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Holistic Understanding of Oligospermia (Qillat-e-Mani) through Unani Medicine: Causes, Diagnosis, and Management Strategies

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Abstract

Oligospermia, a major contributor to male infertility, is defined by a reduced sperm concentration in the ejaculate[1]. In Unani medicine, this condition is attributed to humoral imbalances and disturbances in temperament (Mizaj), especially involving cold and dry states that weaken the body's innate heat (Hararat-e-Ghariziyah)[2]. Diagnosis incorporates clinical evaluation, temperament assessment, and patient history, while treatment emphasizes holistic strategies involving regimental therapy, dietotherapy, and herbal pharmacotherapy[3]. Although preliminary findings indicate therapeutic benefits, a lack of robust clinical trials hinders broader acceptance[4]. This review explores the etiology, diagnostic methods, and Unani-based management of oligospermia, highlighting the importance of integrative, evidence-based approaches[4].

In **conclusion,** oligospermia remains a significant contributor to male infertility, with diverse underlying causes. Unani medicine provides a holistic and individualized approach, emphasizing the correction of humoral imbalances through diet, herbal formulations, and regimenal therapies. Although preliminary evidence supports its potential benefits, further well-designed clinical studies are essential to validate its efficacy and ensure wider acceptance. Integrating Unani principles with modern scientific approaches may offer a more comprehensive and effective strategy for managing oligospermia and improving reproductive health outcomes.

Keywords: Oligospermia, Qillat-e-Mani,Male infertility, Unani medicine, Mizaj, Hararat-e-Ghariziyah, Herbal therapy, Regimenal therapy, Dietotherapy, Semen analysis, Clinical evidence,Sperm quality

I. Introduction

Infertility, defined as the inability to conceive after one year of unprotected intercourse, affects nearly 15% of couples globally, with male factors contributing to about 40–50% of cases[1]. One of the major male-related causes is oligospermia—a condition characterized by low sperm count in the ejaculate. According to WHO guidelines (2010), a sperm concentration below 15 million/mL is classified as oligospermia[5].The Unani system of medicine—based on

Hippocratic and Galenic principles later refined by scholars such as Ibn Sina, Al-Razi, and Al-Zahrawi—offers a profound and holistic framework for understanding and managing male reproductive health. Unani medicine perceives health as a balance among the four bodily humors (Akhlat-e-Arba'a): Dam (blood), Balgham (phlegm), Safra (yellow bile), and Sauda (black bile)[6]. Each individual's temperament (Mizaj) governs their physiological and psychological functions. Reproductive health, in this system, is primarily influenced by Hararat-e-Ghariziyah (innate heat), Quwwat-e-Mudabbira Badan (regulative faculty), and proper humoral composition[7]. The loss or weakening of these forces leads to disorders like Qillat-e-Mani (oligospermia), Zo'f-e-Bah (sexual debility), and Jiryan (spermatorrhea)[8].

II. Concept of Oligospermia in Unani Medicine

In Unani medicine, the condition of low sperm count is referred to as Qillat-e-Mani. Buqrat has clearly mentioned that semen is as product at the 4th stage of Hazim (digestion).[9] Healthy semen indicates optimal Quwwat-e-Bah (reproductive power) necessary for conception.In the Unani System of Medicine, the semen deformities are mentioned under the caption of Qillat-e-Mani and Riqqat-e-Mani. These Conditions are mainly responsible for sexual disorders like Zof-e-Bah (Sexual dysfunction), Uqr (Infertility), Surat-e-Inzal (Premature ejaculation), Kasrate Ehtelam (Nocturnal Emission), Jiryan (Spermatorrhoea) etc.Decreased quantity of haiwane manwiya(Spermatozoa) in Mani (seminal fluid) is called as Qillat-e-Mani or Qillate haiwane manwiya. The modern term equivalent for Qillat-e-Mani or Qillat-e-Haiwain-e-Manvia is Oligospermia[9]. Ibn Sina in Al-Qanun fi al-Tibb described ideal semen as thick, white, viscous, and musky. He linked poor semen quality to weak digestion, loss of innate heat, and psychological disturbances[10].A warm and moist (Har wa Ratab) temperament supports reproductive function, while cold and dry (Barid wa Yabis) states make semen thin and scanty, reducing fertility. Factors like excessive intercourse (Kathrat-e-Jima'), consumption of cold/dry foods, and mental stress can weaken Tabiyat and diminish semen production.

Amraz-e-Mani vo Aalat-e-Mani[8] (Disorders of semen and testis)

The disorders of semen and testis are also one of the leading causes in Infertility. They include the followings:

1. Su-e-mijza-e-Mani (Dystemperamental Seminal disorders): The temperament changes in semen i.e. increase in Hararat vo Yaboosat (Hotness and Dryness) or Buroodat vo Yaboosat (Cold and Dryness) may produce Qillat-e-Mani,i.e. Oligospermia.
2. Riqqat-e-Mani (Decreased seminal viscosity): Extreme increase in Hiddat vo Hararat-e-Mani (Sharpness and hotness of the sperm) may lead to disorders of semen.
3. Soo e mizaj e Mani Aalat e mani: The change in temperament of productive organs of semen. singly Garam (Hot) or associated with Yaboosat (Dryness).
4. Zof-e-Quwwat-e-Masika (Debility of retentive power): Over indulgence in sexual intercourse decrease Quwwat-e-Masika (Retentive power) which causes Sailan-ul-Mani (Spermatorrhoea) resulting in Zof-e-Bah.

III. Causes (Asbab):

In the Unani system, the causes of Qillat-e-Mani (oligospermia) are multifactorial, involving intrinsic and extrinsic disruptions in the equilibrium of the body's temperament, humoral composition, and organ functionality. The following categories provide a deeper insight:

1.Su-e-Mizaj (Dystemperament) of Reproductive Organs:An imbalance in the specific temperament of the reproductive organs—especially a shift toward cold (Barid) and dry (Yabis) states—leads to reduced Hararat-e-Ghariziyah (innate heat), resulting in poor semen production. A cold temperament makes the semen thin, non-viscous, and less potent, directly affecting fertility.

2.Zo'f-e-Bah (Sexual Debility):A general weakness of Quwwat-e-Bah (sexual faculty) caused by chronic illnesses, aging, excessive coitus, or overexertion can impair the production and quality of semen. It reflects diminished reproductive power and vitality.

3.Weak Hararat-e-Ghariziyah (Innate Heat):Hararat-e-Ghariziyah is essential for the final transformation of nutrients into semen during 4th stage of Hazim (the fourth stage of digestion). A decline in this innate heat leads to incomplete or defective transformation, resulting in poor semen quantity and quality. This weakening may result from chronic illnesses, sedentary habits, excessive exposure to cold environments, or aging.

4.Nutritional Deficiencies and Weak Digestion:In Unani medicine, the process of semen formation is closely linked to digestion. Weak Quwwat-e-Hazima (digestive power) impairs the production of high-quality Ghizā-e-Latif (subtle nourishment), which is essential for the creation of semen. Inadequate or improper diet, poor nutrient assimilation, and digestive disorders thus contribute to oligospermia.
5.Psychological Stress and Emotional Factors:Emotional disturbances such as excessive grief, anxiety, or anger disrupt the functions of the heart (Qalb) and brain (Dimagh), which indirectly affect the sexual faculty. According to Unani concepts, the psychological state influences the flow of Ruh (vital spirit), which is crucial for sexual vitality and semen production.
6.Kathrat-e-Jima‘ (Excessive Sexual Activity:Frequent ejaculation without adequate recovery depletes the body’s semen reserves and weakens the sexual organs. It also leads to fatigue of the reproductive system and can permanently reduce the quality and quantity of semen.
7.Cold and Dry Diet (Barid wa Yabis Ghiza):The consumption of foods with cold and dry temperament (like cucumber, sour curd, lentils) diminishes the internal warmth and moistness necessary for healthy semen production, contributing to the condition of Qillat-e-Mani.
8.Environmental and Lifestyle Factors:Exposure to cold weather, sedentary lifestyles, night shifts, chronic use of mobile/laptop on the lap, and excessive heat (such as from hot baths) can impair testicular function and weaken the Tabiyat (natural faculty), affecting sperm production.
9.Use of Barid Advia (Cold-natured Drugs):Prolonged use of drugs with cold temperament (like opium, antipsychotics, certain antibiotics, or steroids) reduces Hararat-e-Ghariziyah and sexual vitality, leading to decreased sperm count.
10.Tafarruq-e-Ittisal (Structural Abnormalities or Obstruction):Physical blockages or varicocele (enlargement of veins in the scrotum) obstruct the movement or release of semen, resulting in apparent oligospermia despite normal spermatogenesis.
11..Oxidative Stress and Toxic Accumulation:Accumulation of fuzlat (waste products) and the presence of harmful toxins in the blood or semen may contribute to the destruction of sperm cells. Oxidative stress weakens the semen and damages its constituents.[18]

IV. Diagnosis:
The diagnostic approach in Unani medicine combines traditional wisdom with contemporary medical tools. It emphasizes the identification of Mizaj (temperament), the state of Quwa (faculties), and the health of organs involved in semen production.
1.Mizaj Assessment:A detailed evaluation of the patient’s overall temperament (hot/cold, moist/dry) is crucial. Reproductive efficiency is best maintained in individuals with a warm and moist temperament (Har wa Ratab). Identification of any shift toward cold and dry is important for confirming dystemperament-related oligospermia.
2.Istifsar-e-Marz (Case History)Comprehensive questioning about onset, duration, and aggravating/relieving factors is conducted. This includes:Marital/sexual history,Diet and lifestyle,Sleep patterns,Bowel habits,Emotional and mental health,Previous medications or illnesses,Muaina-e-Aza (Physical Examination),Examination of the external genitalia, testes, and scrotal contents is performed to detect abnormalities like varicocele, testicular atrophy, or tenderness. General signs such as pallor, lethargy, or dryness of skin may indicate underlying humoral imbalances.
3.Signs of Qillat-e-Mani in Unani Perspective:Watery, thin, or discolored semen,Low semen volume,Weak ejaculation force,Reduced libido (Zo‘f-e-Bah),Absence of musky odor or viscosity in semen,Premature ejaculation or involuntary discharge,Modern Diagnostic Tools (as adjuncts)
While Unani medicine relies on clinical insight, modern tools are often used to support diagnosis:

Semen analysis – To measure sperm count, motility, and morphology
Hormonal profile – LH, FSH, testosterone
Scrotal ultrasonography – To assess testicular structure, detect varicocele or blockage
Urine and blood tests – To rule out infections, oxidative stress, and systemic illnesses

V. Management:

Unani medicine advocates a comprehensive, natural, and individualized treatment approach for Qillat-e-Mani (oligospermia). The therapeutic strategy focuses on restoring humoral balance, strengthening Hararat-e-Ghariziyah (innate heat), improving Quwwat-e-Bah (sexual faculty), and rejuvenating the reproductive system through a combination of three core modalities:

1. Ilaj bil Tadbeer (Regimenal Therapy):Tadbeer refers to modification and regulation of lifestyle to restore health. For oligospermia, several regimenal procedures are employed to stimulate reproductive organs, enhance blood circulation, and eliminate morbid matter:

A.Hammam (Steam Bath):Application of moist heat improves circulation in pelvic organs, supports the function of Hararat-e-Ghariziyah, and helps eliminate waste products (Fuzlat). It also relaxes muscles, alleviates stress, and improves libido.

B.Dalak (Massage Therapy):Massaging the lower back and pelvic region with warm Unani oils like Roghan Baboona or Roghan Zaitoon enhances nerve function, stimulates testes, and boosts sexual energy.

C.Hijama (Wet Cupping):Cupping at specific points (e.g., lumbar region or thighs) is believed to improve circulation, remove stagnation, detoxify the blood, and stimulate reproductive organs. It also helps relieve psychological stress, which is a known contributor to sexual debility.

2. Ilaj bil Ghiza (Dietotherapy):Diet plays a central role in Unani management. Food is seen as the primary source of nourishment for all bodily faculties, including the production of semen (Mani). These dietary recommendations are advised:Nutritive and Aphrodisiac Foods:

Milk: Rich in proteins and minerals, it helps in semen production,Almonds and Dates: Strengthen the brain, improve sperm count, and provide energy,Meat Broth (Yakhni): A source of concentrated nutrition, enhances body heat and fortifies reproductive organs,Eggs and Desi Ghee: Support hormonal function and increase vitality,Dry fruits and seeds (e.g., pumpkin seeds, walnuts): Provide zinc, magnesium, and essential fatty acids needed for sperm production,Avoidance of Cold and Dry Foods:Patients are advised to avoid foods with a cold and dry temperament, such as cucumber, stale bread, pulses, and sour curd, which weaken Hararat-e-Ghariziyah and reduce semen quality.

3. Ilaj bil Dawa (Pharmacotherapy):Unani pharmacotherapy utilizes single herbs as well as compound formulations known for their Muqawwi-e-Bah (aphrodisiac) and Muallid-e-Mani (spermatogenic) properties:

Key Herbs Used:

A.Safed Musli (Chlorophytum borivilianum): Rejuvenates sexual organs, enhances sperm production, and improves motility.[11]

B.Asgandh (Withania somnifera) / Asgandh: Acts as an adaptogen, relieves stress-induced infertility, boosts testosterone, and improves sperm count.[12]

C Mako (Solanum nigrum): Possesses anti-inflammatory and restorative properties.[13]

D.Sandalwood (Santalum album): Soothes nerves, cools excessive heat in the body, and supports hormonal balance.[14]

Classical Unani Formulations:

A.According to different Unani Pharmacopoeias,Majoon-e-Piyaz[15] a compound formulation is exclusively used as Muqawwi-e-Bah (aphrodisiac) and Mumsik (semen retentive) for the
treatment of male sexual disorders.

B.Khamira Gawzaban Ambari: Acts as a nervine tonic, enhances Quwwat-e-Dimagh (mental faculty), indirectly supporting reproductive power.

C.Laboob Kabir[16],Habbe Nishat: Used to address low libido and semen weakness.

Mode of Action:These drugs act through multiple pathways:Enhance digestion and nutrient absorption,Strengthen the reproductive system,Improve circulation to pelvic organs,Boost hormonal balance naturally,Relieve psychological stress and anxiety.

Evidence from Modern Trials:Several clinical and experimental studies support the efficacy of these Unani herbs:Asgandh and Safed Musli have shown significant improvements in sperm count, motility, and semen volume

in clinical trials.They also exhibit antioxidant, anti-stress, and testosterone-boosting properties, which are crucial for reproductive health.

In essence, the Unani management of oligospermia aims to restore the natural equilibrium of the body, enhance reproductive capacity, and improve overall vitality. The emphasis is on minimal side effects, long-term wellness, and alignment with the individual's temperament and lifestyle.

VI. Unani vs. Modern Management

Modern medical management of oligospermia involves a multi-modal approach depending on the underlying cause, severity, and patient-specific factors. Hormonal therapies are employed in cases of hypogonadotropic hypogonadism or hormonal imbalances, using agents such as FSH (follicle-stimulating hormone),hCG (human chorionic gonadotropin) or anti-estrogens like clomiphene citrate to stimulate spermatogenesis.Surgical intervention, such as varicocelectomy, is considered in men with clinically palpable varicoceles and abnormal semen parameters. Varicocele repair has been shown to improve sperm count and motility in selected patients.

In cases where hormonal or surgical therapies are ineffective or in severe oligospermia, Assisted Reproductive Techniques (ART)[17]are recommended. These include:IVF (In Vitro Fertilization):A process where an egg is fertilized by sperm outside the body, and the resulting embryo is transferred to the uterus.ICSI (Intracytoplasmic Sperm Injection):A specialized form of IVF where a single sperm is directly injected into the cytoplasm of the egg, often used in severe oligospermia or non-obstructive azoospermia.These advanced ART methods have significantly improved the chances of conception in couples affected by male factor infertility.Unani therapy emphasizes natural recovery, minimal side effects. An integrative approach may enhance outcomes.

VII. Clinical Evidence

Studies show Unani formulations can improve sperm parameters.[20]In a documented case, Unani compounds Majoon Salab and Jauhar Khussiya significantly enhanced sperm count and motility in a male diagnosed with oligoasthenospermia. Post-treatment analysis showed an increase in sperm count from 20 million/ml to 83.4 million/ml and motility from 10% to 75%.This therapeutic effect is attributed to the presence of ingredients like Asgandh (Withania somnifera)[19]and Safed Musli (Chlorophytum borivilianum), these herbs are similar agents with comparable Muqawwie Bah (aphrodisiac) and Muwallid-e-Mani (spermatogenic) properties are commonly used in Unani regimens. Scientific studies have demonstrated their antioxidant effects, which play a crucial role in enhancing sperm quality by reducing oxidative stress[21] that damages spermatozoa. However, large-scale RCTs are still needed.

VIII. Gaps in Research

There is a significant deficiency in comprehensive pharmacological investigations that elucidate the active constituents, mechanisms of action, and pharmacokinetics of Unani drugs. Most available data are anecdotal or based on traditional knowledge, with limited experimental validation through in vitro, in vivo, or clinical research. This gap restricts the ability to scientifically justify and optimize Unani therapies.To establish the efficacy and safety of Unani treatments, there is an urgent requirement for well-designed multicenter clinical trials with adequate sample sizes. Such trials would help in generating robust evidence across diverse populations. Incorporation of modern diagnostic tools alongside traditional evaluation methods is also necessary to enhance the accuracy of diagnosis, monitoring, and outcome measurement in Unani clinical research.

IX. Conclusion

Oligospermia presents a significant challenge in male infertility, with multifactorial causes encompassing physiological, psychological, and lifestyle factors. Unani medicine offers a valuable holistic perspective by addressing the underlying humoral imbalances and focusing on restoring the body’s innate heat and vitality through regimenal therapy, diet, and herbal pharmacotherapy. Its personalized approach and use of natural remedies provide a safer alternative with fewer side effects compared to conventional treatments.However, while preliminary clinical evidence supports the efficacy of certain Unani herbs and treatments in improving sperm parameters, the lack of extensive, well-designed clinical trials limits its wider acceptance. There remains a critical need for rigorous research to standardize formulations, validate therapeutic claims, and integrate traditional diagnostic methods with modern scientific tools.Bridging the strengths of Unani and modern medicine through collaborative research and

evidence-based practice could enhance the management of oligospermia. Such integration promises comprehensive care addressing both the root causes and symptomatic relief, ultimately improving reproductive outcomes and patient well-being**.**

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