

**A PILOT STUDY OF EFFECTIVENESS OF UNANI TREATMENT IN UQR
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ABSTRACT

Introduction: Infertility is a failure of a conception in a couples having regular, unprotected coitus for a year. Alteration in Mizaj al-Rahim, congenital abnormality or biochemical changes in cervical secretion and presence of anti-sperm antibody in the cervix leads to cervical hostility. Therefore the aim of this study was to appraise the usefulness of Unani treatment in infertility due to cervical mucus factor. **Materials and Methods:** This study was conducted in infertile patients due to cervical mucus factor (n=12) at Govt Nizamia Tibbi hospital, Hyderabad. The inclusion criteria includes infertile married woman aged 18-35 year with normal ovulatory cycles, patent fallopian tubes and normal sperms count of husband. The exclusion criteria were congenital anomalies, tubal blockage, systemic diseases, PCOD, anovulation and obesity. On the basis of Unani Usool-i-Ila'j, Munzij (11 days) and Mushil (3 alternate days) with Tabrid were given in first month of the enrollment. From second month orally Sufuf of Buroode Dandane Feel (2g) and Resha Bargad (2g) with 4g sugar and Majoon Supari Pak 5 g was given twice daily from day 1 to day 10 with vaginal humool (powder of Joazbuwa, Kuzmazij, Phitkari Biryani, and Poste Anar each 2g with Roghan Chameeli 10 g) from day 6 to day 10 was given. The outcome was conception. **Results:** In the present study, minimum age was 18 years and maximum age was 31 years. Eight patients had primary infertility and four patients had secondary infertility. Out of 12 patients, seven (58.33%) patients conceived. **Conclusions:** This study shows that aforementioned Unani treatment is useful in Uqr. Hence, further phase II and III randomized controlled trials are recommended.

KEYWORDS: Cervical factor; Infertility; Uqr; Unani medicine.**INTRODUCTION**

Infertility is a chronic illness that causes medical as well as social and financial problem. It is "the state of inability to conceive after a period of unprotected and regular intercourse for one year."^[1] It is a complex problem for 1 in 6 couples. The incidence of this disease is 10%–15%.^[2] The causes of infertility are male, peritoneal, ovarian, tubal, uterine, cervical, and unexplained. Cervical mucus is a necessary component of human fertility and plays at least two critically important physiologic roles in fertility. First, cervical mucus is essential to sperm survival and transport. The duration of the fertile window is six days in couples of normal fertility: the five days that the sperm can survive in fertile-type mucus plus the day of ovulation. Without fertile mucus sperm would last only hours in the vagina with little chance of meeting and fertilizing the egg (ovum). Second, cervical mucus has been described as a "biological valve," admitting sperm to the uterus at certain times of the cycle while inhibiting their entrance

at other times. During the pre-ovulatory phase of the cycle and under the influence of oestrogen, cervical mucus (when viewed under a microscope) forms parallel channels that allow sperm to traverse the cervix and then to swim up to the fallopian tubes: the biological valve—cervical mucus—is literally "open." In the post-ovulatory phase and under the influence of progesterone, cervical mucus is thick (with a "cobblestone" appearance under the microscope) and blocks the passage of sperm into the uterus: the biological valve of cervical mucus is "closed."^[3] According to Unani concepts, alteration in four humours of body and alteration in uterine temperament or hard texture of uterine inner layer or whole uterus undergo in hard texture due to absorption of phlegmatic fluid in the uterus or abnormal bile and black bile, irregular menstrual cycles, cervical infections, congenital abnormalities, anovulatory cycles, peritoneal infections, and sexually transmitted diseases are common causes of infertility in females. Further, eminent ancient physicians mentioned that infertility due to cervical mucus hostility is caused by temperament changes due to

usage of cold beverages. Alteration in the temperament of uterus such as su'al mizaj har yabis (hot & dry) causes cervical secretion scanty, su'al mizaj barid ratab (cold and moist) causes cervix cold and dense forming thick, tenacious balgam (abnormal phlegm).^[4,5] The cervical mucus is directly affected by ovarian hormones and its study can be used as a reliable predictor of sperm penetration. The post-intercourse collection of mucus shortly before the time of ovulation and a few to several hours after intercourse. The mucus specimen is evaluated for pH, clarity, cellularity, viscosity (the length to which a column of mucus can be stretched in centimeters also known as spinnbarkeit), salinity (evaluated according to the number of channels formed by the crystallization of the mucus when dried on a glass slide also known as "ferning"), and the number and motility of surviving sperm.^[3]

Though there have been major advances in the treatment of infertility in modern medicine like IVF, IUI, etc when compared to other systems of medicine, the infertility caused due to cervical factor has no treatment except condom therapy and IUI. In Unani medicine, the response in cervical factor infertility has been mentioned in the classical texts. Further, these medicine are safe and having no side effects as compared to modern medicine. Therefore the aim of this pilot study was to appraise the usefulness of Unani treatment in infertility due to cervical mucus factor.

MATERIALS AND METHODS

Study Design: This pilot study was conducted in infertile patients due to cervical mucus factor (n=12) at Govt Nizamia Tibbia hospital, Hyderabad during the year 2015-2016 after taking written informed consent.

Participants: The inclusion criteria includes infertile married woman aged 18-35 year with normal ovulatory cycles, patent fallopian tubes and normal sperms count of husband. The exclusion criteria were congenital anomalies, tubal blockage, systemic diseases, PCOD, anovulation and obesity.

Procedure: Patients were assessed through complete history, physical examination and investigations. Detailed general information about name, age, marital status, occupation, religion and social economic status was noted. General and systemic examination was conducted to rule out any systemic diseases. Pelvic examination was performed to evaluate the cervicitis and other cervical lesions/ factors related signs and symptoms.

The subjective parameters were white discharge, low backache, lower abdominal pain, pain during coitus along with patient anxious to conceive. The objective parameters were inflammation with or without signs of infection, erosion/ectopy, edema, nabothian follicles,

congestion of cervix and white discharge seen by per speculum and tenderness felt by bimanual examination. The baseline clinical laboratory investigations like Hb%, TLC, DLC, ESR, VDRL and RBS were done to exclude general diseases. To exclude pelvic pathology, USG, cervical swab culture and papsmear were done. Investigations includes hormonal assay, mantoux test, deficient progesterone, follicular study, chromosomal study, tubal patency by HSG, hyperprolactinemia, hypothyroidism and PCT (post coital test) in female to rule out sluggish/dead sperm in vaginal pool within 2 hours of intercourse, etc. At every follow up during six months of study period, pregnancy test was done to confirm the pregnancy if patient had missed periods. The study was conducted for a period of 14 days of each cycle upto 3 cycles.

Intervention: On the basis of Unani Usool-i-Ila'j, Munzij (11 days) and Mushil (3 alternate days) with Tabrid were given in first month of the enrolment. From second month orally Sufuf of Buroode Dandane Feel (2g) and Resha Bargad (2g) with 4g sugar and Majoon Supari Pak 5 g was given twice daily from day 1 to day 10 with vaginal humool (powder of Joazbuwa, Kuzmazij, Phitkari Biryani, and Poste Anar each 2g with Roghan Chameeli 10 g) from day 6 to day 10 was given.

Joshanda Munzij included Gule banafsha, Maveez Munaqqa, Beeqe Badiyan, Gule Gaozaban, Aslus-soos and Ustequddus (each 5 g). All the drugs were soaked in water overnight and in the early morning Joshanda was made and administered orally. Mushil included habbe ayarij 7 tabs orally in the early morning. The tabrid consists of Khameera Gaozaban Sada (5g) with Warqe Nuqra (1 tola) orally given twice daily on alternate days after Mushil.

Outcome: The outcome was conception.

Statistical analysis

Data Analysis: The results were analyzed statistically using Graph Pad InStat version 3.00 for window (Graph Pad Software, San Diego, Calif, USA) at completion of the study.

Statistical Analysis: The descriptive statistical analysis has been carried out in the present study. Results on continuous measurements were presented on Mean±SD and categorical measurements were presented in number (%).

RESULTS

In the present study, minimum age was 18 years and maximum age was 31 years. Eight patients had primary infertility and four patients had secondary infertility. Out of 12 patients, seven (58.33%) patients conceived (see table 1).

Table 1: Participants socio-demographic data and outcome.

S. No	Age (y)	Type of infertility	Married life (y)	SES	Duration of treatment (cycles)	Outcome
1	18	Primary	2	LIG	3	Conceived
2	28	Secondary	4	MIG	4	Not conceived
3	28	Secondary	9	LIG	3	Not Conceived
4	28	Secondary	6	LIG	2	Conceived
5	22	Primary	4	LIG	3	Conceived
6	24	Primary	4	LIG	2	Not conceived
7	28	Secondary	9	MIG	5	Conceived
8	25	Primary	6	LIG	4	Not conceived
9	26	Secondary	6	LIG	5	Conceived
10	28	Primary	10	LIG	4	Not Conceived
11	31	Primary	3	MIG	3	Conceived
12	28	Primary	4	MIG	6	Conceived

SES: Socioeconomic status; LIG: lower income group; MIG: Middle income group;

DISCUSSION

The basic principle of Unani treatment is based on temperament. In the present study 10 patients were of Balgami Mizaj (phlegmatic) and two patients were of Safravi Mizaj. According to the Unani medicine, health is reflection of equilibrium in four Akhlat (humours) with respect to their quantity and quality, conferring Mizaj Tabai to the human body, necessary for occurrence of normal functions. Any disturbance in the equilibrium of these four Akhlat leads to Sue Mizaj (distemperament), responsible for abnormal bodily functions and a reflection of disease. Sue Mizaj Maddi means a derangement in Mizaj tabai coupled with abnormality in Madda (material). Correction of Sue Mizaj Maddi requires elimination of abnormal Madda for restoration of Mizaj Tabai.^[4] Since, Uqr due to cervical factor is caused due to Ghair Tabai Balgham (abnormal phlegm); it produces Sue Mizaj Maddi in the uterus and needs Madda to be eliminated to restore Mizaj Tabai. The elimination of abnormal humour/Madda is known as Tanqia (evacuation/elimination) and restoration of Mizaj Tabai is known as Ta'deel (normalization).^[6] Aforementioned Unani drugs used in Joshanda munzij have Mufatteh Sudad, Qate Balgham Muhallil, Mulattif, Muqawwie Asab, Munaqqie Akhlate Ghaleeza, and Jali properties.^[7] Once the Balghami madda (Phlegmatic material) is dissolved, detached and disintegrated by the action of Munzij Balgham (phlegm conctives) drugs, it is purgated out by Mushil Balgham (phlegm purgatives) drugs. Mushil drugs have property to expel the Akhlat raddiya (Morbid humours) from the vessels, neighbouring structures and from whole body through intestine.^[6] Mushil drugs used in this study have Mushil Akhlate Salasa, Mushile Balgham, Munaqqie Dimagh, Mukhrije Balgham, Qate Balgham, Mulattif, Jali and Mufattehe Sudad properties.^[7]

Unani scholars opined that Buroode Dandane Feel and Resha Bargad help in conception. Majoon Supari Pak is useful as it has muqawwie al-rahim property. Joazbuwa, Kuzmazij, Phitkari Biryani, and Poste Anar are also beneficial in infertility due to cervical factor as these

drugs have Qabiz and Mujaffif properties.^[4,8] A study has proven aphrodisiac activity of Joazbuwa.^[9] Further, other study, reported that methanolic extract of Nutmeg seed showed good antioxidant activity by methods of 1,1-diphenyl- 2-picrylhydrazyl (DPPH) and ferric reducing antioxidant power (FRAP) due to high content of tannin, flavonoid and terpenoids.^[10] Acetone extract showed good antioxidant activity by the DPPH radical scavenging assay due to the presence of several terpenoids like sabinene, myristicin and eugenol.^[11] The strength of the study was it is first of its kind where infertility due to cervical factor was treated. Limitations of the study are single group, no blinding and without control. The results shows further studies are needed to prove the efficacy of above mentioned Unani treatment in randomized controlled trial in larger samples.

CONCLUSION

This study proves that aforementioned Unani treatment was beneficial in infertility due to cervical factor. Further, randomized controlled trials are recommended to prove the efficacy of aforementioned Unani treatment.

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