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Review Article

A REVIEW OF CONTRACEPTIVE DRUGS DESCRIBED IN UNANI LITERATURE

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Abstract

The practice of contraception is as old as humanity itself. Previously, contraceptive preparations were used mostly in the form of pessaries, suppositories, liniments and ointments. The advancement in the field of medicine leads to the invention of many effective contraceptive devices such as pills, condoms, IUDs and many others. But the hormonal contraceptives as available today cannot be used for long duration due to their adverse effects. Hence there is a need to search for alternate formulations from indigenous system of medicine, which can be used as contraceptives. Thus, in this article it has been tried to throw a light on contraceptive drugs mentioned in Unani medicine.

Keywords: Unani Medicine; Contraceptives; Mana-e- Hamal.

INTRODUCTION

India is one of the most populous countries of the world. At present India's population is second to that of china. According to UN projection India's population will reach 1.53 billion by the year 2050 and will be the highest population in the world. One of the causes of higher fertility in India is limited use of contraceptives. Contraceptive methods are by definition preventive methods to help women avoid unwanted pregnancies. In present era, there is cafeteria choice of contraceptive methods from which an individual can choose according to his needs and wishes. Each contraceptive method has its unique advantages and disadvantages. Success of any contraceptive method depends not only on its effectiveness in preventing pregnancy but on the rate of continuation of its proper use. Main problem with these present contraceptives is the adverse effects associated with long term use such as liver disorders, cardiovascular effects and carcinogenesis¹, so there is need of time to search for a safe, effective, acceptable, inexpensive, reversible, and simple to administer contraceptive drugs. As Unani literature is very rich in formulations and single drugs for temporary and permanent contraceptive purpose. Thus, the contraceptive drugs mentioned in Unani literature can be an alternative choice for peoples.

Historical Background

Evidence of early contraceptive techniques can be found in ancient works from a number of different cultures and societies, including the Egyptians, Greeks, Romans, Chinese and Indians. Oldest reference for contraception was discovered on ancient Egyptian papyrus named Kahun Papyrus which was written in 1850 BC. It describes a pessary of crocodile dung and fermented dough. The Kahun Papyrus also refers to vaginal plugs of honey, gum and ground acacia.² Hippocrates (460-377 BC) in his treatise "On the

Nature of Women" described 'coitus interruptus' and 'using fingers to wipe out the vagina' for contraception. He had also mentioned the use of Wild Carrot as an oral contraceptive.³ The Greek philosopher, Aristotle (384-322 BC) in his book "Historia Animalium" was the first to mention contraception. He mentioned local use of olive oil, cedar oil, and ointment of lead and frankincense oil as spermicidal.⁴ Galen (130-200 AD), in his book "Kitab al Advia al Mufrida" had described several medicines which have bearing on procreation.⁵ During the flowering of Arabic medicine in 10th century, a variety of contraceptive recommendations were detailed, particularly in the work of Razi, Ali Ibn Abbas Majusi, Ibne Sina and Ismail Jurjani. Zakaria Razi (865-925 A.D), in his book "Kitab Al Hawi Fit Tib" had revived the writings of Buqrat, Duscarioos, Rofas, Ibn Serabuen, Ibn Masoya, Al Kandi and Hunnain Bin Ishaq regarding contraception.⁶ Ali Ibn Abbas Majusi (930-994 AD), in his book "Kamil- us-Sanaa" mentioned about certain conditions in which a physician should and should not prescribe any contraceptive drugs. He had also mentioned several contraceptive drugs which can be given in the form of pessaries and liniments.⁷ The great philosopher, thinker and prominent physician of Arab medicine, Ibne Sina (980-1037 AD), in his book "Al Qanoon Fit Tib" had extensively described certain conditions, various practices and drugs for contraception used in the form of pessaries, suppositories, liniments, ointment, pastes and orals.⁸ In 12th century, Ismail Jurjani (1110 AD), author of excellent medical compendium entitled "Zakheera Khawarzam Shahi" had given detailed description about contraceptive methods. Apart from this, he had described one of the safest and easy way to wrap the penis with a fine and thin piece of cloth, then insert and ejaculate in vagina, after the sexual act the piece of cloth should be removed, which is the origin of modern day condom.⁹ The famous Herbalist, Ibne Baitar (1197-1248 AD) had described nearly 150 drugs

for contraception in his book *Al Jami li Mufridatul Advia wal Aghzia*.¹⁰ Nineteenth century's famous physician Mohd. Azam Khan in his books "Akseer-e-Azam", "Ramoze-Azam" and "Muheet-e-Azam" had given detailed list of contraceptive drugs.¹¹

Formulations Described in Unani Literature

The ancient literature of Unani medicine comprises a good number of contraceptive drugs for oral and local application. Drugs are used orally either in the form of powder or Decoction, while the locally applied drugs have been prescribed in various dosage forms viz. suppository, pessary, liniment, douche, Fumigation and Sitz bath to be applied on the male or female genital organs. The Details of Formulations are given below:

Kitab Al Hawi by Zakaria Razi

- Shaham-e- Hanzal (*Citrullus colocynthis*), Saqmoonia (*Convulvulus scammony*), Hazarjashan (*Bryonia alba*), Khabs-al-Hadeed (Iron Rust) and Tukhm Karnab (*Brassica oleracea*) in equal quantity should be powdered, Mixed with Qatran (*Pinus sylvestris*) and be used as pessary after menstruation.
- Roghan Balsam (Balsam oil) when used as pessary and as well as its anointment in cervix before coitus prevents contraception.
- Shokran (*Conium maculatum*) when used locally on glans penis act as contraceptive.
- Juice of Badrooj (Sweet Basil), if taken orally by woman immediately after coitus prevents conception.
- Filfil (Black pepper) acts as spermicidal when it is used as pessary after coitus by a female.
- Razi quoting on the authority of Galen, recommends the juice of Na'na (pepper-mint) used as pessary for contraception.
- Use of Qatran (*Pinus sylvestris*) locally on penis before coitus acts as contraceptive. He holds qatran as the most effective drug as compared to other contraceptives. Continuous use of it by a female causes sterility.
- Razi was of the opinion that the drug Bukhoor Maryam (*Heliotropium indicum*), if tied to the arm or neck of a woman she would not conceive.
- One seed of Baqla (*Vicia faba*) taking daily in early morning for 76 days could cause permanent sterility⁶.

Kamil us Sana'ah by Ali Ibn Abbas Majoosi

- Majoosi has mentioned about Milh-e-Indrani (Rock salt) as contraceptive for both man and woman. He has suggested two ways of its administration (a) it should be applied on penis before sexual union. (b) It should be used by woman as a pessary.
- Majoosi recommends the fresh leaves of Suddab (Rue) as pessary to prevent conception.
- He recommends the use of Tukhm Karnab (*Brassica oleracea*), Shagoofa Karnab and extract of Suddab (Rue) as pessary before or after intercourse⁷.

Al Qanoon by Ibne Sina

- Shaham-e- Hanzal (*Citrullus colocynthis*), Kibreet (Sulphur) Saqmoonia (*Convulvulus scammony*), Hazar jashan (*Bryonia alba*), Khabs-al-Hadeed (Iron Rust) and Tukhm Karnab (*Brassica oleracea*) in equal quantity should be powdered, Mixed with Qatran (*Pinus sylvestris*)

and be used as suppository.

- He mentioned the use of leaves of Gharab (*Salix babylonica*) and Fodnaj (Mentha) in the form of pessary for contraceptive purpose.
- Use of Shaham-al- Rumman (*Punica granatum*) with Shubb (Aluminium hydroxide) by female in the form of pessary before coitus prevents conception⁸.

Zakheera Khwarzam Shahi by Ismail Jurjani

- He mentioned the use of Roghan Kunjad (Sesame oil) as a contraceptive agent for male, when it is applied on glans penis before coitus.
- Local application of Filfil siyah (Black peeper) and Na'na (Pepper mint) by female in the form of pessary after coitus act as contraceptive.
- Shaham-e- Hanzal (*Citrullus colocynthis*), Khabs-al-Hadeed (Iron Rust), Kibreet (Sulphur) Saqmoonia (*Convulvulus scammony*) and Tukhm Karnab (*Brassica oleracea*) in equal quantity should be powdered, mixed with Qatran (*Pinus sylvestris*) and be used as suppository⁹.

Qarabadeen Azam by Hakeem Azam Khan

- Kali zeeri (*Centratherum anthelminticum*), Tukhm haleela Kabuli (*Terminalia chebula*), Nagkesar (*Mesua ferrea*), Narkachoor (*Zingiber zerumbet*), and Kaifal (*Myrica nagi*), 5 g each, make powder of these and prepare seven tablets from it, and should be taken by female during menstruation 1 tablet daily.
- Use of Na'na (Pepper-mint) and suddab (Rue) in the form of pessary before coitus prevents conception.
- Local application of Roghan kunjad (Sesame oil) mixed with onion extract on Glans penis prevents conception.
- Use of Aaqarqarha (*Anacyclus pyrethrum*) mixed with honey orally prevents conception.
- Oral or local use of Baqam 1 part, Egg shells ½ parts, Alum ¼th part mixed in suddab juice, by female prevents conception.
- Suddab, na'na and Qatran locally in the form of Pessary prevents conception.
- Use of Powder of Buds of karela (Bitter gourd) and Hurmali (*Peganum harmala*) 6 g daily after menstruation for seven days prevents conception.
- Use of Powder of Dar filfil (*Piper longum*), Badanji Kabuli, Tinkaar (Borax) with milk after menstruation prevents conception¹².

Ijazul Ghurba by Hakim Ghulam Imam

- Use of Naushadar (Ammonium chloride) and Zaj (aluminium hydroxide) in the form of pessary prevents conception.
- Use of salt mixed with oil on glans penis before coitus act as spermicidal.
- Use of babchi (*Psoralea corylifolia*) mixed with oil in the form of suppository after menstruation prevents conception.
- Oral use of Haldi (*Curcuma longa*) powder during menstruation and three days after menstruation prevents conception¹³.

Bayaz-e- Khas by Hakim Sharif Khan

- Single dose of Abhal (*Juniperus communis*), Heeng

(*Ferula foetida*), Ushq (*Dorema ammoniacum*), each 2 g in the form of tablet results in miscarriage.

- Anisoon (*Pimpinella anisum*), Tukhm karafs (*Apium graveolens*), Pudina Dashti, Mushkatramashi (*Mentha pulegium*) 1 part each and Sumbulutteeb (*Nardostachys*

jatamansi), Darchini (*Cinnamomum zeylanicum*), Saleekha, Hab balsam (*Commiphora opobalsamum*), Ood balsam, Abhal (*Juniperus communis*) and Qust (*Saussurea lappa*) ½ part, grind them and make tablets, be used by female before coitus¹⁴.

Common single drugs mentioned in Unani literature for contraceptive purpose

S. No.	Drug (Scientific name)	Part Used / Form	Route of Administration	Time of administration
1	Anar ^{5,8,15} (<i>Punica granatum</i>)	Seeds Powder	Vaginal pessaries	Before and After coitus
2	Asfidaj ^{5,8,11} (White Lead)	As such	Vaginal pessaries	Before coitus
3	Bas ^{5,11,16} (<i>Allium cepa</i>)	Bulb	On Glans Penis as anointment	Before coitus
4	Balsam ^{11,17} (<i>Commiphora opobalsamum</i>)	Seeds oil	Oral / Local Application	Before coitus
5	Baqla ^{5,6} (<i>Vicia faba</i>)	Seeds powder	Oral	76 days
6	Baid Anjeer ^{4,15,17} (<i>Ricinus communis</i>)	Peeled seeds powder	Oral	After menstruation
7	Badrooj ^{6,8,18} (<i>Ocimum basilicum</i>)	Leaves juice	Oral	After menstruation
8	Filfil siyah ^{6,8,9,16} (<i>Piper nigrum</i>)	Seeds powder	Vaginal pessary	After coitus
9	Gharab ^{6,19} (<i>Salix babylonica</i>)	Leaves juice and fruits powder	Oral / Pessary	After menstruation
10	Haldi ⁵ (<i>Curcuma longa</i>)	Rhizom e powder	Oral / vaginal pessary	After menstruation
11	Jauz ⁶ (<i>Juglans regia</i>)	Leaves powder	Oral	After menstruation
12	Khabs-ul- hadeed ⁷ (Iron rust)	powder	vaginal pessaries	After menstruation
13	Kakna ⁵ (<i>Physalis alkekengi</i>)	Fruit powder	Oral	After menstruation
14	Karnab ^{6,7,8,18} (<i>Brassica oleracea</i>)	Seeds / Buds powder / extract	Vaginal pessaries	Before coitus
15	Kunjad ^{5,9,11} (<i>Sesamum indicum</i>)	Seeds oil	On Glans Penis as anointment	Before coitus
16	Kishneez ⁵ (<i>Coriandrum sativum</i>)	Seeds powder	Oral / vaginal pessaries	After menstruation
17	Kafoor ⁵ (<i>Cinnamomum camphora</i>)	Oleo-gum	Oral	Before coitus
18	Luk ¹⁸ (<i>Laccifer lacca</i>)	Exudation	Oral	After menstruation
19	Milh-e- Indrani ^{5,7} (Rock salt)	Salt	Vaginal pessaries/Locally on glans penis	Before coitus
20	Neem ¹⁸ (<i>Azadiracta indica</i>)	Seeds oil	Oral	After menstruation
21	Naushadar ⁵ (ammonium chloride)	Salt	vaginal	After menstruation
22	Na'na ^{5,6,8,15,18} (<i>Mentha arvensis</i>)	Leaves juice	Vaginal pessaries	Before coitus
23	Patsan ¹¹ (<i>Hibiscus sabdariffa</i>)	Seeds powder	Oral	After menstruation
24	Qaranfal ¹⁷ (<i>Syzygium aromaticum</i>)	Buds powder	oral	After menstruation
25	Qatran ^{5,6,7,8,18} (<i>Pinus sylvestris</i>)	Oleo-resin	Vaginal pessary / Locally on glans penis	Before coitus
26	Suddab ^{7,17,18} (<i>Ruta graveolans</i>)	Leaves juice / powder	Vaginal pessaries	After menstruation
27	Shibbat ⁵ (<i>Anithum sowa</i>)	Leaves / seeds	Oral / vaginal pessaries	Before coitus
28	Saqmoonnia ^{8,15,17,18} (<i>Convulvus scammony</i>)	Gum powder	Locally on penis as liniment	Before coitus
29	As ¹ ¹⁸ (Honey)	As such	Local	Before coitus
30	Ward ⁵ (<i>Rosa damascus</i>)	Petals	Oral	After menstruation
31	Zaj ¹⁸ (Aluminium hydroxide)	salt	Vaginal pessaries	After menstruation

Pharmacological Studies on Single Drugs

Suddab (*Ruta graveolans*)

Ethanol extract of *Ruta graveolans* and *Cannabis sativa* in adult wistar male rats showed significant reduced spermatogenesis. The effect of *Ruta graveolans* was more than *Cannabis sativa*. Both the drugs showed significant reduction in the epididymal sperm counts.²⁰ In another study Immobilization effect of aqueous extract of *Ruta graveolans* on human sperm was carried out at different doses. The sperm immobilization effects of the extract appeared immediately in a dose dependent manner and 100 % of the sperms become immotile at a concentration of 100 mg/ml.²¹

Badrooj (*Ocimum basilicum*)

Hydroalcoholic extract of *Ocimum basilicum* leaves in female wistar rats shows anti ovulatory activity by disrupting estrus cycle and prolonging diestrus phase.²²

Neem (*Azadiracta indica*)

This drug is found to have spermicidal activity on *in vitro* studies. Sperm motility declined significantly on the use of this drug and the fructose concentration of seminal vesicles also significantly reduced.²³ when used intra vaginally the oil prevented pregnancy in rats (20 µl), rhesus monkeys and women (10 ml). The oil did not reveal any side effects on repeated application as confirmed by Histopathological

studies on reproductive organs or other tissues where as oral dose of as low as 25 µl oil demonstrated a complete anti-implantation effect in rat.²⁴

CONCLUSION

For centuries herbal preparations have been connected with the goal of preventing, and or disrupting pregnancy. Modern scientific research has confirmed anti-fertility effects in at least some of the herbs tested like Suddab (*Ruta graveolans*), Badrooj (*Ocimum basilicum*) and Neem (*Azadiracta indica*). Yet there is a need of further animal as well as clinical studies to establish the efficacy of above mentioned drugs.

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