

- The Tomb of Ankh-mahor, at Saqqara which contains several unique medical and surgical reliefs. Among them was a flint knife which some considered as evidence of its remote origin. The most recent surgical research is vindicating the flint instruments of antiquity. It has been found that for certain neurological and optical operations, obsidian possesses qualities that cannot be matched by the finest steel, and an updated version of the old flint knife is coming back into use.
- On the outer corridor wall of the temple at Kom Ombo, a box of surgical instruments is carved in relief. The box includes metal shears, surgical knives, saws, probes, spatulas, small hooks and forceps.

Although no surgical scars have been reported in mummies (apart from embalmers' incisions), there are thirteen references in the Smith Papyrus to 'stitching'. The Papyrus also mentions wounds being brought together with adhesive tape which was made of linen. Linen was also available for bandages, ligatures and sutures. Needles were probably of copper.

Egyptian doctors distinguished between sterile (clean) wounds and infected (purulent) wounds. The former were written using the determinative for 'blood' or 'phlegm' and the latter, using the determinative for 'stinking outflow' or 'feces'. A mixture of ibex fat, fir oil and crushed peas was used in an ointment to clean an infected wound.

Each temple had a full-scale laboratory, where medications were made and stocked.

The Medical Library

Some time ago in pre-Dynastic Egypt, there were six books on medicine, which were attributed/inspired by or dedicated to Tehuti(Thoth). He is the personification of divine intellect, the patron of Learning and Literature. The first of these medical books was related to anatomy.

Another book on anatomy was written during the reign of Athothis (c. 3000 BCE).

According to a Christian writer, Alexandrinus Clemens, living in Alexandria in about CE 200, the priests of Early Dynastic Egypt had written the sum total of their knowledge in forty two (42) sacred books which were kept in the temples and were carried in religious processions. Six of these books were concerned totally with medicine, and dealt with anatomy, diseases in general, surgery, remedies, diseases of the eye and diseases of women. No examples of these books survived, nor of the anatomy books, said to have been written during Athothis' reign.

Several medical papyri have survived the ages. They contain prescriptions for treating diseases of the lungs, liver, stomach, bladder and for various afflictions of the head and scalp (including recipes for preventing the hair falling out or turning gray). They also contain prescriptions for rheumatic and arthritic complaints and for woman's diseases. The following is a summary of the major medical papyri:

Edwin Smith Papyrus

- It has been dated to about 1600 BCE. The presence of Old Kingdom words in the text, suggest that the Papyrus was copied from earlier work around 2500 BCE when the pyramids were built.

This is the earliest book of surgery in the world. It contains a total of forty-eight surgical cases, of traumatic nature, methodically arranged from the head and generally going down the body to the lower limbs.

- Each case is preceded by a brief caption expressing a summary diagnosis, followed by another detailed diagnosis, a brief but clearly formulated prognosis and sometimes the therapy.
- The diagnosis was established, after extraordinarily precise observations had been made. In its conclusion it proposed three possibilities: a doctor could act with full success, he could try, with some chances of success, or he stood no chance at all, in

which case he should do nothing.

The techniques were numerous and varied. Fractures were properly set, splints were applied, and wounds were sutured. There was a sort of adhesive plaster that worked wonders with broken bones. Perfectly healed fractures can be seen in numerous mummies.

- The most exciting sentences are to be found right at the beginning of this papyrus:

The counting of anything with the fingers [is done] to recognize the way the heart goes. There are vessels in it leading to every part of the body ... When a Sekhmet priest, any doctor ... puts his fingers to the head ... to the two hands, to the place of the heart ... it speaks ... in every vessel, every part of the body.

The medical papyrus proves that the Egyptians understood the relationship of the heart to the circulation of the blood, and that they believed the heart to be the source of life within the body, and they felt the pulse and measured it, by comparison with their own pulses.

- The Egyptians also believed that all the 'inner juices of the body' flowed through vessels radiating from the heart and collected at the anus, whence they could again be redistributed to various parts of the body. Air, blood, urine, mucus, semen and feces flowed around the system, usually in harmony, but occasionally getting out of hand and thence causing an illness.
- The Smith Papyrus contains what is probably the first documented description of the human brain:

When you examine a man with a ... wound on his head, which goes to the bone; his skull is broken; broken open is the brain of his skull ... these windings which arise in poured metal. Something is there ... that quivers (and) flutters under your fingers like the weak spot in the head of a child which has not yet grown hard ... Blood flows from his two nostrils.

- Advances in modern neurology prove that the Egyptians understood, in detail, the workings of the nervous system, and the relationship between the areas of the brain and the manner in which these areas controlled the bodily functions.

Ebers Medical Papyrus

- The date of its origin is about 1555 BCE. It is considered to be a manual for the teaching of anatomy and pharmacy.
- It contains 876 remedies and mentions 500 different substances used in medical treatments.
- The Ebers Papyrus describes treatment of and prescriptions for stomach complaints, coughs, colds, bites, head ailments and diseases; liver complaints, burns and other kinds of wounds; itching, boils, cysts and the like, complaints in fingers and toes; salves for wounds and pains in the veins, muscles and nerves; diseases of the tongue, toothache, ear pains, women's diseases; beauty preparations, household remedies against vermin, two books about the heart and veins, and diagnosis for tumors.

Berlin Papyrus

- It has been dated between 1350 and 1200 BCE.
- It deals with childbirth and infants.
- It contains a test for pregnancy, which recognized that urine carried the pregnancy factor. It calls for steeping some wheat and some barley in her urine. If the wheat sprouts, it will be a boy, if the barley sprouts, it will be a girl.
- In 1963 Ghalioungui found that, whilst urine from non-pregnant women prevented the growth of (modern) barley and wheat, it proved impossible to detect the sex of an unborn child from the rate of growth of either grain, possibly because the grains and the soils were both different in ancient Egypt. Nevertheless, the fact that the Egyptians recognized that urine carried the pregnancy factor was remarkable. The standardization of reliable