CONTRACEPTION IN ANCIENT AND MODERN EGYPT

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ABSTRACT

The Islamic religion does not prohibit contraception.

Ancient Egyptian, Islamic and current methods of contraception are reviewed.

INTRODUCTION

Islamic authorities agree that contraception is permitted when there is a valid reason for it, whereas abortion is considered sinful unless without it greater harm would ensue, such as the death of the mother (1).

The Prophet Mohammed urged his people to increase their numbers. This was valid when moslems were counted in hundreds or thousands.

Now they number 800 million, so it is not necessary for them to reproduce at a great pace. Quality rather than quantity is now more important. It is stated in the Hadith that people used the method of coitus interruptus to avoid pregnancy. In the **Koran,** Surat El Khaf says that money and children are the best things in life. Some people cite this as an objection to birth control without mentioning the rest of the Surah which states that good works and workship are better than money and children.

When the mother of Anas Ibn Malek asked the prophet to make a wish for her child, he prayed that God would bless him with increased wealth and children. Priority is given to wealth in the Prophet's prayer. If a boy grows up to have too large a number of children he cannot be rich.

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In Surat Hood reference is made to the effect that God provides for every individual on earth. People who quote this Surah and state that it is therefore unnecessary to worry about birth control forget that one must work for one's share of God's bounty.

The Moslem people must be assured that the Islamic religion does not prohibit contraception (2—4). Infertility creates unhappiness, but controlled fertility creates great happiness. The Egyptian people, therefore, should be made aware of the various ancient and modern contraceptive techniques in order to help eliminate the present problem of the population explosion.

Contracption in Ancient Egypt

The oldest medical prescriptions for contraception are to be found in certain Egyptian papyri.

The Petri papyrus was found at Kahum in 1889 and dates from the time of Amenemhat III, 1850 B. C. Prescriptions in this paper : To prevent conception ... crocodile dung cut up (?) on anyt paste, sprinkled ... ; one pint (henu) of honey, consperge in vulvan ejus (sprinkle on her uterus), this to be upon Sehem (?) of natron ; upon anyt gum, consperge in vulvam ejus (sprinkle on her uterus).

Dawson has well summarized (5) these prescriptions :

The first consists of crocodile's dung mixed with a paste-like vehicle, and is probably a pessary for insertion into the vagina. The second consists of irrigating (or plugging) the vagina with honey and natron (native sodium carbonate), and the third mentions a gum-like substance for insertion into the vagina.

The **Ebers papyrus** dates to 1550 B. C. and is described as the most ancient book in the world (6). Prescription in this paper : In order that a woman should cease to conceive for one, two or three years, tips (?) of acacia D'r. t ; triturate with a measure of honey, mosten lint therewith and place in her vulva.

The tipe of the acacia contain gum arabic which, under fermentation, liberates lactic acid anhydride which readily dissolves in water to yeild lactic acid. Gum arabic, or gum acacia, is generally used in the production of contraceptive jellies as a vehicle or medium.

The **Berlin papyrus** dates to 1300 B. C. Prescription in this paper : Fumigate her in her vulva with mimi (a drug) then she will not receive her seed. Afterwards give her a prescription to get rid of it ; grease, m'atet herb, sweet ale. Cook them. To be swallowed for four mornings.

Ancient Egyptians used prolonged lactation to reduce fertility. One writer (7) has declared that primitive Egyptian women were not expected to bear children more frequently that once every three years and that accordingly they nursed their children for a corresponding period.

The Kings of Lydia, Adramyttes and Gyges, castrated the women of their (harems) in order that they might continually be used with the full bloom of youth and beauty (8).

Striking is the fact that all of the Egyptian recipes mentioned above seem to have been dependent upon the female. This is in accordance with the best modern theortical thought on the subject. As the woman experiences the travail of childbearing, it is preferable that control should be in her hands.

In analyzing these prescriptions, it seems that those in the **Petri papyrus depend more upon physical than chemical features, those in Ebers** combine both physical and chemical features, while the **Berlin** combine both physical and chemical features, while the **Berlin** prescriptions are magical.

Pre-Islamic arabs were not unfamiliear with the problem of too many mouths and too little food. At leat three of their social customs female infanticide, polyandry and tribal raids, were crude but effective checks on excessive fecundity.

The Prophet Mohammed brought a message of hope and prosperity. As a great statesmen he established unity among the tribes and opened the path for a glorious expansion. The Islamic Community challenged the Roman and Persian Empires. Next to faith, it needed numbers. Marrige and procreation of children were encouraged (9). When the Islamic religion became widespred, the people began to think of different types of contraception.

Al-Razi was the greatest Islamic clinician, and in fact the greatest physician of the Middle Ages (10). He applied chemistry to medicine and studied the history of contraceptive medicine. There are approximately 24 prescriptions in his tenth century treatise **Quintessence of Experience.** One example follows.

Occasionally it is very important that the semen should not enter the womb, as for instance when there is danger to the woman in pregnancy, or, if it has entered, that it should come out again. There are several ways of preventing its entrance. The first is that at the time of ejaculation the man withdraw from the woman so that the semen does not approach the os uteri. The second way is to prevent ejaculation. A third method is to apply to the os uteri before introgression some drug which blocks the uterine aperture or which expels the semen and prevents conception, such as pills or pessaries (suppositories) of cabbage, coloynth pulp, bryony (?), iron scoria (?), tamarisk dew (gum ?), pich, ox gall, inner skin of a pemegranate, animal's ear wax, the ? of a mulberry bush, elephant's dung, scammony, and white wash. These may used alone or in combination.

Ali Ibn Abbas in his tenth century treatise **The Royal Book** (chapter 28) wrote on that which prevents conception.

As to the remedies which prevent conception, although it ought to be a duty not to mention them in order that they might not be used by certain ill-famed women, it is nevertheless indispensable to administer them to those women who have a small uterus, or to those suffering from a disease which would render gravidity so dangerous that the patient might die during parturition. Except for women in such predicaments the physician should never import contraceptive information to women, nor should he prescribe remedies calculated to suppress the menses, nor remedies for causing abortion except to trustworthy women. Conception will be prevented if women insert rock salt (milh andarani) into the vagina during coitus or induce the man to anoint his penis with the same meterial or with tar ; or if a woman inserts the flowers and seeds of cabbage (kurunb) and the juice of rue (sadhab) during or after coitus ; or carries in her vagina the rennet of rabbit or the leaves or fruits of the weeping-willow (gharab).

It is clear from the words of Ali Ibn Abbas that he is sensitive to the possibility of misuse of contraceptive knowledge as he wished contraceptive information to be given only by physicians. He outlined medical indications for contraception, but he nsglected to mention economic indications.

Ibn Sina (980—1037) in the **Canon** presented the following prescriptions for the prevention of contraception.

Partners should avoid simultaneous ejaculations (orgasms). The Woman should rise at the end of coitus and jump backwards seven or nine times. In this way the sperm may conceivably come out. Jumping and leaping forward causes the sperm to remain. Another way to avoid the sperm is to provoke sneezing. The woman must also be careful to smear tar in the vagina before and after coitus and to anoint the penis with it, or else anoint it with balm oil and white lead.

Another recipe is for a woman to insert before and after coitus the pulp of pomegranates with alum, or she can insert the flowers and seeeds of cabbage during the period of purity (i.e., after menstruation). The use of the latter before and after coitus is also an efficient means for the same purpose, especially if mixed with tar or dipped into a decoction of the juice of pennyroyal. Insert intravaginally the leaves of the weeping-willow after purity in a flock of wool, especially if dipped in the juice of the weeping-willow. The same is obtained by equal parts of pulp of colocynth, mandrake, iron dross, sulphur, scammony and cabbage seeds, collected, mixed with tar and inserted (pessary). Inserting pepper after coitus likewise prevents conception and so does the insortion of elephant's dung alone or in fumigations at the times mentioned previously. It is also useful to drink three okas (pints) of an infusion of sweet basil. If the penis, particulary the glans, is anointed with sweet oil before coitus, conception is prevented. Likewise the leaves of bindwed (lablab) prevent conception if women insert them after their purity.

Ismail al-Jurjani's book **Treasure of Medicine**, dedicated to the King of Khwarazm, was probably the first medical encyclopedia written in Persian rather than Arabic. He lived in the first half of the 12th century (1135) and followed mainly the same lines of Ibn Sina for prevention of conception.

Ibn al-Jami was a jewish, Egyptian physician of the 12th century. The following contraceptive recipes are taken from his **Book of Right Conduct.** Anticonceptional means : Anointing the penis before copulation with the expressed juice of onion will prevent conception. Likewise, conception will be prevented if a woman iserts after purification a tampon impregnanted with peppermint juice, pennyroyal or the seeds of leek. Moreover, a woman may insert pessaries made from myrrh (murr), apopanax, rue and hellebore kneaded with ox gall.

Ibn al Baitar was born towards the end of the 12th century and died in 1248 in Damascus. In his chief work a **Treatise on Simples** are the following prescriptions. It is said that the rennet of earthly hare, taken for the three days which follow the period, will cause a woman to become sterile. It is said that Hedysarum, a plant which has a smal bitter fruit, if used with honey as a suppository before coitus, will prevent conception. If a woman urinates on the urine of a wolf she will never be a child. If she takes the right testicle of a wolf, rubs it with oil, puts it on wool and uses it as a suppository she will lose all venereal desire.

Dawud al-Antaki was a Syrian physician who lived in Cairo and died in Mecca in 1544. Islamic contraceptive techniques reached a very low level and became mainly magical in the 16th century and this is shown in al Antaki's book **Kitab at-Tadkhira.**

Attention has been placed on the above few works in spite of the fact that there are others in many Arabic lands which would need several years of research. The extent to which contraceptive practices were actually used by Islamic people is not known, but it is known that they were not forbidden by religion. A report (11) on modern Mecca shows that certain contraceptive folk practices have persisted into very late modern times.

Contraception in Egypt in the 20th Century :

Today a world socio-economic problem exists due to a population explosion. It is estimated that the world's population increased by 85,000 to 100,000 per day, or about one million persons every 10 to 12 days. We have seen historically that fertility control was developed to meet individual family requirements, but it now has a wider scope as certain governments have advocated and / or are supporting national programs in an attempt to limit population growth to the social and economic capabilities of their geographic areas. A rapid population

growth can seriously hamper efforts to raise living standards, to further education, to improve health and sanitation, to provide better housing and transportation, to forward cultural and recreational opportunities, and, in some countries, to assure sufficient food. In short, the human aspiration common to men everywhere to live a better life is being frustrated.

The popultion of Egypt is now about thirty million and it is increasing at a rate of about 2.6% per annum. As a result of a decline in mortality rates due to up-to-date medical services in Egypt the population growth rate threatens to become even greater. If birthcontrol is neglected, the expected rate of growth of the population will soon be 3.5%. Such an increase in population will naturally lead to a low social, economic and national position of Egypt. We are now approaching the realization of the High Dam of Aswan which will improve the nation's income by increasing the productivity of the land. But if the population continues to grow at the present high level the considerable gain from the Dam will be lost.

Currently, a great deal of medical research involves studies which should provide better methods of contraception for males as well as females. In 1898, Beard (12) suggested that the corpus luteum might be involved in the suppression of ovulation. Many ivestigators confirmed this in different species (13—15), and in 1934 crystalline progesterone was isolated (16—20). It had been noted that estrogens produced a delay or suppression of ovulation. In the early 1950's Rock (21), using oral crystalline progesterone and diethylstilbestrol in increasing doses, maintained women anovulatory and amenorrheic. Spurred on by the confirmation of Chang et al. (22) in experiments with rabbits, and by Makepeace et al. (23), and similar experiments with rats (24), Pincus (25) applied the newer synthetic progestogens in animals. Subsequently, Rock et al. (24) applied these to the human female in the form of the oral contraceptive pill.

Although progestational steroids of the 19-nor series have been shown to have ovulation inhibiting effects when the pure compounds are used (27, 28), early clinical trials employed 19-nor progestins either contaminated with a significant amount of estrogen or with estrogen purposely added for various clinical reasons.—It was not until 1963 (29) that it was realized that the estrogens alone could account for most, if not all, of the antifertility action of these contraceptive preparations.

It is accepted beyond dispute that oral contraceptives are superior to all other methods used nowadays. They have an efficiency, when taken according to instructions, of virtually 100% for prevention of pregnancy (Table 1). There use is becoming increasingly widespread and it is estimated that over 10 million women have used these agents (Table 2).

TABLE 1

Average Pregnancy Rate Per 100 Woman Years of Exposure for Various Methods of Contraception (30—32)

Method	Pregnancy Rate (%)
Douche	37.8
Rhythm	24
Foam tablets	22
Jelly alone	20
Withdrawal	16
Condom	14.9
Safe period	14.4
Diaphragm	12
Intrauterine devices	5
Sequential orals*	1.4
Combined orals +	0.2

* Calculated on the basis of total or grand total number of cycles used (13 cycles = 1 year).

\+ Calculated on the basis of total cycles and pregnancy rate.

TABLE 2

Estimated World Census of Women Using Oral Contraceptives (33)

Area	Number of Users X 10^3
North America	5,450— 6,050
Latin America	1,850
United Kingdom	415— 550
Europe	390— 750
Australia	465— 480
New Zealand	130
Far East	400
Near East	450
Africa	100
Grand Total	9,650—10,760

As a result of the efforts of the Egyptian National Supreme Council for Birth Control, established in 1965, the oral «pills» are used in both cities and villages. The Council has made use of the existing 2,000 Health Centres (34) distributed uniformly all over the country. Each Centre has at least one qualified doctor, a midwife and a nurse. Some of the Centres have a social worker as well. New Family Planning Centres have been opened, specially in Cairo with its population of some four million, and provide advice and contraceptives at less than cost prices. Socially there has been no difficulty in implementing a family planning policy in Cairo, and the campaign is proving to be highly successful (35).

In addition the Family Planning Centres, research is going on in Egypt which is directed mainly toward studying the effects that may be encountered in persons using these pills for long periods.

The alternate method of contraception nowadays is the intrauterine device. Such devices have been used for over 2,000 years in a variety of gynecologic disorders as well as for the control of fertility. Scientific writings on this subject were extensive during the 19th centry. A resurgence of interest occurred in 1930 when Grafenberg

(36) reported on a series of over 2,000 insertions of intrauterine devices for contraceptive purposes. The failure rate with his silver ring was 1.6%. In 1959, Oppenheimer (36) gave results on the use of a modified Grafenberg ring. In Japan, Ota (36) was the first to utilize plastic materials for intrauterine contraceptive devices. The chief advantages of the newer forms resulted from the use of relatively inert plastics and stainless steel, and from the development of new techniques of insertion that do not require dilation of the cervix. Intrauterine are used in family planning centers in Egypt which are affili ated with a university medical school. Until sufficient personnel are trained this situation will continue to exist (37).

The condom, or sheath, was used by early Egyptians for protection against diseases until the 19th and 20th centuries when it was used for contraceptive purposes. However, vulcanization of rubber, and later the introduction of the latex condom helped promote the universal use of the sheath for contraception.

Ligation of the Fallopian tubes is still done in quite a large number of Egyptian women (37). Vasectomy in men is not significant in Egypt (37).

In a study of 401 women attending four family planning centres in Egypt, two urban and two rural, to receive the pills for contraception, the majority (65.3%) had previously employed some form of contraception that was either unsccessful or annoying. They were therefore keen to adopt the oral method. The methods of contraception previously used are shown in Table 3. below.

TABLE 3

Contraceptive Methods Used by Some Egyptians

Centre	None	Cap	Condom	Chemical	Coitus interruptus	Traditional	Oral	More than one method
Urban	32.3	7.8	9.1	16.1	5.5	7.5	18.5	3.1
Rural	38.8	12.2	4.8	2.7	0.0	13.6	24.5	3.4
% Total	34.7	9.5	7.5	11.2	3.5	9.7	20.7	3.2

The effects of oral progestogens on gonadotropin production are well known (39,40), and prospects for progestogens acting for up to one to three months are promising. A modification of the original pill which requires a daily dose has been tested in South America. It is the «once-a-month pill» containing the steroid called Quinestrol which is stored in body fat after administration and is slowly released during one cycle. Moreover, research is going on to find a dosege of steroids which will prevent pregnancy for longer periods which may be up to a year. This may be achieved by implanting under the skin a capsule made of Silastic containing the steroids required. This silastic material is nonreactive to body tissues and fluids, resists clogging and does not support bacterial or fungal growth. The steroids contained in this capsule would be released very slowly but in sufficient amounts to act as a contraceptive.

Immunologic studies on the male are being carried out. Sperm per se are strongly antigenic when injected into animals of other species. The process of immunologic methods for contraception in the male are of great interest.

It is apparent that ancient Egyptians desired to limit the size of their families when necessary. We are now faced with the problem of a population explosion which is leading us to a difficult economic position despite the fact that we decided to double our national income at least once every ten years following the 1952 revolution. Deep awareness of the necssity of planning in th life of an individual is the decisive solution to this problem. Nasser (41) has said that this awareness will change an individual's feeling of submission to fate and replace it with a feeling of responsibility which, in turn, will drive the individual to planning.

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