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Case Report

Achieving Successful Conception And Pregnancy Outcome With Unani Medicine: a Case Report On Idiopathic Primary Infertility (*'Uqr*)

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ABSTRACT

Introduction: Infertility is a common problem contributing to negative impact on patient emotiona-lly, sexually and socially, impairing their quality of life and causing significant economic burden on health care system. A minimum of 80 million couples suffer from infertility worldwide. Despiteimprovement in diagnostic techniques, the incidence of unexplained or idiopathic infertility remainsup to 15%. Due to absence of an identifiable cause, the treatment of this condition is empirical. In Unani system of medicine, various drugs and formulations are used to induce ovulation. One ofsuch formulation has been chosen to treat the present case for unexplained infertility and observe long term pregnancy outcome.

Case presentation: We report a case of 25 years old, nulligravida who successfully achieved preg-nancy following unani treatment. She presented with complain of unsuccessful attempts at concepti-on since three years. Investigations were carried out which did not reveal any abnormality thus making unexplained infertility as diagnosis of exclusion. The patient was prescribed to take *nuskhaMu'īn-i-Ḥaml* 6g twice a day from D_5 – D_9 of menstrual cycle with warm milk and *Ma'jūn mocharas* 6g twice a day throughout the month. The patient conceived after the treatment for 2 cycles and had an uneventful pregnancy with delivery of a female baby weighing 2.6kg.

Conclusion: These Unani formulations might have assisted in conception due to their uterotonic and ovulation inducing properties. This article offers an approach to treat unexplained infertility usingunani formulation. Further researches in the form of randomized clinical trials are needed to prove the efficacy of these formulations in unexplained infertility.

Keywords Infertility, Majun mocharas, Muin-i-haml, Ovulation induction, Unani Medicine, Uqr.

INTRODUCTION

Infertility is a social concern due to its psychological, physical, social, and financial consequences.[1] In most traditions "being barren" is an undesirable social role[2] that has significant negative psychological impact due to a lack of social support and less chances of getting remarried.[3] Studies on infertile women have revealed a deleterious relationship between infertility induced stress, marital satisfaction and quality of life.[1] A minimum of 80 million couples suffer from infertility throughout the world, with secondary infertility rates being double the primary infertility rates (3-30%).[2] Idiopathic infertility accounts for about 15% of the total cases of infertility despite improvement in diagnostic techniques.[4] Clinically, infertility is defined as a disease of the reproductive system due to which women fail to achieve pregnancy after regular unprotected intercourse for twelve or more months.[2] The International Committee for Monitoring Assisted Reproductive Technologies (ICMART) defines idiopathic infertility as, infertility in couples with seemingly normal ovarian function, fallopian tubes, uterus, cervix, and pelvis and with acceptable coital frequency; and normal genito-urinary anatomy, testicular function and a normal ejaculate.[5] Due to absence of an identifiable cause, the treatment of Idiopathic infertility is empirical.[5] Management for idiopathic infertility can be either expectant or active management which includes ovarian stimulation (OS), intrauterine insemination (IUI), and in vitro fertilization (IVF) with or without intracytoplasmic sperm injection (ICSI).[6]

'Uqr is a term used by Unani scholars for infertility. Unani scholars have stressed on having coitus after cessation of menstrual bleeding to increase the chances of pregnancy. Further, use of various unani drugs and formulations during preovulatory phase (after the cessation of menses) by scholars make it evident that they were very well aware of the fertile window for conception and concept of ovulation.[7-11] Galen has quoted that, "If both gonads of any animal is removed or crushed or frozen then it won't be able to conceive".[9] This statement highlights the significance of gonads in the conception as emphasized by Unani scholars. In Unani multiple causes of infertility have been mentioned but if the cause of infertility remains unknown it is termed as "*Khaqi banjpan*" or idiopathic infertility.[7] Drugs used for treatment of

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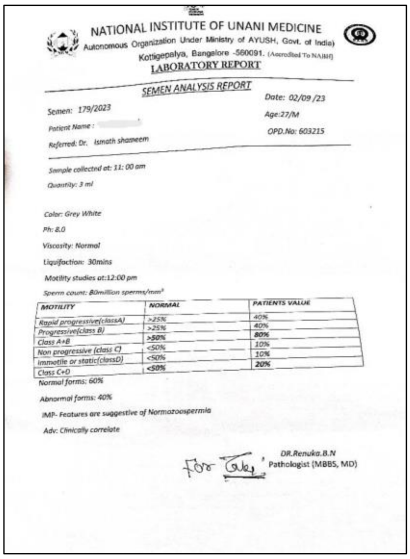
infertility possess the properties such as *Muwallid-i-Manī* (Ovulation inducing), *Muqawwī-i-Raḥim* (utero-tonic) and *Muʻīn-i-Ḥaml* (aiding in conception).[12]

CASE PRESENTATION

A married couple, (25 year old nulligravida and 27 year old male partner) reported to gynecological OPD (Department of Ilmul Qabalat wa Amraze Niswan), of National institute of Unani Medicine (NIUM), Bangaloreon 14-08-2023, seeking treatment for infertility. The patient had been married for three years with a normal sexual life (coital frequency- thrice per week; no history of dyspareunia or post-coital bleeding) and non consanguinity in marriage. She was normotensive, euthyroid and non-diabetic. Her menstrual cycles were regular with menstrual interval of 35-40 days with scanty flow (using 1-2 pads/day) lasting for 5-6 days. Her last menstrual period was 18-07-2023. She had not received any medication for conception previously. Her medical or surgical history was unremarkable. She did not report any family history of infertility on either side of the partners. The patient was a homemaker and belonged to upper-lower socio-economic class (Modified Kuppuswamy Scocioeconomic scale-2022) and her partner worked as a salesman in a local shop Bangalore. She had no history of sexually transmitted diseases (STDs) and addictions. The patient's partner also reported good health, with no problems with erection or ejaculation. He reported no prior STDs, urogenital infections, medical or surgical history and addictions.

Physical examination revealed the patient in good general health, with normal complexion, well hydrated, alert and oriented to place, person and time. The patient was moderately built with 149 cm height, weighed 62 kg, and had a body mass index (BMI) of 27.97 kg/m^2. Her vitals were stable, with blood pressure- 100/70 mmHg, pulse rate- 80 bpm (regular and normal volume); temperature- 98.2ºF and respiratory rate- 20 per minute. She was acynotic, anictric, with no edema or pallor. Cardio-pulmonary auscultation was normal. Per abdomen was soft and non-tender with no evidence of organomegaly or palpable lump. Breast examination also revealed no abnormality. On inspection vulva was structurally normal. Per speculum examination revealed cervix and vagina healthy, with presence of mild watery discharge. On bimanual examination, uterus was anteverted, normal size, non tender, soft and mobile with no fornicial tenderness. No mass was appreciated in any fornix.

Routine infertility profile was advised for the couple which revealed, hemoglobin- 13g/dL; fasting blood sugar- 78mg/dL; T3- 153 ng/dL, T4- 9.14µg/dL and TSH- 3.35 µIU/mL; Day 2 of menstrual cycle FSH- 8IU/L, LH- 3.2IU/L, prolactin- 15ng/Ml, and AMH-2ng/mL. Ultrasound revealed anteverted uterus with size of 6.4×3.8×3.1cm, endometrial thickness of 6.2mm and bilateral ovaries of normal size. HSG on day 9 of menses revealed uterine cavity with normal volume, symmetric contours, and no filling defects with bilaterally patent tubes as evident by spillage. Husband semen analysis was normal with respect to sperm count, morphology, motility and volume. (Fig.1,2 and 3)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LABORATORY REPORT
SEMEN ANALYSIS REPORT

Semen: 179/2023
Date: 02/09/23
Patient Name:
Age:27/M
Referred: Dr. Ismath shameem
OPD.No: 603215

Sample collected at: 11:00 am
Quantity: 3 ml
Color: Grey White
Ph: 8.0
Viscosity: Normal
Liquifaction: 30mins
Motility studies at:12:00 pm
Sperm count: 80million sperms/mm³

MOTILITY	NORMAL	PATIENTS VALUE
Rapid progressive(classA)	>25%	40%
Progressive(class B)	>25%	40%
Class A+B	>50%	80%
Non progressive (class C)	<50%	10%
Immotile or static(classD)	<50%	10%
Class C+D	<50%	20%

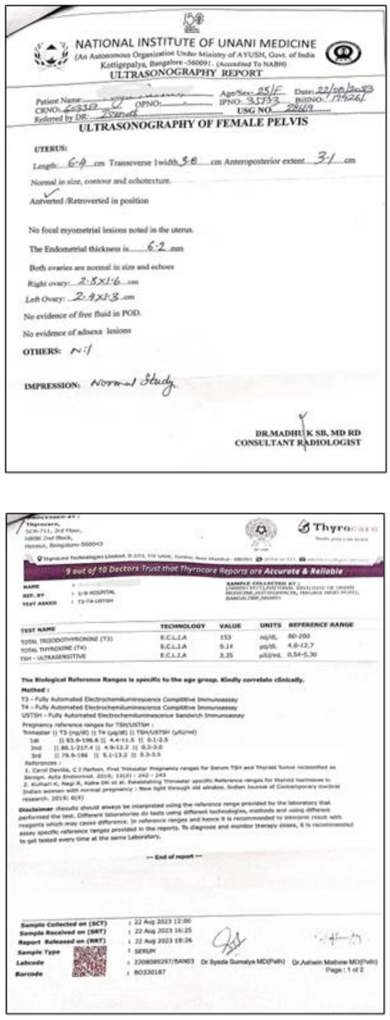
Normal forms: 60%
Abnormal forms: 40%
IMP- Features are suggestive of Normozoospermia
Adv: Clinically correlate

For
DR.Renuka.B.N
Pathologist (MBBS, MD)

Fig 1. Husband semen analysis.

A.

B.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ULTRASONOGRAPHY REPORT

Patient Name: Age/Sex: 25/F Date: 22/08/2023
CRNO: 60338 OPNO: IPNO: 35733 BillNO: 179261
Referred by DR: Ismath USG NO. 28669

ULTRASONOGRAPHY OF FEMALE PELVIS

UTERUS:
Length: 6.4 cm Transeverse 1width 3.8 cm Anteroposterior extent 3.1 cm
Normal in size, contour and echotexture.
Anteverted /Retroverted in position
No focal myometrial lesions noted in the uterus.
The Endometrial thickness is 6.2 mm
Both ovaries are normal in size and echoes
Right ovary: 2.8x1.6 cm
Left Ovary: 2.4x1.3 cm
No evidence of free fluid in POD.
No evidence of adnexa lesions
OTHERS: Nil
IMPRESSION: Normal Study

DR.MADHU K SB, MD RD
CONSULTANT RADIOLOGIST

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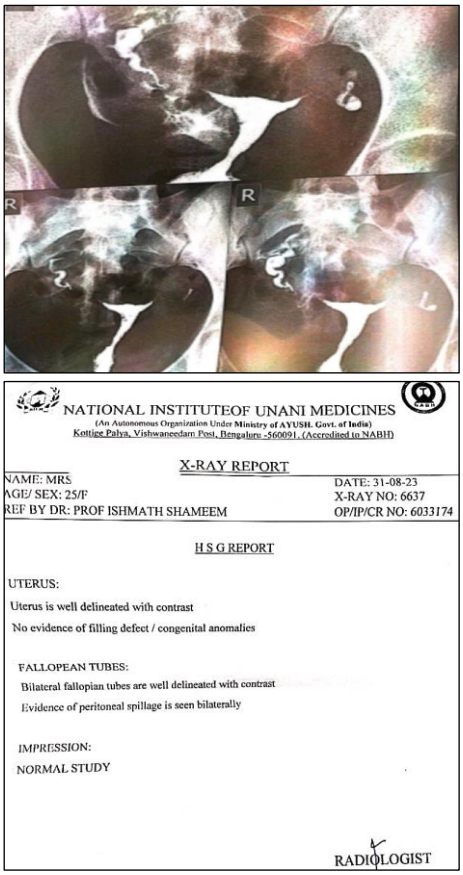
TEST NAME	TECHNOLOGY	VALUE	UNITS	REFERENCE RANGE
TOTAL TRIIODOTHYRONINE (T3)	E.C.L.I.A	153	ng/dL	80-200
TOTAL THYROXINE (T4)	E.C.L.I.A	9.14	µg/dL	4.8-12.7
TSH - ULTRASENSITIVE	E.C.L.I.A	3.35	µIU/mL	0.54-5.30

The Biological Reference Ranges is specific to the age group. Kindly correlate clinically.
Method :
T3 - Fully Automated Electrochemiluminescence Competitive Immunoassay
T4 - Fully Automated Electrochemiluminescence Competitive Immunoassay
USTSH - Fully Automated Electrochemiluminescence Sandwich Immunoassay

-- End of report --

Sample Collected on (SCT) : 22 Aug 2023 12:00
Sample Received on (SRT) : 22 Aug 2023 16:25
Report Released on (RRT) : 22 Aug 2023 18:36
Sample Type : SERUM
Page : 1 of 2

Fig 2. (A)USG pelvis; (B)Thyroid profile of the patient.



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X-RAY REPORT

NAME: MRS
AGE/ SEX: 25/F
REF BY DR: PROF ISHMATH SHAMEEM

DATE: 31-08-23
X-RAY NO: 6637
OP/IP/CR NO: 6033174

H S G REPORT

UTERUS:
Uterus is well delineated with contrast
No evidence of filling defect / congenital anomalies

FALLOPEAN TUBES:
Bilateral fallopian tubes are well delineated with contrast
Evidence of peritoneal spillage is seen bilaterally

IMPRESSION:
NORMAL STUDY

RADIOLOGIST

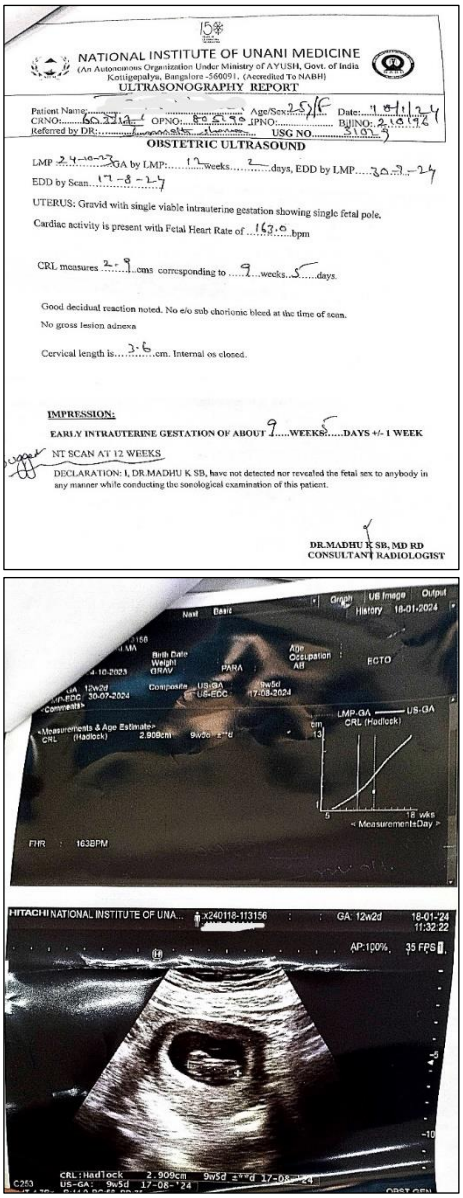
Fig 3. HSG report of the patient showing bilateral spillage without any filling defect or anomaly.

INTERVENTION

The patient was asked to report to hospital on day 1of her menses (21-09-2023) and started with *nushkha Mu‘īn-i-Ḥaml* 6g twice a day from D_5 – D_9 of menstrual cycle with warm milk and *Ma‘jūn mocharas* 6g twice a day throughout the month for 1st cycle. She was properly educated related the timed intercourse and was advised not to get up after coitus. Second dose (24-10-2023) of *nushkha Mu‘īn-i-Ḥaml* was given following next cycle in the similar manner in conjugate with *Ma‘jūn mochras*. Patient was asked to report to hospital next month.

FOLLOW UP AND OUTCOME MEASURES

Patient reported to hospital on 4-01-2024 with complaint of amenorrhoea of two months after taking 2 cycle of the prescribed medicine. Urine pregnancy test was advised which came out to be positive. She was instructed to undergo obstetric dating scan (as shown in Fig.4), antenatal profile and was started with tab folic acid 5mg once a day. Patient was followed throughout her pregnancy which remained grossly uneventful. She underwent all necessary investigations and received routine iron and calcium supplements. She delivered an alive healthy female baby weighing 2.6 kg with APGAR score of 8/10 on 25-07-2024 at 5pm. Both intra and post partum period was uneventful.



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ULTRASONOGRAPHY REPORT

OBSTETRIC ULTRASOUND

LMP 24-10-23 GA by LMP: 12 weeks 2 days, EDD by LMP 30-7-24
EDD by Scan 17-8-24

UTERUS: Gravid with single viable intrauterine gestation showing single fetal pole.
Cardiac activity is present with Fetal Heart Rate of 163.0 bpm

CRL measures 2.9 cms corresponding to 9 weeks 5 days.

Good decidual reaction noted. No e/o sub chorionic bleed at the time of scan.
No gross lesion adnexa

Cervical length is 3.6 cm. Internal os closed.

IMPRESSION:
EARLY INTRAUTERINE GESTATION OF ABOUT 9 WEEKS 5 DAYS +/- 1 WEEK

NT SCAN AT 12 WEEKS

DECLARATION: I, DR.MADHU K SB, have not detected nor revealed the fetal sex to anybody in any manner while conducting the sonological examination of this patient.

DR.MADHU K SB, MD RD
CONSULTANT RADIOLOGIST

Fig 4. Obstetric scan of the patient.

DISCUSSION

Infertility is considered a stressful experience for couples. The huge stress of infertility might be due to the fact that owing a child is considered to be important in society.[13] Furthermore, infertility may adversely impair an individual’s self-esteem.[13] Women desiring pregnancy who have failed to conceive even after 12 months of unprotected sex or donor insemination should be evaluated for infertility.[4] For idiopathic infertility, due to absence of an identifiable cause, the treatment is empirical, which highlights the need for alternative approaches such as those offered by traditional medicine such as Unani. The presented case study discusses a 25 year old nulligravida who had been unsuccessfully attempting to conceive for three years. Following a comprehensive medical evaluation that revealed no abnormality in both the partners, the diagnosis of idiopathic

infertility was made. The Unani treatment regimen prescribed to her included *nuskha Muʻīn-i-Ḥaml* and *Maʻjūn* mocharas taken over a period of two menstrual cycles. The patient achieved pregnancy after this treatment and had a healthy baby.

Nuskha Muʻīn-i-Ḥaml consists of gule dhawa (*Anogeissus latifolia*), bekh asgand (*Withania somnifera* L.), bekh piyabansa (*Barleria prionitis*) and gule nelofar (*Nymphaea alba*) in equal quantity,(Khan, 2011) while *Maʻjūn* mocharas is a utero-tonic and contains mocharas (*Salmalia malabarica*), supari (*Areca catechu*), tabasheer (*Bambusa arundinacea* Retz), nashasta (*Triticum sativum*), mazoo sabz (*Quercus infectoria*), gule surkh (*Rosa damascena* Mill.), habbul aas (*Myrtus communis* Linn.), halela (*Terminalia chebula*), balela (*Terminalia bellerica*), amla (*Emblica officinalis*), gile makhtoom (*Terra sigillata*), musli siyah (*Curculigo Orchioides*), musli safaid (*Chlorophytum Borivilianum*) and post anar (*Punica granatum*).[14,15] A study by Kafeel *et al*. reported ovulation rate of 40%, 35.3% and 68.8% in 1st, 2nd and 3rd cycle while conception rate of 10% and 18.8% was noted in cases of polycystic ovarian syndrome using unani formulation conatining gule dhawa (*Anogeissus latifolia*), bekh asgand (*Withania somnifera* L.), bekh piyabansa (*Barleria prionitis*) and gule nelofar (*Nymphaea alba*) which was comparable to the control group (clomiphene citrate).[12]

- **Gule dhawa (flower of *Anogeissus latifolia*):** Govindarajan *et al.* reported that *Anogeissus latifolia* possess significant antioxidant potential.[16] This is attributed to the presence of gallic acid, flavonoid- quercetin.[16,17] Quercetin is also known to improve egg quality and increase fecundity.[18]

- **Bekh asgand (root of *Withania somnifera* L.):** Asgand or Ashwagandha also known as Indian Ginseng is a known anxiolytic and antioxidant herb with multiple studies suggesting its beneficial effects on male and female fertility. Due to its anxiolytic property, it also helps to reduce stress associated with infertility.[19,20] Withanolides, mainly withaferin A, withanolide D and withanone present in this plant exhibit antioxidant properties by increasing the activity of cellular antioxidant enzymes thus play crucial role in regulating the hypothalamus and pituitary gland activity.[21] Azgomi *et al*., in a systematic review concluded that *Withania somnifera* root extract improved balance between luteinizing and follicular stimulating hormone leading to folliculogenesis and increased gonadal weight.[22] Additionally, phytoconstients such as isoflavones and flavonoids in this plant possess estrogenic effect, which may help in conception.[20]

- **Bekh piyabansa (root of *Barleria prionitis*):** *Barleria prionitis* contains saponins[23] which can improve fertility.[24,25]

- **Gule nelofar (flower of *Nymphaea alba*):** It contains flavonoids-quercetin and is also a potent antioxidant.[23,26]

These Unani formulations might have assisted in conception due to their uterotonic and ovulation inducing properties and did not have any adverse effect on fetus. However, the robust evidence supporting the efficacy of the formulations is a significant limitation as the exact mechanisms by which the formulation induces ovulation are not well understood. Further researches in the form of randomized clinical trials are needed to prove the efficacy of these formulations in unexplained infertility.

List of abbreviations:

AMH:	Anti-Mullerian Hormone
BMI:	Body mass index
D5-D9:	Day 5 to Day 9
FSH:	Follicle stimulating hormone
HSG:	Hysterosalpingogram
ICSI:	Intracytoplasmic sperm injection
IUI:	Intrauterine insemination
IVF:	In vitro fertilization
LH:	Luteinizing hormone
OPD:	Out patient department
OS:	Ovarian stimulation
STDs:	Sexually transmitted diseases
T3:	Triiodothyronine
T4:	Thyroxine
TSH:	Thyroid stimulating hormone

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CONFLICT OF INTEREST

The authors declare no conflicting financial interests.

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