (FSH) [Follistim, Gonal-F, Bravelle]; human menopausal gonadotrophin (hMG) [Humegon, Repronex, Menopur); luteneizing hormone (LH) [Luveris]
- 2. Medications for Oocyte Maturation. Human chorionic gonadotropin(hCG) [Profasi, APregnyl, Novarel, Ovidrel)
- 3. Medications to Prevent Premature Ovulation. GnRh agonists (Lupron and Synarel); Gn RH antagonists (Antagon, Cetrotide) [18, 19].

Clomiphene: Clomiphene citrate (Clomid, Serophene) is usually the first fertility drug of choice for women with infrequent periods and long menstrual cycles. Unlike more potent drugs used in super ovulation, clomiphene is gentler and works by blocking estrogen, which tricks the pituitary into producing follicle-stimulating hormone (FSH) and luteinizing hormone (LH). This boosts follicle growth and the release of the egg. Clomiphene can be taken orally, is relatively inexpensive, and the risk for multiple births (about 5%, mostly twins) is lower than with other drugs [20]. Women with the

best chances for success with this drug are those who have the following

#### Conditions:

- 1. Polycystic ovarian syndrome (PCOS)
- 2. Ability to menstruate but irregular menstrual cycle
- 3. Women with poorer chances of success with this drug have the following conditions:
- 4. Infertility but with normal ovulation
- 5. Low estrogen levels
- 6. Premature ovarian failure (early menopause)

One or two tablets are taken each day for 5 days, usually starting 2 - 5 days after the period starts. If successful, ovulation occurs about a week after the last pill has been taken. [21] If ovulation does not occur, then a higher dose may be given for the next cycle. If this regimen is not successful, treatment may be prolonged or additional drugs may be added. Doctors usually do not recommend more than 6 cycles. Clomiphene often reduces the amount and quality of cervical mucus and may cause thinning of the uterine lining. In such cases, other hormonal drugs may be given to restore thickness. Other side effects of clomiphene include ovarian cysts, hot flashes, nausea, headaches, weight gain, and fatigue. There is a 5% chance of having twins with this drug, and a slightly increased risk for miscarriage. [22]

Gonadotrophin: If clomiphene does not work or is not an appropriate choice, gonadotropin drugs are a secondoption. Gonadotropins include several different types of drugs that contain either a combination of follicle-stimulating hormone (FSH) and luteinizing hormone (LH), or only FSH. Whereas clomiphene works indirectly by stimulating the pituitary gland to secrete FSH, (which prompts follicle production), gonadotropin hormones directly stimulate the ovaries to produce multiple follicles. Gonadotropins are given by injection. Gonadotropins include:

- 1. Human Menopausal Gonadotropins (hMG), also called menotropins
- 2. Human Chorionic Gonadotropins (hCG)
- 3. Follicle Stimulating Hormone (FSH)
- 4. Gonadotropin-releasing hormone (GnRH) analogs, which include GnRH agonist and GnRH antagonists.

This action helps prevent the premature release of the eggs before they can be harvested for assisted reproductive technologies. [23, 24]

### GnRH agonists and antagonists:

1. GnRH agonists include leuprolide (Lupron), nafarelin (Synarel), and goserelin (Zoladex).

2. GnRH antagonists include ganarelix (Antagon) and cetrorelix (Cetrotide). GnRH antagonists suppress FSH and LH more than GnRH agonists, and they may require fewer injections [25, 26].

### **Unani and Infertility:**

Unani: UNANI was derived from the word IONIAN which indicates it origin to Greece. TIBB means medicine. {27} Unani system of medicine is a synthesis of Greek and Arabs system. Unani physicians were the first to classify the disease on thebasis of different anatomical and physiological symptoms of the body. Hippocrates explained that the disease was a normal process and its symptoms were the reaction of the body to the disease. [28]

Arab physicians introduced unani pathy in India which took firms root in the soil soon. Unani pathy had its days in Indiaduring 13th and 17thcentury's. Soon it spread all over the countryand remained popular among the masses, even after thedownfall of Mughal Empire. It got a set back during British rule but still remained in practice as it enjoyed the faith ofmasses[29]. The unani pathy survived during British rule due tothe efforts of the sharifi family in delhi.the Azizi family of lucknow and the Nizams of Hyderabad. Hakim ajmal khan(1868-1927) from sharifi family was an outstanding physicians and scholar of unani medicine kept the tempo high.[30] Ajmal khan was the scion of the family of physicians who had long served the mughal court and after their decline those of regional princes. Like his father and grandfather, ajmal khanwas an influential figure in the city of Delhi, respected for his aristocratic standing and behavior and renowned formiraculous cures.[28] In Unani Medicine, the pathogenesis of general diseases has been attributed to three factors viz. mizaj(temperament) tarkeeb (structure) and ittesal (continuity of tissues). Abnormalities of these factors are considered as: sue mizaj (altered temperament), sue Tarkeeb (altered structure) and tafarruge Ittesal(discontinuity in tissues) respectively. [29,30] Mizaj is a specific and distinct state of an individual reflecting neuro-endocrine, genato-metabolic and somato-environmental equilibrium at the optimum functional level of adjustment. [31] The harmony of specific mizaj results in proper and healthy functioning of the body and derangement in this distinct state consequently becomes the cause of ill health. [32] The derangement of mizai, results from the shift in the equilibrium of four qualities (kaifiyate arba) i.e.haraarat (hotness), baroodat (coldness), ratoobat (moistness) and yaboosat (dryness) is considered as sue mizaj sada and if this imbalance is at the level of Akhlat (body fluids/humors) it will be considered as sue mizaj maddi. [31]

Unani medicine, as is well known, based on the Hippocratic humoral theory. This theory supposes the presence of four humuors in the body viz: blood, phlegm, yellow bile and black bile. The mizaj of individuals are expressed by word damawi (sanguine),balghami (phlegmatic), (choleric) and saudawi (melancholic) according to the dominancy of the humour. Every person is supposed to have aunique humoral constitution which represents his healthy state and any change in this state causes illness of the said person. The severity of the disease depends directly upon the change in equilibrium from mizaj.[33] There are three major *quwa* (faculties) which regulate human body viz. Quwwate nafsania (psychicfaculties), Quwwate haivania (vital faculties) and Quwwate tabiyya (physical faculties). These quwa (faculties) are specific for a particular tissue or organ on which the specific functions of that organ depend. Quwwate tabiyya is concerned with taghzia (nutrition), пати (growth) and (reproduction) and jigar is considered uzwe raees (epicenter) of this quwwat. Quwwate haivaniya is concerned with tadbeer of rooh, which brings life to the part it supplies. Qalb is uzwe raees of this faculty. Quwwat nafsania is concerned with intellect, sensory and motor functions and dimagh (brain) is supposed to be seat of this faculty. [34-36] Quwae nafsania (psychic or mental faculties) are those faculties which perform intellectual, sensory and motor function of the body, consists of two main faculties and stand as genus for them. [36] These are Quwae mudrikah (perceptive/ cognitive faculties) and Quwae muharrikah (motor faculties). Quwae mudrikah (perceptive/ cognitive faculties) has also been dividing into two types' viz. quwae mudrikahzahira (external perceptive faculties) and quwae mudrikah batinah (internal perceptive faculties). External perceptive power is sensory and related to five external senses such as vision, hearing, smell, taste and tactile sensation, whereas, internal perceptive faculties are concerned with the intellectual functioning of the brain. [31,32,36]

**Infertility:** The disease disables the women to conceive due to some specific diseases of reproductive organs or due to some other complications of general diseases.[37]

## Classification:-

- Congenital sterility: it is further classified into:
  - a. Complete or untreatable.
  - b. Secondary or treatable.
- Acquired or pathological sterility: it is further classified into:
  - a. Active.
  - b. Passive.

Unani interpretation of the female reproductive system: Aristotle:-The earliest references to the ovary are in the writings of Aristotle (384-322 B.C.E.). Although, he did not recognize the existence of the ovaries.[38] Soranus of Ephesus (ca. 50 A.D.E.):- He gave the first detailed description of the ovaries, which he referred to as didymi (paired organs). The didymi are attached to the outside of the uterus, near its isthmus, one on each side. They are of loose texture and like glands are covered by a specific membrane. Their shape is not as long as that of the testis in males; rather they are slightly flattened, rounded and little broadened at the base. The seminal duct runs from the uterus through each didymus and extends along the side of the uterus as far as the bladder and is implanted in its neck. Therefore, the female seed seems not to be drawn upon in generation since it is excreted externally.[39]

Hakim Akbar Arzani: - He described the shape and layers of the uterus.[40]

Ibn-e- Zuhr or Avenzoar: - He mentioned that the uterus is one of the sensitive organs because it serves as a connecting point for many nerve fibres. Therefore its developmental constitution includes a major portion of muscular fibres that allows the uterine cavity to contract and relax extensively.[41]

Abu Sahl Masihi:- He described in detail the structure of uterus and ovaries. He postulated that uterus lies in between urinary bladder and rectum and differentiate them at the upper portion of urinary bladder. It is held by suspensory ligaments. Its whole body is neuronal which has a capacity to distend itself when full. When empty, it has two 'Os' whose mouth is same and has two projections known as 'Horn of uterus.' Behind these projections, two oval shaped structures are present, which are similar to testis in males, and stronger than them. Through these structures, ovum goes into the cavity of uterus.[42]

Ibn-e-Sina or Avicenna:- He stated that the uterus is located in between the urinary bladder and rectum and differentiate them at the upper portion of urinary bladder. In nulligravida women, it is small in size before puberty and is held by suspensory ligaments which are made up of nerve fibres. During labour, uterus has capacity to distend or constrict because of ligaments. Uterus has two batan (cavities) which exten upto cervix. It has two projections. These projections are known as Horn of uterus. Behind these projections, ovaries are present which are smaller than the testis in male. The ovum is realsed from ovaries and goes into the uterus. [43]

Ibn-e- Al-Ouf:- He stated that uterus is a highly sensitive organ with maximum hormonal response. It has only a single covering which consists of fibers of varying variety. There are some longitudinal fibers which are few in number. However, circular fibers are extensive /abundant but oblique fibers range maximum. Uterus though shows structural similarity with the urinary bladder, however, on both the sides, near the uterus, two horns like process/outgrowths are present known as cornua. The inner aspect of uterus has got two openings that are called Nager, that serve as the ends of uterine artery and vein. The inner surface is firm and rough. Uterus lies in between bladder and rectum. It is 12 inches long on an average height. It lies between the bladder and rectum. Bilaterally, in between two nagraat, there are two small and firm structures called ovaries that are smaller than those of males. Both of them are enclosed in a membrane that provides them separate location. The Qazif-ulmani (fallopian tube) is attached to the ovaries to receive the ovum.[44]

### Unani interpretation of the Menstruation cycle:

Menstrual blood is in fact excreta whose retention in body, like retention of other excreta (example urine & stool) causes severe diseases of difficulties. In healthy female bleeding occurs at the age of maturity from 12-16 years which occurs in some women at the gap of 22 days & generally occurs for 3, 4, 5 or 7 days 7 after that it stops on its own It ceases naturally at the age of 44-55 years. During pregnancy & after delivery this blood is used in the growth & development of fetus. Menstruation ceases after pregnancy & it supplies nourishment to fetus in uterus up to nine months until its growth & development completes. The waste product from the fetal food is excreted during puerperium. This blood takes the form of milk in maternal breast during the period of lactation from which new born gets its nourishment. Other then these periods retention of this blood in the body irregular menses is included in disease & if not treated properly may lead to severe disease, example ascites, headache, melancholia, unconsciousness, epilepsy, indigestion, anorexia. etc [1] According to, menses starts between the age of 10-14 years & ceases at 36-60 years.. The least duration of menstrual cycle is two days & maximum is 7 days & if it is more than this, it is unnatural. The women whose intervals between the cycles are prolonged feel more pain.[42]

Ibne Hubhl Bagdadi stated that menses normally started at the age of 10-14 years. However in cold geographical areas, the onset is beyond this stage and in hot climates there is an early beginning. Ceasetion of menses generally occurs from 36-60nyears of age. There is complete absence of this

physiological process in hermaphrodite. The normal duration of menstrual flow ranges from 2-7 days, increased duration is an alarming sign of certain underlying pathologies. The time period between two cycles is 23 days .Although cases have been reported where there was prolonged duration of about 2 months in absence of any diseases. When the duration between the two cycle cross the physiological range, it give rise to amenorrhea.[45]

**Unani etiology of infertility:** In Unani literature infertility occurs due to congenital defects of uterus & ovaries like small sized uterus, closure of external os, small ovaries, etc

- 1. Metritis
- 2. Inversion of uterus
- 3. Salpingitis
- 4. Amenorrhea
- 5. Polymenorrhea
- 6. Vaginal discharge
- 7. Anaemia
- 8. Syphilis
- 9. Gonorrhea

Sometimes due to increased phlegm in the body there is change in temperament (increase coldness) which leads to weakness of power of retention of uterus due to which pregnancy cannot occur.[46,47]

**Symptoms:** Presence of any of the defects or diseases described above, 'sard mizaj', more phlegm- in all these conditions there is change in the temperature of female with pale or whitish complexion. There is continuous white discharge from the uterus. The patient becomes restless.[48]

# Diagnosis of infertility as per Unani system of medicine

- 1. It is essential to rule out whether failure of conception is due to male or female sterility. This requires detailed microscopic examination of semen. If the fact is established that it is the woman who is sterile. The primary aim is to find the exact cause this requires an ideal questionnaire about complete history of patient, thus enquiring into the duration of the disability. This would also reveal any of the etiological factors mentioned earlier.
- 2. Examination of genital organs should be carried out with perfections because many a times the defect is suspected on such examinations.
- 3. Try to extract the knowledge from patient such as her conditions at the time of menses & her feelings at the time of intercourse.
- 4. For secondary sterility, previous abortion or delivery's details should be investigated.
- 5. Detail knowledge of usage of contraceptives by the patient should be detected.

Last but not the least, information about leucorrhoea, amenorrhoea, metorrhagia should be brought to concern.[49,50,51]

### **Unani Approach**

- 1. Try to find the exact cause & treat accordingly.
- 2. In case of congenital defects of reproductive organ(s) assist surgical manipulations.
- In case of obesity proper dietary plan should be made & advice the patient to eat less than her requirement.
- excessive secretions or phlegmatic dominance are the etiological factors then advice her to consume grinded Pistacia lentiscus (Mastagi), Carcum carvi (Zeera siyah), Zinjber officanalis (Zanjbeel) 1gm each along with jawarish-e-jalenus (7gm) in morning. Added to this, boil Coriandrum sativum( Podhina khushk), Amomum subulatum(Elaichi kala). Elettaria cardamomum(Elaichi khurd) 5gm each, Zinjber officanalis (Zanjbeel), Carcum carvi (Zeera sivah), Anethum graveolens (Aneesoon) 3gm each, Foeneaculum vulgare(Badyan) 5gm, Cinnamomum verum (Daar cheeni) 3gm in water. Decant & use along with khameera banafsha (50gm). Grind & extract the paste of Foeneaculum vulgare (Badyan) (5gm), Carcum (Zeera siyah), Zinjber officanalis (Zanjbeel), Anethum graveolens (Aneesoon) 1gm each in 150ml Arq elaichi; mix it with khameera banafsha (50gm) & use it in evening.
- 5. If there is generalized excess of secretions,then use *kushta-e-marwareed* (20mg) in *majoon-e-supari paak* (7gm) for few days. After completion of menstrual flow, advice the usage of *hab-e-hamal* (1), *majoon mochras* (12gm), in morning & hab-e-marwareed (2) along with *Arq-e-ambar* (40ml), *Arq-e-gaozuban* (90ml) & Misri (25gm) in evening.
- 6. Once localized pathology & other complications subside, prescribe the use of buradah- dandaane feil (2gm) for few days. Use the suppository made from magz-e-sarkanjashk (3gm) & honey (3gm).
- 7. For uterine strengthening, *majoon-e-hamal ambary alvi khani* (5gm) is adviced.
- 8. If sterility is due to excessive intercourse or undue use of contraceptives then stoppage of such consumptions is strictly indicted.[1,52,53,54]

#### CONCLUSION

Infertility has increased massively in the past decade and this is due to the result of a

combination  $\alpha$ f environmental. psychological, and nutritional factors. Today, the modern medicine can find out what exactly is dysfunctional in an individual through several diagnostic tests and examinations. Using these tests, the treatment focuses on correcting the dysfunction. However, modern medicine treatments are not focused to the individual but are to what the dysfunction of the body is. Also, they fail to incorporate in their therapeutic approaches, the immune, digestive, circulatory and nervous systems, all so essential for the process of fertilization. Infertility is managed only by looking at the reproductive system components. The treatments can be rather invasive, inhumane; can be disappointing and extremely expensive with no guarantee of a pregnancy and with potential side effects. Unani, on the other hand, looks at the individual constitutional types, enhances the body systems that participates in the process of fertilization in totality, and hence serves as a better alternative for reaching fertilization. Unani addresses the internal balances and external influences contributing to the problem. It accomplishes that by building the Ojas, improving the overall health and virility of the individual, hormones, stimulating enhancing the hypothalamus and pituitary glands in a way which indirectly induces the ovaries to ripen and release eggs. Managing the emotional and chemical factors utilizing Unani understanding of the Psychophysiological composition of the individual and creating synergic hormonal balance, are the two most significant factors in restoring fertility. Unani provides a low cost, noninvasive, and noniatrogenic alternative and complement to modern Western medicine in the treatment of female infertility. Because Unani focuses on rebalancing individuals and not just treating diseases, its treatments are tailor-made and have low potential for iatrogenesis or side effects. In addition, they tend to promote the systemic health and well-being of the individual. This being the case, it makes sense to first attempt to correct infertility through Unani treatment and then, if that fails, to subsequently employ the more forceful but also more risky treatments of modern Western medicine. It is also possible to use the high tech diagnostic tests of modern Western medicine and its pathophysiological specificity in tandem with the holistic, benign, but nonetheless effective therapies of Unani. As human beings, we all have this ultimate power of healing through selfrealization and Unani guides us to connect to our inner wisdom and grace and heal from within

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