



FERTILITY, ANTIFERTILITY AND CONTRACEPTION IN UNANI MEDICINE

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ABSTRACT

The Unani system provides a unique perspective on reproductive health, highlighting the importance of balance and equilibrium in bodily functions. It describes various methods and agents to prevent conception, including herbal remedies, dietary modifications, and local applications. Unani physicians identified reproductive organs and their functions, emphasizing the role of quwa (faculties) in fertilization and fetal development. Unani physicians advocated contraception in specific circumstances, such as medical conditions or young age, and described temporary and permanent methods. The system includes a vast array of herbs and formulations with potential contraceptive properties, some of which have been scientifically validated.

This review examines the various forms of contraceptive methods and potential of Unani herbs in respect to contraception. Few herbs have been evaluated in Preclinical studies demonstrate their efficacy in modulating reproductive processes like alteration of estrus cycle, suppressing of ovulation, inhibition of implantation, disruption of hormonal balance etc.

These findings suggest that Unani herbs may offer a promising approach to contraception. To fully harness the potential of Unani medicine in modern contraceptive practices, further research is necessary to standardize extracts, elucidate mechanisms, and conduct clinical trials to establish safety and efficacy.

Keywords: Unani Medicine; Herbal Contraceptive; Maane hamal; Uqr; Infertility.

INTRODUCTION

The Unani system of medicine presents a comprehensive approach to contraception, leveraging natural agents and methods rooted in the concept of quwa (faculties) and balance of bodily functions. But practice of maane' hamal (contraceptives) is not advocated profoundly by ancient Unani physicians, unless some unavoidable circumstances. But the methods and agents (eatables and drugs) of antifertility described by them centuries ago were quite enough to make the subject

understandable. In classical Unani text description regarding the antifertility methods and agent shows their depth, understanding, knowledge and familiarity with the subject.

Unani physicians say everything is identified only after comparing with their zid opposition). So, concept of infertility can't be understood without the knowledge of fertility. In ancient Unani text, Unani physicians explain fertility, antifertility and contraceptive methods and agents as follows:

According to Majoosi, Ibn Sina and Ibn Rushd, khussiyatur reham (ovaries), qarne reham (fallopian tubes), reham (uterus) and pistaan (mammary gland) are the reproductive organs of females. Ovaries and Uterus are most important among them, as former concern with production of female mani (ovum) and later one provides base for the conception and to flourish the fetus in the womb^{1,2,3}. Majoosi advocates and records the opinion of Jalinoos and Buqrat in context of reproduction i.e., mani serves as the main performer as well as the matter, while khoone haiz (menstrual blood) serves as the matter alone².

Ibn Rushd states in Kitabal Kulliyat, that uterus is responsible mainly for two functions; one is birth of a child while, excretion of fuzlaat hazme sani of blood (menstruation) being the other³. Majoosi further states that quwa (Capacity/faculty) is solely responsible for fertilization, implantation and then growth of the fetus in the womb². The concept of quwa is unique in Unani system of medicine. It is the property of the body, with which all the phenomenon of life is manifested. It provides the basis of different bodily functions⁴.

Ibn Sina has mentioned three divisions of quwa i.e. quwate nafsaniya, quwate haiwaniya and quwate tabiya¹. The one which acts for the preservation of life is known as quwate shakhsiya while, quwate tanasuliya acts for the preservation of species. Quwate tanasuliya is responsible for the generation of mani i.e. sperm and ovum; all sexual functions and formation of fetus in the mother's womb. Quwate muwallidah and quwate musauwwirah are the subdivisions of the quwate tanasuliya. Quwate muwallidah involves with the formation of mani. It is said to control spermatogenesis in males and oogenesis, ovulation and formation of corpus luteum in female whereas, quwate musauwwirah is responsible for the development of and to give the shape to the fertilized ovum.

Each and every organ is furnished with certain quwa through which specific physiological functions are performed by that particular organ⁵. Apart from quwate ghazia (nutritive power) uterus possesses five more types of quwa namely, quwate jazeba (absorbing power), quwate masika (retaining power), quwate hafiza (protecting power), quwate da'afea (evacuating power) and quwate mumaiyaza (differentiating power-although its action is not obvious in uterus), through which it performs its normal functions.

Quwate hafiza is responsible for protection of fetus and if gets weaken, chances of conception either decrease or diminishes all together while, quwate masika aids the fetus to get retained in the womb. Secretion of a kind of slippery fluid in the uterus causes weakness of this quwa which may ultimately lead to abortion.

Quwate da'afea acts for pasteurization and weakness of quwate da'afea leads to difficulty in delivery of fetus while, its empowerment may cause abortion. Quwate jazeba works to aid conception and so weakness of this quwa may result in difficulty to conceive¹.

All the normal physiological function of the reproductive organs (especially of uterus and ovaries) depends upon proper equilibrium of all their quwa and arwah (pneuma). Any imbalance in quwa and arwah may leads to deviation in their normal function hence in process of conception. Apart from tafarruke ittisal (loss of continuity) and any other traumas, sue mizaj maddi and ghair maddi is also responsible for the imbalance of quwa which leads to infertility either temporary or permanent. This deviation may also be induced by some tadabeer or external agent (eatable items and drugs)³. In

Kamilus Sanaa'h, Majoosi clearly mentioned that few drugs are responsible for antifertility. Unani physicians describe several tadabeer (regimens), eatable items and drugs which may cause infertility².

Indications to adopt Contraceptive methods

Although, discussed in great depth, use of contraceptives is not suggested by any of the ancient physicians, unless and until compelled to do so. However, a common view has been shared by the Unani physicians while advising the indications for the use of contraceptive drug. Majoosi said 'although we should not mention drugs which prevent conception, lest they be used by corrupt women, we are obliged to give them sometimes to women with small uterus or with diseases which might prove fatal if the women conceive and delivers'².

Similarly in the opinion of most of the Unani physicians, an antifertility drug can only be advised to a woman who is suffering from any congenital or acquired disease of uterus or weakness of urinary bladder or if her uterus is very small, so that if she gets pregnant, would, either die at the time of delivery or at least suffer enuresis for the rest of her life. Too young age or ill health of woman, also justify its use^{1,2,6,7}. It is very clear that population load becomes a matter of concern only since last century so none of the ancient Unani physicians indicated the use of contraceptive for controlling the population.

Types of Contraceptive measures

Unani Physicians have mentioned mainly two types of contraceptive measures, depending upon the duration of their action. Aarzi maane' hamal tadabeer (temporary contraceptive measures); those which postpone pregnancy for a short duration, around the period of its use. They are also called reversible methods. Another one is the measures which eliminate or destroy one's ability to reproduce, permanently are known as daayemi maane' hamal tadabeer (permanent contraceptive measures)⁶.

Methods of Contraception: As mentioned in Unani text, contraception can be achieved either through some practices or with the help of drugs.

Practice: Several methods have been described by the Unani physicians that may be adopted in order to prevent conception.

- Ibn Sina advised the male to get separated from the female at the time of ejaculation so that semen is discharged outside (coitus interruptus)¹.
- The woman should not be pulled too close, at the time of ejaculation nor her thighs be pulled up⁶.
- The posture favourable for conception should be avoided¹.
- The ejaculation in both the partners should be avoided to coincide^{1,7}.
- After intercourse, the woman should jump backward, seven or nine times, it usually results in flowing out of semen¹.
- Sneezing by woman after intercourse also helps in expelling semen⁸.
- It is advised by Jurjani that one should cover the penis with a soft cloth before intercourse and remove later so that semen may be prevented to enter vagina⁷.

Drugs: The classical text of Unani Medicine comprises a good number of antifertility drugs for oral and local applications. Drugs that are used orally either in the form of powder or extract, while the locally applied drugs have been prescribed in various dosage forms, viz. suppository, pessary, liniment, douche, sitz bath, ointment, fumigation and paste, to be applied on the male or female genital organs.

Time of drugs administration has also been given immense importance. According to the mechanism through which the drug acts upon, they are usually given pre or post coitum or before or after

menstruation. Unani treatises deal with the three types of drugs used primarily as contraceptive, emmenagogues and abortifacient to avoid or terminate pregnancy.

Maane' hamal (Contraceptives): These are the drugs used to prevent conception either by interrupting ovulation or fertilization of the ovum by sperm. e.g. Luk (*Laccifer lacca*), Baid anjeer (*Ricinus communis*), Ghongchi Surkh (*Abrus precatorius*), Filfil siyah (*Piper nigrum*), Banjankusht, Balsan (*Impatiens balsamina*), Busl etc.

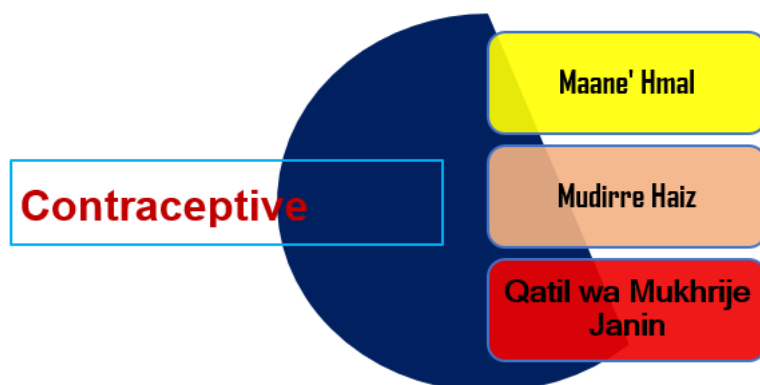
Mudirre haiz (Emmenagogue): These are the drugs which induce or enhance menstruation. They facilitate the conditions which are adverse for the implantation of zygote to the uterus. Abhal (*Juniperus communis*), Afsanteen (*Artemisia Absinthium*), Anisoon (*Pimpinella anisum*), Sowa (*Anethum graveolens*) Kalonji (*Nigella sativa*) and Brinjasif (*Achillea millefolium*) are few examples of emmenagogue drugs.

Qatil wa mukhrije janin (Abortifacient): These are the drugs which may bring about abortion or expel the fetus from the uterus. They facilitate the condition for detachment of placenta from the uterus. The examples of such drugs include Amaltaas (*Cassia fistula*), Murr (*Commiphora myrrha*), Inderain (*Citrullus colocynthis*), Jundbedastar (*Castoreum Juntiana*), Kapas (*Telosma procumbens*), Haloon (*Lepidium sativum*) etc. Few special claims mentioned in classical Unani literature about drugs having antifertility activity are:

- A woman would not get pregnant for as many years as the number of seeds of Baid anjeer muqashshar (*Ricinus communis*) she would swallow⁹. It is mentioned in Khazainul Advia that Hakim Azam Khan quoted the statement of an experienced women that if a woman swallows one seed of Arand daily for 7-8 days, after menstruation, would get sterile permanently. A similar effect has been ascribed to Ghongchi surkh (*Abrus precatorius*).
- If Roghan tukhme neeb (*Azadirachta indica*) is taken in the dose of 4 ½ masha (4.5gm), will cause permanent sterility to a woman.
- Zaqoom (*Euphorbia nerifolia*), dried, roasted and mixed with an equal amount of sugar, if taken for 21 days in the dose of 2 gm daily, would cause permanent sterility^{6,10}.
- A pessary of blood would act as contraceptive to the woman¹.
- If a woman is fed with dried Zabl al feel (elephant dung) along with honey, would never get pregnant. A pessary of Zabl al feel also acts as contraceptive.
- Juntiana (*Gentiana lutea*), mixed with some hina, if applied to the palm of a woman, would prevent conception and cause amenorrhoea⁷.
- Zakarya Razi was of the opinion that the drug Bukhoore marium (*Heliotropium indicum*) is so harmful that if a pregnant woman hangs it to herself or simply steps over it would get an abortion. In fact, if it is tied to the arm or neck of a woman, she would not conceive. Ismail Jurjani shares the claim of Razi in his treaty Zakheera Khwarzam Shahi^{7,8}.
- After menstruation, if a woman takes 3gm of Qaranfal (*Syzygium aromaticum*) would become more likely to get pregnant whereas, a daily dose of one Qaranfal would serve as contraceptive^{10,11}.
- Ibn Baitar mentioned that a woman would not conceive if she takes one fruit of Kaknaj (*Physalis alkakengi*) daily for seven days after menstruation⁹.
- Qatraan (*Pinus sylvestris*), if applied to genitalia of male during coitus, would be proved to be most effective of all contraceptives.
- Tukhme karnab (*Brassica oleracea*), after grinding if used as pessary, would prevent conception, as it destroys the semen.
- One seed of Baqla (*Vicia faba*) taken daily in the early morning, for 76 days, would cause permanent sterility.
- Crushed leaves of Gharab (*Salix babylonica*), if drunk with alcohol would prevent conception.
- Drinking of Paneer mayah (Rennet) is also contraceptive.
- If the leaves of Akhrot (*Juglans regia*) are eaten with vinegar after menstruation, will prevent conception.

- Khubsul hadeed [iron rust, $\text{Fe}(\text{OH})_3$] has also been mentioned as a contraceptive⁸.

Unani physicians have in their books and treaties dealt with almost 388 plants, animal and mineral origin single drugs which are beneficially used as contraceptive (82), abortifacient (148) and emmenagogues (158) in various forms. Hakim Mohammad Azam Khan has describe 77 single drugs as contraceptives, abortifacient and emmenagogues in the 3rd volume of Akseere Azam⁶.



Many drugs and formulations have been advocated with contraceptive properties in Unani medicine. But only Few of them such as Gule neem (*Azadirachta indica*)¹², Pyaz (*Allium cepa*)¹³, Gurhal (*Hibiscus rosa sinensis*)¹⁴, Amaltas (*Cassia fistula*)¹⁵, Badrooj (*Ocimum basilicum*)¹⁶ etc. have been scientifically worked upon and found to be effective and safe but still many drugs like Tuxhme san (*Hibiscus cannabiss*)^{6,17}, Jauz (*Juglans regia*)⁸, Khubsul hadeed⁷, Qaranfal (*Syzygium aromaticum*)⁷ and Luk (*Laccifer lacca*)^{6,17,18} need to be evaluated scientifically to use these drugs as rational and evidence based medicine.

Natural Antifertility Agents

Alcoholic extract of *P. alkakengi* (Kaknaji) extract when administered to the animals intra peritoneally in the dose of 150 mg/kg from 1st to 5th day of pregnancy, decreases the number of implantations significantly. Moreover, it reduced the weight of the neonates delivered by the animals who received same treatment¹⁹. The ether soluble fraction of methanolic extract of the seeds of *Ricinus communis* (Baid anjeer), when administered to adult female rats and rabbits at doses upto 1.2 g/kg and 600 mg/kg, respectively, showed anti-implantation and anti-conceptive activities^{20,21}. Chloroform extract of root, stem and leaf of *Ruta graveolans* (Suddab) showed significant antifertility activity in rats when administered intra-gastrically on day 1-10 post coitum. It also acts as abortifacient at early stages of pregnancy²². The seeds of the *Terminalia chebula* (Halela), orally, during days 1-5 of pregnancy inhibits implantation in 60% of animals and increases fetal loss²³.

Pretreatment with ethanolic extract of *Allium cepa* (300 mg/kg) shows significant inhibition of number of implantation sites in the female rats treated for the first 7 days of pregnancy¹³. The Neem flower extract in the dose of 1gm/kg, alters the estrus cycle in rats and reduces significantly the number of ova shed¹². Petroleum ether extract of *Heliotropium indicum* produces 40% antifertility activity in female albino rats²⁴. An indigenous preparation (AYUSH-47) having *Coccus lacca* as one of the ingredients in combination with *Saraca indica*, *Areca catechu*, gold and sugar when given in the dose of 1.25-5.0 mg/kg orally from days 1-5 of pregnancy exhibits 33.3% to 85.7% anti implantation effect in rabbits. The study also confirms the anti progestational activity of the drug²⁵. Acetone extract of *Juniperus communis* when administered orally, shows inhibition of pregnancy in 60% rats²⁶. Hydroalcoholic extract of leaves of *Mentha arvensis* (Na'na) has been found to possess reversible antifertility property without adverse toxicity in male mice. Moreover, it reduces fructose synthesis in seminal vesicles, as a result of which the viability of spermatozoa seems to be altered^{27,28}. The aqueous and hydroalcoholic extract of *Punica granatum* (Rumman) prevent

implantation in 50% of rats when given orally, for the first five days of pregnancy²⁶. Ethanolic extract of *Citrullus colocynthis* (Hanzal), (200 mg/kg) shows 40% inhibition of ovulation²⁹. The dry extract from seeds of *Abrus precatorius* acts as oral contraceptive, prevents implantation of fertilized ovum by inhibiting endometrial alkaline phosphate and induces 100% sterility in mice when injected one day pre and post coitum³⁰. Several studies have been carried out on fruits of *Piper longum* (Dar filfil) to establish its antifertility activity. The acetone, benzene and hydroalcoholic extracts prevent implantations in rats upto 50%. An anti-spermetogenic effect of this drug is also established^{31,32,33}. Hydroalcoholic extract of *Badrooj* (*Ocimum basilicum*) interfere normal ovulation by disrupting the estrus cycle and prolonging the diestrus phase thus, has the potential of being developed into a female contraceptive¹⁶.

CONCLUSION

The Unani system of medicine offers a rich repository of natural agents and methods for contraception, grounded in the concept of quwa and balance of bodily functions. Scientific validation of certain Unani herbs has demonstrated their potential as effective contraceptives. By integrating traditional Unani knowledge with modern scientific approaches, we can develop novel, natural, and safe contraceptive methods. Further research is necessary to standardize herbal drugs, elucidate mechanistic actions, and conduct clinical trials. This integration can lead to innovative solutions for reproductive health, providing women with more choices and promoting global health. Unani medicine's potential in modern contraception is promising.

ACKNOWLEDGEMENT

We acknowledge all the authors/writers whose references has been inculcated in this article.

Funding: Nill

Conflict of interest: Nill

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