

AN EXPLORATORY CLINICAL STUDY OF EFFICACY OF UNANI MEDICINE IN CASE OF INFERTILITY (UQR) DUE TO PCOD (MERZ-E-AKYS-E-KHUSYTAR RAHEM) AT GOVT. NIZAMIA TIBBI COLLEGE-HYDERABAD**Dr. B. Mazharunnisa^{1*}, Dr. N. S. Kareemunnisa²**

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ABSTRACT

Infertility (Uqr), particularly due to Polycystic Ovarian Disease (PCOD) or Marz-e-Akys e khusytar Rehem, is one of the leading causes of anovulatory infertility among women of reproductive age. It is characterized by menstrual irregularities, obesity, hirsutism, and hormonal imbalance, resulting in ovulatory dysfunction. The present clinical study was conducted to evaluate the efficacy of Unani formulations in the management of infertility caused by PCOD. Group A: Received a combination of Ustukhuddoos (Lavandula stoechas), Gaouzaban (Borago officinalis), Gule-Tisu (Butea monosperma), Musli Safed (Chlorophytum borivilianum), and Musli Siyah (Curculigo orchioidea). Group B: Received Aftimoon (Cuscuta reflexa), Afsanteen (Artemisia absinthium), Sadab Khushk (Ruta chalepensis), Khulanjan (Alpinia galanga), Bozidan (Tanacetum umbelliferum), and Asgandh Nagori (Withania somnifera). The formulations were administered in powdered and decoction forms from the 1st to 25th day of the menstrual cycle for three consecutive months. Clinical evaluation, hormonal assays, and ultrasonography (USG) were performed to assess ovulation and symptomatic improvement. The Unani formulations used in this study were effective in restoring menstrual regularity and inducing ovulation in patients with infertility due to PCOD. The combination of Unani herbs possessing emmenagogue, deobstruent, anti-inflammatory, aphrodisiac, and insulin-sensitizing properties proved beneficial in correcting hormonal imbalance and improving reproductive function. These findings substantiate the classical Unani concept that Sue Mizaj Barid Balghami (cold and phlegmatic temperament) and humoral imbalance contribute to anovulatory infertility.

KEYWORDS: Infertility (Uqr) Polycystic Ovarian Disease (PCOD); Ihtibas-e-Tams; Unani Medicine; Ovulation; Menstrual irregularity; Herbal therapy; Ustukhuddoos; Gaouzaban.

I. Introduction of Infertility (Uqr)

Infertility is defined as a failure to conceive within one or more years of regular unprotected coitus. Infertility is a symptom not a disease. It is like a chronic illness. Sometimes it may be a tragedy to the married women & can be cause of marital upsets as well as personal unhappiness & ill health. The "having of children cement's a marriage" and without children, loss of fertility is the loss of woman's hope for future. Infertility causes great personal suffering and distress. Infertility is not only social but medical problem that involves both the couples & both of them remain involved even if only one person needs medical treatment. To have an own family is a universal dream. This dream can become a

nightmare for the infertile couple and learning that you have an infertility problem can engender painful and difficult emotion. Infertility may bring out feelings of resentment of guilt and of despair. Almost all the couples expect to have their own babies, once they get married, but getting pregnant is like a game of odds as game of luck. It is impossible to predict when an individual couple will succeed in achieving pregnancy.

Infertility in women is broadly divided into ovulatory and anovulatory. Anovulatory is being the commonest cause in 1/3 of infertile couple. The major feature of hypothalamus pituitary ovarian axis whose function is the corner stone of reproductive process, shows

disturbance leading to anovulation and infertility. The failure of ovulation may present as amenorrhea oligomenorrhoea, luteal phase deficiency. Ovulation occurs due to rupture of one or more follicles within the ovary 30% of infertility are due to problem associated with ovulation. Anovulation occurs when there is either no development or immature development of Graafian follicle due to inadequate gonadotrophin stimulation or defect of steroidogenesis, the disease known as PCOD. PCOD is most common endocrine disorder approximately 6-10% of women in a general population have this disease, prevalence depends on the type of population being screened 87% of hyper androgenism 50% of oligomenorrhoea and 60-90% of anovulatory infertility is due to PCOD.

The description of polycystic ovaries heralded a new era in the field of reproductive endocrinology, currently this problem is becoming the most challenging and taxing issue to the practicing gynecologist. Polycystic ovary disease is characterized by chronic menstrual irregularity (amenorrhea or oligomenorrhoea) hirsutism, obesity and infertility. Polycystic ovary disease is thought to be a reproductive female hormonal imbalance i.e. tonically elevated LH increased androgen production from the theca cells & stroma of the ovaries, decrease SHBG, increased unbound estrogen & androgens (Disturbed adrenal function is also implicated in androgen excess). pituitary sensitivity to GnRH is increased, preferential increased production of LH & decreased production of FSH due to inhibin. where the follicles fail to mature & expelled from the ovary, creating an ovary filled with immature follicles & misleadingly labeled as "cysts". The "cysts" then contribute to the hormonal imbalance which is explained by the derangement in the complex neuro endocrinal interaction that controls the sequence of cyclic reproductive events.

The exact pathogenesis is still unknown, but oligomenorrhoea & infertility result from anovulation & hirsutism is the result of both ovarian and adrenal hyper activity, about 40% - 70% of patients with PCOD have increased levels of adrenal androgens, Hyper responsiveness of adrenal to corticotrophin (ACTH) increased ACTH production, decreased endogenous opioids hyper secretion of catecholamines or hyper prolactin may contribute to the increased adrenal activity.

In this study a complete clinical history was to be taken for each partner and a full examination was to be taken for each partner & a full examination was to be performed comprising a urogenital examination & semen sample from men & a pelvic examination as well as hysterosalpingography (HSG) or Laparoscopy to estimate tubal patency among women.

In ancient times even though without any sophisticated method to evaluate the exact cause of infertility, physicians put forth many hypotheses regarding, & claimed its successful treatment with herbal drugs. The

drugs having the properties of insulin sensitizers, Hepatotoxic, emmenagogues, deobstruent resolvents, aphrodisiac, Exhilarant & coactives were selected.

Now with the aid of high technology medicines where exact cause of infertility can be evaluated. It is crucial requirement to trial again the drugs mentioned in the classical literature of Unani medicine, & in the onset of new Millennium people too, begin believed that modern medicine is losing its relevance in many fields including in the treatment of infertility. I have the very strong conviction that "Unani Medicines is the hope for the childless couple. It has been proved beyond doubt, in numerous cases around the globe. I believe this treatment, can bring them back to the happy world & the joyful moments will last forever. "Being born a human is blessing & to reproduce is double blessing"

II. INFERTILITY AND ISLAMIC LAW

The issue of infertility has been addressed in Quran, Belongs the dominion of the heavens & the earth, he creates what he wills. He bestows male or female, according to his will or he bestows both male & female & leaves barren whom he will, for he full of knowledge and power.

God the best creator has integrated the random matter in a particular complexity by organizing the human body. One who is unfortunately to have ill health.

According to a Hadith, the holy prophet said "Allah" has not only created a disease but there is cure for it.

In another Hadith it is said there is "Cure" for every disease, when it is administered by the will of "Allah" the patient gets well.

It is evident from the above verses of the "holy Quran" & hadith that no disease is incurable, the search for a proper cure through available source, is a vital factor in benefiting humanities, which confirm with the guide lines, provided by the "Quran & hadith"

III. HISTORICAL ASPECTS

The problem of infertility has been with us as long as the history of mankind, thus it is impossible to estimate with any degree of certainty, the most antique part of history.

A. Pre-History period: The foundation of medicine was laid down by Babylonians & Assyrians (2000 B.C) of pre historic times. They felt that women's diseases were due to some magical forces, demons and spirits. The methods to cure disease were to drive out its particular demon.

B. Greek period: - This period Hippocrates (460-377 B.C) known as the father of medicine which was the first person to propose the scientific & ethical aspects of medicine. He was the first to record his medical views called the "father of medical literature" & the father of medicine".

- C. Egyptian Era: Egypt the birth place of medicine from 6000-12000B.C had numerous skilled physicians who wrote books on Gynecology.
- D. Roman Era: - In the "Holy Bible" it is written in Leviticus 15;19 that the diagnosis of hypergonadism & dropsy is conjectural. The women shall have a regular discharge of blood from her body.
- E. Arabian:- Arabian did tremendous job of translating modifying & preserving the Greek literature. The basic biochemical & biophysics ideas in the medicine were given by Arabians.
- F. Vedic period: - The ancient Hindus (Sushruta Samhita 1200-1000B.C) knew about two dozen of women's diseases. They performed laparotomies & were the first in the history who tapped the ovarian Cyst in cases of dropsy by trocos. using AI tools, you agree to the Generative AI User Guidelines.

➤ Augstin Michals Gendrin in 1859 was among the first to suggest that ovulation could control menstruation.

➤ Aristotle was not a physician he was a great naturalist, zoologist & gave medicine many fundamentals relative to conception, sterility, menstruation & the gravid state of humans. He believed that semen a menstrual blood mixed in uterus & formed a fetus (Adams 1849, Pect 1943). He noticed the incompatibility between ovum & sperm is an important part of sterility.

➤ Galen called as Roman physician thought that there was a mixing of male & female semen from the ovaries, with this formation of a conception.

➤ Galen (130-210AD) described the hypothesis that the female reproductive tract is mirror image of the male. The penis turned inside to the vagina. He analogues the uterus of the scrotum & oviducts to seminal ducts.

About sterility wrote in his book "De-Lous Affects" if menstruation stops among other symptoms, like nausea & decreased appetite examine the cervix with finger. If the cervix is closed but feels soft then the women is pregnant.

➤ The Muslim physicians Zakaria Razi (850-925A.D) in this book Alhavi in Vol ix exclusively devoted about infertility, conception pregnancy & diseases of uterus.

➤ Avicenna (980-1037A.D.) He described the anatomy of ovary and considered it as similar to testis in function, i.e. production of ova which is then transformed to uterus through the tubes. In his book "Al-Qanoon-fit tibb" he clearly mentions the triad of symptoms, obesity, hirsutism & infertility as complications of amenorrhea.

➤ Ali Bin Abbas-Al- Majoosi (994 AD) in his book "Kamilus Sanah" Sharfuddin Ismail Jurjani (1766 AD) in "Zakhira-e-khowazam shahi" Allama Burhanuddin Nafees (1218 AD) had described in the anatomy of ovary. They thought that obesity leads to amenorrhea which if not treated using All tools, you agree to the Generative All User Guidelines. timely makes the women similar to men (in voice and hair pattern) and they become infertile

Hakeem Abdul Razzakh (1926) in "Talimul Qabila" had given detail description of ovarian dropsy its causes & treatment.

As early as 1844 Cherean described sclerocystic changes in the human ovary some 90 years before the classic paper of stein and Leventhal in 1935, Elevated Luteinizing Hormone (LH) concentrations were first reported in 1958 creating a criterion for diagnosis & the introduction of radio immunoassays in 1971. Stimulated reliance on a biochemical diagnosis.

Although it was clear before 1962 a wide variety of clinical presentation.

It was only in 1976 that the concept of PCOD with normal LH concentration was developed. A further mile stone was the discovery of the association of PCOD & insulin resistance by "Khan et al" in 1976 & Urghen et al" in 1980 "Swan son" first described the ultrasound findings of women with PCOD is 1981, but only after "Adams et al" refined & critically defined diagnostic criteria in 1985 did the ultra-sonographic diagnosis of PCO become accepted.

The Unani literature is very much rich on the subject of infertility (Uqar). Infertility has been known to the Unani physician from ancient time they describe uqar due to altered temperament of the uterus impairment & dominance of akhlath (humour). The temperament of the uterus & cervix is hot & moist.

The humoural theory was postulated by father of medicine Hippocrates (460BC), The body contains four major kinds of humours Khoon (blood) Balgham (Phelgam) Safra (Yellow bile) Sauda (Black bile) a right proportion according to quality & quantity constitutes health & unright proportion of quality & quantity constitute disease.

Uqr is described by the almost all scholar in their books as-Majoosi Kamilus-sana (1889AD Vol iii) Avicenna Qanoon-e-Shaikh (1934 Vol i) Ismail Jurjani Zakhira Kawazm shahi (1902 Vol vi)

According to humoral theory of Hippocrates the cause of the disease is alteration in the kamiyyat(quantity) & kayfiyyath of akhlath ie alteration in the mizaj & akhalat. Therefore, the diagnosis & treatment of the disease is based on akhalath.

Hippocrates held the view that seeds came from all parts of the body of man & women followed together forming a fruit & than developed.

According to Unani system of medicine Quwa-e-tanasuliyah (Reproductive faculties) is responsible for the generation of mani (semen) i.e. sperm & ovum. Quwa-e-tanasuliyah are two kinds.

(i) Al-Quwah-al-muwallidah (generative faculty)

(ii) Al-Quwah-al-musawirath (formative faculty)

Al-Quwah-al-muwallidah is that Quwah which separates mani(semen) i.e, sperm as ovum from compounds of the body inside the testis & ovary, makes each of its part to become a particle, organ. Thus, this Quwah controls spermatogenesis in males & oogenesis. ovulations, formation of corpus luteum in female & also the process of the menstruation in female with the help of different akhlat muharrikah (hormones)

The main cause of Uqr in the female are due to the defect in ovulation. The process of ovulation according to Avicenna is the transformation of genetic material from each organ of the body to ovaries which was beautifully described by Avicenna in the chapter of akhalath while describing rutubath-e-manvia. The process of ovulation in the female genital organ is completed in the following ways.

- (i) The Quwat-e-tabia (provides nutrition & genetic material to the site of ovulation.
- (ii) The Quwat-e-Jazeba absorbs the genetic materials & nutrients.
- (iii) The Quwat-e-masika retained the material & nutrients for a required time, while the Quwat-e-mugira act upon this material & form the shape of ovum, so that it can contact with the sperm, to ovum.
- (iv) The Quwat-e-dafiya is responsible for ejecting the ovum into a proper place and the Quwat-e-dafiya release the waste of these processes of metabolism. Now it can be said that if there is any defect in the faculties Qua will disturb the process of ovulation.

IV. Infertility in Unani system of Medicine

In the Unani system of medicine, infertility is called "Uqr" and is understood as a condition resulting from defects in either the male or female reproductive system, including the sperm (mani) or ovum (ovum). Unani principles address Uqr through principles of removing the root cause (like obesity or "zo'afe jigar"), using drugs with properties like muwallid-e-mani (ovulation-inducing) and muqawwi-e-rahim (uterotonic), and specific lifestyle advice, such as timed coitus during the fertile window. Causes (according to Unani concept)

A. Defects in the reproductive organs: "Uqr" can stem from issues with the male or female reproductive organs as a whole.

B. Abnormalities in reproductive fluids: Deficiencies or poor quality of male sperm (Qillat-e-Mani) or female "mani" are considered causes.

C. Associated conditions: Unani physicians have linked several conditions to infertility, including:

- Obesity (Siman Mufrit), which can disrupt ovarian function.
- Amenorrhea (lack of menstruation).
- Hirsutism.

- Polycystic ovary syndrome (PCOS).
- General organ weakness, such as "zoafe jigar" (liver weakness).

D. Treatment principles and approaches

- **Treating the root cause:** The first step is to eliminate the underlying cause of infertility. This may involve addressing obesity, for instance.
- **Using specific herbal formulations:** A variety of herbal and polyherbal Unani formulations are used, often with properties such as:
 - Muwallid-i-Mani: To induce ovulation.
 - Muqawwi-i-Rahim: To strengthen the uterus.
 - Moin-e-Hamel: To aid in conception.
- **Lifestyle and behavioral advice:** Encouraging intercourse during the fertile window, particularly after menstruation has ceased. Specific dietary and lifestyle recommendations tailored to the individual's temperament (mizaj) and the specific ailment.

V. Concept of PCOS in Unani Medicine

Classical Unani texts, including Al-Qanoon Fil-Tibb by Ibn Sina and Zakheera Khvarazm Shahi by Ismail Jurjani, provide insights into endocrine disorders. Rhazi described the treatment methods of various endocrinological disorders in Kitab-Al-Hawi-Fit-Tib like diabetes, impotence, galactorrhea, menstrual irregularities, sex organs, contraception and obesity. According to Saheb Kamil, the age of menarche ranges between 10-14 years, while menopause occurs between 36-60 years. The duration of menstruation typically lasts between 2-7 days, with an intermenstrual interval ranging from 20 days to 2 months. If the menstrual cycle exceeds this duration, the condition is referred to as ehtebase Tams (Amenorrhea). These early contributions highlight the relevance of Unani principles in modern endocrinology. According to Ali Ibn Abbas Majooosi, an altered temperament of the liver, particularly when it becomes Barid (Cold), impairs its ability to transform chyme into blood. Disrupting this process leads to the production of tenacious balgham (Phlegm). He also identified saman mufrit (Obesity) as a contributing factor for ehtebase tams (Amenorrhea), attributing it to reduced blood flow and narrowing of blood vessels due to increased viscosity of blood as a result of Su-e-Mizaj Barid Balghami. This abnormal balgham accumulates within the body, altering the temperament and manifesting as symptoms such as ehtebase tams (Amenorrhea), qillate tams (Oligomenorrhea), uqr (Infertility), saman mufrit (Obesity) and hirsutism. This seems very similar to the clinical conditions associated with contemporary diagnosis of PCOS.

VI. Pharmacognosy of Drugs

A. Ustukhuddoos

Ustukhuddoos *Lavandula stoechas* Linn. belongs to Lamiaceae / Labiatae family. Unani literatures have mentioned many pharmacological actions of this drug

such as Kasir-e-Riyah (Carminative), Mufatteh (Desiccative), Munzij (Attenuant), Muhallil (Resolvent), Mulattif (Demulcent), Muqawwi (Tonic), Munaqqi (Purifier), Jaroob-e-Dimagh (brain scavenger), Daf-e-Sauda (evacuation of black bile), Da-fe-Tashannuj (anti-convulsant), Mufarrah e-Qalb-Wa-Dimagh (exhilarant of heart and brain), Muqaww-i-Aasab (nervine tonic) etc, and it is used in several ailments such as Zof-e-Dimagh, Nisyan (dementia), Malankholia (malancholia), Waja al qalb (angina pectoris), Suda-e-Muzmin (a chronic headache), Fali (paralysis), Laqwa (facial paralysis) etc.

B. Gule Tisu

Gul-e-Tesu is flower of *Butea monosperma* (Lam.)

Uses: Waram-e-Masana (Cystitis), Waja ul-Masana (Cystodynia), Waram-e-Rahem (Metritis), Ushr al-Bawl (Dysuria), Ihtibas al-Bawl (Retention of urine in bladder), Ihtibas -e-Tams (Amenorrhoea) Waram al-Khusyatayn (Orchitis) Sozak (Gonorrhea) & Ishal (Purgation).

C. Gauzaban

Gauzaban (*Borago officinalis* L.) of the family Boraginaceae described in the Unani System of Medicine with various therapeutic properties as exhilarant, expectorant, laxative, resolvent, diuretic, lithotriptic and tonic for principal organs of the body like the brain, heart and liver. Due to these properties, it is used in the treatment of Cardiac weakness, Palpitation, Anxiety, Melancholia, Schizophrenia, Catarrh, Cough, Asthma, renal calculi and healing of wounds etc. Also used antidepressant, anxiolytic, antioxidant, antidiarrhoeal, antibacterial, antifungal, antiaging, anti-asthmatic, anticancer, wound healing activity and as a memory booster.

E. Musli Safed

Safed musli is a rare herb from India. It is used in traditional systems of medicine including Ayurveda, Unani, and homeopathy. People use safed musli for athletic performance, obesity, erectile dysfunction (ED), and other conditions. But there is no good scientific evidence to support these uses. This plant species is now a threatened species worldwide due to overharvesting.

Uses & Effectiveness

- Breast-feeding, Cancer.
- Diabetes., Diarrhea.
- Erectile dysfunction.
- Gonorrhea., Increasing sexual desire in healthy people.
- Obesity, Osteoarthritis.

F. Musli Siyah

Kali or Shyah-Musali, its botanical name *Curculigo orchoides* and belongs to the Hypoxidaceae family. The spermatogenic and aphrodisiac actions of Kali Musli root is beneficial in improving sexual dysfunction. Kali Musli is attributed to aphrodisiac help to correct male sexual

problems and promote stamina. Furthermore, Kali Musli's natural nature helps in treating urinary problems. While its Rasayana (rejuvenating) action may also support liver detoxification.

G. Afsanteen

Afsanteen is the name for *Artemisia absinthium*, commonly known as worm wood. Traditional and medicinal uses

- Digestive health: Used to treat loss of appetite, indigestion, gall bladder problems, and intestinal spasms.
- Liver health: It is traditionally believed to support liver function and aid in detoxification.
- Parasitic infections: Wormwood is a well-known anthelmintic, meaning it's used to expel intestinal worms and other parasites.
- Anti-inflammatory and pain relief: Some traditional uses include its application for pain relief and anti-inflammatory properties.
- Other ailments: Historically, it has been used for a wide range of conditions, including fever, hepatitis, and chronic conjunctivitis.

H. Aftimoon Vilaiti

Aftimoon (*Cuscuta reflexa*), a member of Convolvulaceae family is a miraculous parasitic plant with a rich history of utilization in traditional medicine. It is used in Unani treatments as therapeutic effects including antioxidant, anti-inflammatory, anticancer, hepatoprotective, and neuroprotective activities. It is utilized as a single medication (mufrad) in powder, mixture, and decoction form and as compound formulations (murakkab) to treat a variety of ailments, which includes hepatitis, palpitations, varicose veins, mental ailments such as epilepsy and depression as well as dermatological conditions such as vitiligo and pityriasis.

I. Sadab Khusk

Sadab khushk is likely a reference to dried rue, with the scientific name *Ruta chalepensis* or its close relative *Ruta graveolens*, depending on the regional classification. Traditional medicinal uses

- Antimicrobial and antifungal
- Anti-inflammatory and pain relief to reduce inflammation and relieve pain from conditions like arthritis, headaches, and joint pain.
- Digestive and antispasmodic
- Abortifacient: In high doses, the plant can cause uterine contractions and is strictly contraindicated during pregnancy.

J. Asgand Nagori

"Asgandh Nagori" refers to Ashwagandha root, Unani medicine for its adaptogenic properties, which may help the body adapt to stress and promote overall health.

Traditional medicine

- **Stress and anxiety:** May help reduce stress and anxiety by regulating cortisol levels.
- **Cognitive function:** Can potentially improve focus, memory, and other cognitive functions.
- **Energy and vitality:** Traditionally used to boost physical energy, stamina, and athletic ability.
- **Immune support:** May help strengthen the immune system.
- **Sleep:** Can promote more restful sleep.
- **Sexual health:** May improve sexual function and fertility in both men and women.
- **Inflammation and pain:** Has potential anti-inflammatory properties, and is used for conditions like arthritis.

K. Khulunjan

Kulanjan, or Alpina galangal, offers numerous benefits, including supporting respiratory and digestive health, reducing pain and inflammation, and boosting immunity. It is traditionally used to treat conditions like asthma, coughs, and indigestion, and has antioxidant and antimicrobial properties.

- Respiratory health
- Digestive health
- Pain and inflammation
- **Fights infections:** Exhibits antimicrobial and anti-infective properties against bacteria, viruses, and fungi.
- **Boosts immunity:** Helps in strengthening the body's overall immunity.
- **Oral health:** Can be used to treat bad breath and gum infections.
- **Skin and circulation:** Its oils can be used externally for skin problems, and it may improve blood circulation.
- **Diabetes management:** May help in regulating blood sugar levels and treating incontinence in diabetes patients.
- **Antioxidant properties:** Rich in antioxidants that protect the body from oxidative stress.

L. Bozidan

Bozidan scientifically identified as *Tanacetum umbelliferum*, is used as a herbal remedy. Its traditional uses include the following:

- **Aches and pain:** relieve pain associated with rheumatic diseases, gout, and nerve pain. Some recent research has investigated its effects on hyperuricemia, which is a cause of gout.
- **Sexual debility:** like spermatorrhoea (involuntary ejaculation) and leucorrhoea.
- **Anthelmintic:** It is used to expel intestinal parasitic worms.

VII. MATERIALS AND METHODS

A. Methodology

The study is carried out in outpatient department, post graduate department of obstetrics & gynecology, Nizamia General Hospital Charminar Hyderabad.

Selection of Patients: - This study has been conducted on 30 patients of Infertility due to PCOD in three years duration of post-graduation on the basis of complete history, general examination, hormonal & ultra sound evaluated cases of PCOD with following inclusion & exclusion criteria.

A. Inclusion criteria

- Females with age group between 20 to 35 years.
- Female in the reproductive age group with at least one year of normal sexual life.
- Females with duration of married life 2 years.
- Female of primary as well as secondary infertility & secondary infertility associated with first trimester abortion.
- Females with infertility dysfunctional uterine bleeding. due to PCOD
- Females whose husbands were fertile (normal sperm count)

B. Exclusion criteria

Females with congenital anomalies or anatomical causes like vaginal atresia, narrow introitus elongated cervix, scarring of cervix, infantile uterus, hypoplastic etc. Females with surgical causes for infertility like PID, polyp, cervicitis, carcinoma of vagina, cervix endometrium, tubo-ovarian masses, tubal block etc. Women whose husbands were infertile & women who are not living with their husband.

Study design: It was an observational study all the patients came with

Complaint of infertility and irregular menstrual cycle in O.P.D of N>G>H were thoroughly counselled a detailed history about age, duration of infertility, duration of marriage, rhythm & pattern of menstrual cycle marital status, contraception, vaginal discharge incidence of conception and abortion, dietary habits & drugs taken were recorded. A part from general examination a specific emphasis was given to examination of pelvis P/S & P/V examination to assess uterine size, shape, mobility to rule out surgical cause & congenital anomaly.

According to need of patients, they were investigated routine base line examination both partners were advised i.e., C.B.P, CUE, RBS, VDRL, ESR, Blood grouping & Rh typing, in addition male partner was also advised semen analysis. They were investigated to rule out systemic diseases like hypertension, diabetes mellitus, tuberculosis, anemia for both partners. Female partner was advised hormonal assay like FSH, LH. 3rd day of M.C, serum prolactin, serum insulin, serum DHEA & serum. Progesterone is advised on 21 days of menstrual

cycle & USG. Endometrial biopsy is done between 23rd to 28th day of menstrual cycle. On the basis of these examination & investigation 30 patients of infertility due to PCOD were selected for clinical trial,

Selection of drugs

Patients divided into two groups A & B. 15 patients were administered with group 'A' medicines & other 15 patients were administered with group 'B' medicine for three months consecutively, three months follow up, the drugs having the properties of insulin sensitizers emmenagogues, deobstruent, resolvent, Hepatotoxic, aphrodisiac, exhilarant & coctives were selected.

Planned sexual intercourse was recommended around the time of ovulation (i.e., alternate day during 9th to 21st day of menstrual cycle). HSG for tubal block. All the patients were followed up every month in OPD when they were re-examined for follicular study for ovulation starting from 9th day of menstrual cycle.

B. Method of drug administration

Both groups of drugs were given according to days of menstrual cycle. Both groups contain oral medicines (powdered, decoction) form.

Group 'A' Decoction

- Ustukhuddoos -5g
- Gaouzaban -5g
- Gule-tisu -5g

The above drugs were taken in equal quantities & made them in decoction form.

Preparation:- Make the above drug into a course powder soak 15 grams in a 200 ml of water at night, next morning boiled & concentrated 100 ml & filtered. 100ml is given in two divided doses i.e. morning & evening Dosage: - Empty stomach. From 1 day of period to 10th day.

Powdered

- Moosli safed
- Moosli siya

The above drugs were taken in equal quantities & make them fine.

Powder Dosage

10 grams power is to be given in two divided doses i.e., morning & evening after meal from 5th day of periods to 12th day of periods.

Group 'B' Decoction

- Aftimoon
- Afsanateen
- Sadab Khusk

The above drugs were taken in equal quantity & made them in decoction form.

Preparation:- Make the above drugs in a course powder soak 15 grams in 200ml of water at night next morning boil & concentrated to 100 ml & filtered.

Dosage; 100 ml is given in two divided doses i.e. morning & evening, from 1st day of period to 5th day of period.

Sufoof or powder

- Khulan Jan
- Bozidan
- Asgand

Preparation: The above drugs should be taken in equal quantity & powdered finely. Then mix all the powder thoroughly. Dosage: 9 grams powder is to be given in three divided doses i.e., morning afternoon & evening from 5th day of periods to 25th day of periods.

Instructions

The patients were instructed to report for follow up over fortnight

Decreased consumption of carbohydrates, fats and all spicy food

Exercises and increased physical activities.

Advice on discharge

To review on 1st day of menstruation

To consult immediately if any adverse effect occurs.

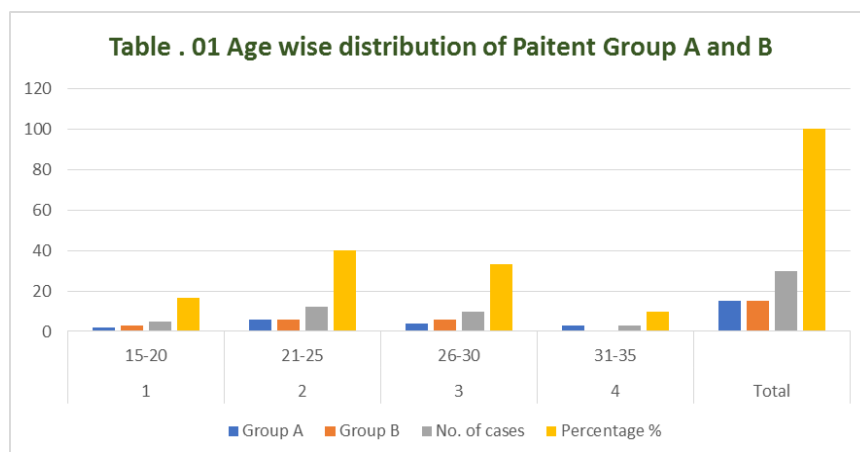
High protein and fibrous diet

If the cycle does not occur on the expected date, silently wait for days.

VIII. OBSERVATION AND RESULTS

Table NO. 01 Age wise distribution of Patient Group A and B.

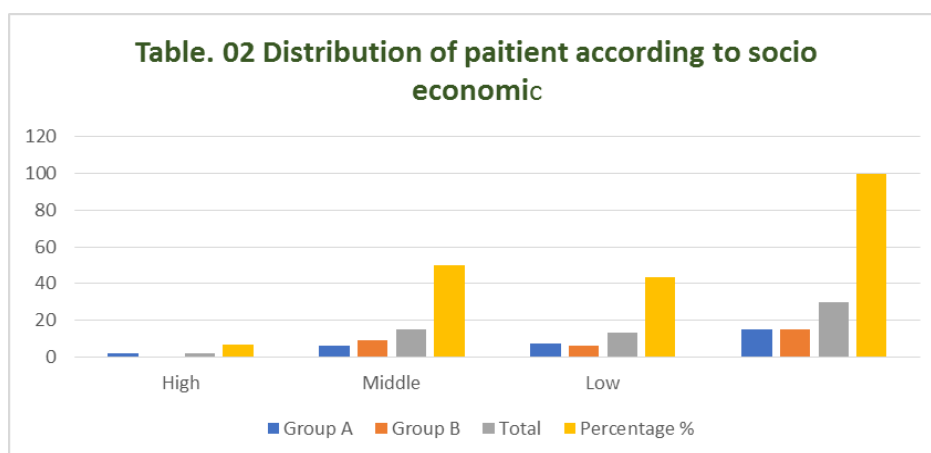
S. No	Age	Group A	Group B	No. of cases	Percentage %
1	15-20	2	3	5	16.67
2	21-25	6	6	12	40
3	26-30	4	6	10	33.33
4	31-35	3	0	3	10
Total		15	15	30	100



Graph No. 01: Age wise distribution of Patient Group A and B.

Table No. 02 Distribution of patient according to Socio Economic.

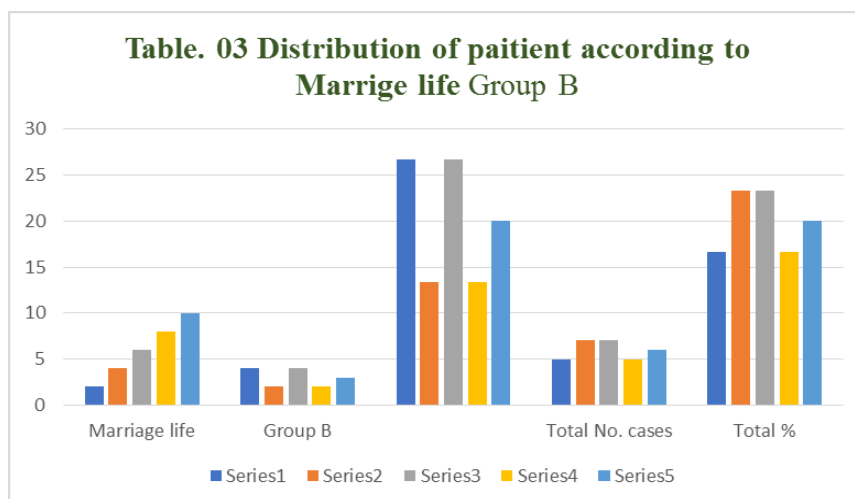
S. No	Socio Economic status	Group A	Group B	Total	Percentage %
1	High	2	0	2	6.67
2	Middle	6	9	15	50
3	Low	7	6	13	43.33
Total		15	15	30	100



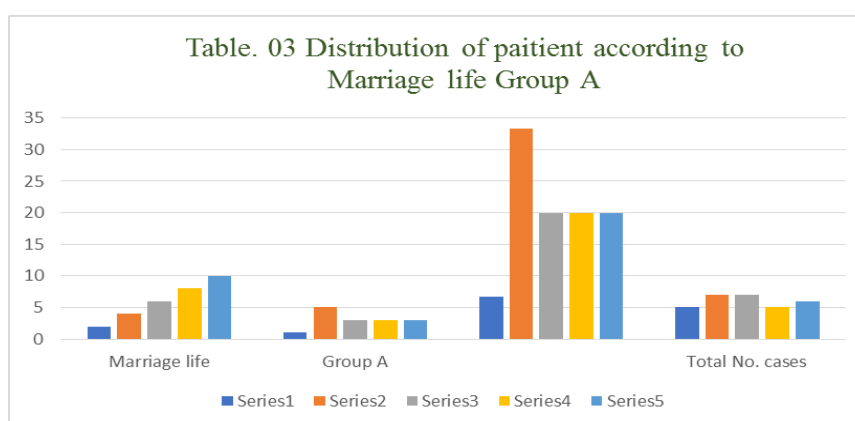
Graph 02: Distribution of patient according to socio economic.

Table No. 03 Distribution of patient according to Marriage life.

S. No	Marriage life	Group A	Group B	Total No. cases	Total %
1	2	1	4	5	16.67
2	4	5	2	7	23.33
3	6	3	4	7	23.33
4	8	3	2	5	16.67
5	10	3	3	6	20
Total		15	15	30	100

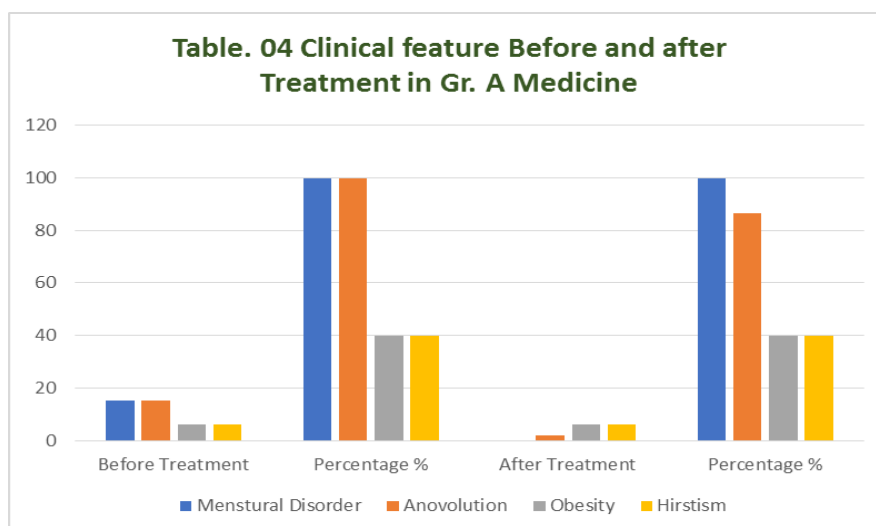


Graph No. 03: Distribution of patient according to Marriage life Group A.



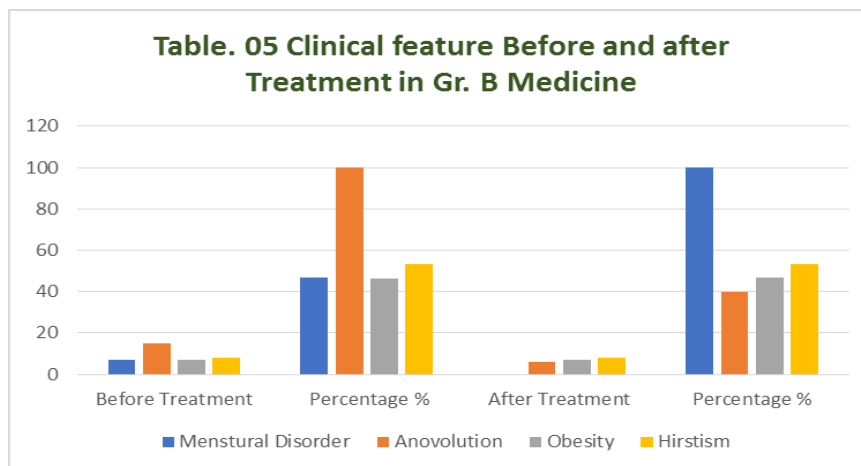
Graph No. 04: Distribution of patient according to Marriage life Group B.

Table. 04 Clinical feature Before and after Treatment in Group A Medicine.				
Clinical Feature	Before Treatment	Percentage %	After Treatment	Percentage %
Menstrual Disorder	15	100	0	100
Anovulation	15	100	2	86.67
Obesity	6	40	6	40
Hirsutism	6	40	6	40



Graph No. 05: Clinical feature Before and after Treatment in Gr. A Medicine.

Table. 05 Clinical feature Before and after Treatment in Gr. B Medicine.				
Clinical Feature	Before Treatment	Percentage %	After Treatment	Percentage %
Menstrual Disorder	7	46.66	0	100
Anovulation	15	100	6	40
Obesity	7	46.46	7	46.66
Hirsutism	8	53.33	8	53.33



Graph No. 06 Clinical feature Before and after Treatment in Group A Medicine.

XI. DISCUSSION

The present clinical study was conducted to evaluate the efficacy of Unani medicine in the management of infertility (Uqr) due to Polycystic Ovarian Disease (PCOD), a major cause of anovulatory infertility in women of reproductive age. PCOD is characterized by menstrual irregularities, obesity, hirsutism, and hormonal imbalance that leads to chronic anovulation. In Unani medicine, this condition is described as Ihtibas-al-Tams (retention or suppression of menses) resulting from Sue Mizaj Barid Balghami (cold and phlegmatic temperament), which impairs uterine function and ovulation.

In the present study, 30 patients aged 20–35 years diagnosed with infertility due to PCOD were enrolled and divided into two groups: Group A and Group B. Both groups received Unani formulations containing herbs with proven actions on reproductive health, metabolism, and hormonal regulation. The results demonstrated that Group A, which received Ustukhuddoos, Gaouzaban, Gule-Tesu, Musli Safed, and Musli Siyah, showed superior clinical improvement compared to Group B, which received Aftimoon, Afsanteen, Sadab Khushk, Khulanjan, Bozidan, and Asgandh Nagori.

Most patients belonged to the 21–30-year age group (73.33%), representing the most active reproductive phase, with a predominance of middle and lower socio-economic backgrounds. The majority also had Balghami temperament, consistent with Unani theory that excess cold and moist humors weaken uterine tone (Zauf-e-Rahem) and hinder ovulation. After three months of treatment, Group A exhibited marked improvement in menstrual regularity (100%) and ovulatory response (86.67%), with relief in associated symptoms such as

oligomenorrhea, anovulation, and menstrual irregularity. In contrast, Group B showed 60% improvement in ovulation, indicating that the combination of herbs used in Group A was more effective for hormonal and follicular regulation. The therapeutic efficacy of the formulations can be explained by the pharmacological actions of their ingredients:

Ustukhuddoos (*Lavandula stoechas*) acts as a Munaqqi-e-Dimagh (brain cleanser) and Muqawwi-e-Aasab (nervine tonic), improving hypothalamic-pituitary-ovarian axis function.

Gaouzaban (*Borago officinalis*) and Gule-Tesu (*Butea monosperma*) act as Muqawwi-e-Aaza-e-Raeesa (tonics for vital organs) and Mufatteh-e-Sudad (deobstruents), enhancing blood flow and correcting hormonal irregularities.

Musli Safed (*Chlorophytum borivillianum*) and Musli Siyah (*Curculigo orchoides*) are potent Muwallid-e-Mani (reproductive tonics) and Muqawwi-e-Rahem (uterine tonics), supporting ovulation and improving fertility.

On the other hand, the Group B formulation helped improve metabolism and liver function through the Hepatoprotective and Insulin-sensitizing effects of Afsanteen, Aftimoon, and Asgandh Nagori, which are essential for treating insulin resistance—a key factor in PCOD pathogenesis. However, their slower reproductive response compared to Group A indicates that direct uterine tonics and follicle stimulants (as in Group A) are more effective in achieving ovulation within a shorter period.

The study validates the Unani principles of treating infertility by correcting humoral imbalance, improving uterine strength (Taqwiyat-e-Rahem), removing obstructions (Tafteeh-e-Sudad), and promoting ovulation (Tahleel-e-Rutoobat). The results are consistent with the classical descriptions by Unani scholars such as Ibn Sina (Avicenna), Zakariya Razi, and Jurjani, who attributed infertility and Ihtibas-e-Tams to deranged temperament and accumulation of viscous phlegm within the uterine vessels.

Importantly, no adverse effects were observed during or after the treatment, confirming the safety and tolerability of the Unani regimen compared to modern ovulation-inducing drugs that often cause side effects like ovarian hyperstimulation, mood changes, or metabolic disturbances.

In summary, this study demonstrates that Unani formulations, particularly the Group A combination, are effective in regulating menstruation, inducing ovulation, and improving fertility in women with PCOD. Their multifaceted action—addressing hormonal imbalance, improving uterine health, and enhancing overall metabolism—provides a holistic and natural approach to infertility management. Future research involving larger sample sizes, hormonal profiling, and long-term follow-up is recommended to substantiate these findings and to integrate Unani therapy as a complementary approach to conventional reproductive endocrinology.

IX. CONCLUSION

The present clinical study concludes that Unani formulations are effective, safe, and well-tolerated in the management of infertility (Uqr) due to Polycystic Ovarian Disease (PCOD). The treatment successfully restored menstrual regularity, induced ovulation, and relieved associated symptoms such as irregular cycles and anovulation, demonstrating the therapeutic potential of Unani medicine in addressing the root causes of infertility. Among the two study groups, Group A, which received Ustukhuddoos (*Lavandula stoechas*), Gaouzaban (*Borago officinalis*), Gule-Tisu (*Butea monosperma*), Musli Safed (*Chlorophytum borivillianum*), and Musli Siyah (*Curculigo orchoides*), showed superior results, with complete normalization of menstrual cycles and ovulation in 86.67% of patients. The formulation's success can be attributed to its emmenagogue, aphrodisiac, uterine tonic, anti-inflammatory, and hormonal balancing properties.

The study findings validate classical Unani concepts that attribute infertility and Ihtibas-e-Tams to Sue Mizaj Barid Balghami (cold and phlegmatic temperament), which leads to hormonal imbalance and uterine dysfunction. The Unani regimen effectively corrected this imbalance by enhancing Taqwiyat-e-Rahem (uterine tonicity), improving follicular function, and restoring reproductive equilibrium. Importantly, no adverse effects were observed throughout the study, establishing the

formulation's safety and tolerability compared to conventional ovulation-inducing drugs that often cause side effects. Therefore, the Unani formulations used in this study offer a natural, holistic, and cost-effective alternative for the management of infertility associated with PCOD. Further large-scale, randomized clinical trials are recommended to substantiate these findings, optimize dosage, and explore their long-term benefits in restoring fertility and hormonal balance in women.

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