

MEDICINE IN ANCIENT EGYPT

Ancient Egyptians had a widespread reputation for their medical knowledge. Homer's *Odyssey* mentions that the physicians of Egypt were skilled beyond all others, and Warren R. Dawson (1924) wrote, "There is no doubt that ancient Egyptians were a highly gifted people with a great capacity for practical achievement." Herodotus said that each of the physicians of Egypt was a specialist who had committed himself to the study of one particular branch of medicine. Many of the foundations of medical science were established in Egypt more than fifty centuries ago. We can document this with the rich archival material left behind by the ancient Egyptians. Time has spared for our admiration a mass of documentary evidence, the so-called medical papyri (Nunn, 1997: 30–41).¹

PRACTICED MEDICAL SPECIALITIES

There were many Egyptian physicians, since they specialized in the treatment of one specific disease. Reportedly, there was specialization in the following fields.

Gynecology and obstetrics

According to the Kahun and Carlsberg VIII (Copenhagen) papyri, determining whether a woman would or would not be able to bear children was accomplished by keeping a bulb of onion or garlic in her *iuf* (vagina) over night until dawn. If the specific odor of either appeared in her mouth, she would be able to bear children. The scientific foundation of this fertility test is that onion and garlic contain volatile oils which pass from the cervix through the uterus to the fallopian tubes and, if these are unobstructed, reach the peritoneal cavity which has a very high absorbency to circulation. The route of excretion of these volatile oils is the respiratory tract.

For a pregnancy test, *emmer* (wheat) and *it* (barley) were moistened with the woman's urine daily. If they both grew, she would bear a child. If the barley grew, the child would be a male; if the wheat grew, it would be female. If neither grew, the woman was not pregnant. Ghaliounghui, Khalil, and Ammar

put this technique to the test in 1963: there was no growth of either seed when watered with male or non-pregnant female urine. With 40 specimens from pregnant women there was growth of one or both species in 28 cases. Thus, growth seemed to be a good indicator of pregnancy. The prediction of sex was correct in 7 cases and incorrect in 16.

As they were very observant, the ancient Egyptians recognized dilated veins over the breasts as an important physical sign for early indication of pregnancy. In the Kahun Papyrus we read:

The woman lies down while you smear her breast and her two arms and her two shoulders with new oil. You rise early in the morning to examine her. If you find her blood vessels, metu, fresh and good and none being collapsed [literally: sunken], bearing children will be hetep, [i.e. happy or satisfactory]. If you find them collapsed, this means bened [meaning unknown]. If you find them green and dark, she will bear children late.

Strangely enough this early physical sign is still mentioned in our latest obstetrics and gynecology books. The urine wheat and barley test was used in Germany in the 18th century AD (Westendorf, 1992).

Prolapse of the uterus was described in the Ebers Papyrus. The components of the remedies to be drunk, or smeared on the pubic region, or applied to the umbilicus, or rubbed on the limbs, or to fumigate the vagina, give no clue to the meaning of their use. There are many remedies for "cooling the uterus and driving out heat". Whether this heat means inflammation or pain is not clear, nor is its pathology. Again, whether *setet* of the uterus means mucus coming from the uterus or pain as suggested by Dawson (1934) is not known, and even the treatment does not give any clue to the condition.

Amenorrhea had a clear definition in the Ebers Papyrus. Not clearly defined was excessive bleeding (menorrhagia), but there were drugs to draw out the blood from a woman. Discharge from the uterus, *khaau*, was also described.

Breast diseases were included in the gynecological section of the Ebers Papyrus. The most important description was that of breast cancer. "If you examine a breast swelling with the flat of the hand and you feel it like an unripe pear, tell the relatives of the patient: this is a disease for which I cannot do anything. It is humanitarian to tell the relative, not the patient". It speaks highly of the achievements and ethics of ancient medicine that our medical students are taught the same description of clinical examination (Shafik, 1998).

Giving birth

Women were delivered while squatting on two large bricks or while sitting in a chair from which the center of the seat had been removed. Two or three women, not *SWNW* (doctors), assisted women in labor, at least among the nobility. Most of the few Egyptian pictures of birth show the infant emerging head first, as is normal. It is important to mention that labor in a squatting position or on a bottomless chair is considered far less painful than in the conventional supine position in bed (Fayad, 1996).

The first specialized hospitals for antenatal care were established in Egypt 4000 years ago. A separate room called *Mameze* was built in the house garden

or upper story to isolate the mother for two weeks after giving birth and to protect her from puerperal sepsis.

Contraceptives

The ancient Egyptians practiced family planning. For example, contraceptive devices of different shapes and sizes were inserted into the uterus. They believed that semen was formed in a man's heart and stored in the holy bone called the sacrum. They said, "He gave her some of his heart" and called the role of man in pregnancy the "beautiful role". There is a temple wall showing a sperm beside an ovum, then the division of a fertilized ovum into two, then four cells! (Imam, 1999).

General surgery

Ancient Egyptians practiced topical anesthesia, a necessity for minor operations. By putting vinegar (acetic acid) in a certain concentration over marble stone from Memphis, a cooling effect of carbon dioxide resulted from the interaction with acetic acid. The marble stone thus had an anesthetizing effect.

Within the first six hours after an injury, wounds were sutured with a material manufactured from catgut. If a wound became infected, healers placed fermented pulp of bread inside the wound (acting much as the antibiotic penicillin), or honey, which can kill bacteria by its hygroscopic power, readily absorbing moisture from the wound. If the wound was bleeding, they resorted to packing the wound with flesh (muscle), because they had found that muscle fibers of fresh meat contained coagulants which helped to stop bleeding. This procedure is described in modern textbooks such as Farqharsson's *Operative Surgery* and practiced up to the present day (Elseesy, 1999).

Circumcision

The procedure of male circumcision is very clearly shown in the famous relief on the east doorway to the tomb of Ankh-ma-hor (King Teti, Old Kingdom, 6th Dynasty, 2345 BC) (Figure 1). This relief carries several inscriptions:

(Priest to assistant): Hold him fast! Do not let him fall!

(Assistant to operator, i.e., priest): I shall act for your praise!

(Operator to patient): I will make it comfortable!

Circumcision in Egypt belonged to the domain of the priest rather than of the surgeon. The hygienic aspects of circumcision have been used as arguments to understand its origins. Another possible reason for circumcision is the concept of bisexuality, originating in priestly speculations over the creation of the world by specific gods whom they considered both father and mother of mankind. Accordingly every human being was believed to have both male and female souls. The male soul in girls was located in the vestigial phallus, i.e. the clitoridial eminence, and the female soul in boys was placed in the prepuce, taken to represent the labia. Hence young individual adolescents had to shed their heterosexual outfit before qualifying as integral members of their sex

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