

The Medical Knowledge of the Ancient Egyptians.

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II.—THE ALEXANDRIAN PERIOD.

If the Alexandrian epoch came when all the former glory of Egypt had vanished, with medicine it was the reverse. Untrammelled by priestly superstition, but in the hands of a comparatively new people, it advanced by leaps and bounds. Never before (and only again within the last hundred years) has the healing art seen such palmy days. Men—strong, earnest, *thinking* men—arose, capable of methodically probing the mysteries of science and correctly interpreting what they found, and learning was fostered and encouraged by a dynasty of monarchs anxious for its advancement. We owe a debt of unalterable gratitude to these men for teaching the world truths which serve in great part as the basis on which is founded modern learning, and their names will live as long as human knowledge.

Alexandria was founded B.C. 332 by Alexander the Great, with the design of making Egypt the centre State of his Empire. At his death Ptolemy, the son of Lagus, received the city as his share of the Empire, and, being a man rather above the ordinary, he founded there the first university the world had seen, and which contained at one time no less than 14,000 students. He brought artisans and learned men from Greece, built lecture rooms, laid out zoological and botanical gardens and recreation grounds, and founded the magnificent library, which contained papyrus rolls whose number has been computed by Epiphanius at 54,800, and by Ammianus Marcellinus and Gellius at 700,000. It has been said to have possessed in the time of Ptolemy Philadelphus (B.C. 260) 400,000 works. One cannot help comparing this library with that of Oxford, which consisted in A.D. 1300 of a few tracts, kept in chests! There was also a smaller library in the Egyptian quarter of the town, which had 40,000 works.

The arrangement of the buildings constituting the university is described by Strabo. The Museum was in the immediate vicinity of the royal palace, and was even treated as a part thereof, the Serapeum being more remote and of less importance. The different houses contained day and night apartments, with great halls for meals and covered colonnades hung with pictures, which opened into large courts and pleasure gardens, well supplied with shady trees.

At the university of Alexandria, for nearly 1,000 years, were taught medicine, mathematics, natural history, chemistry, philosophy, astronomy, jurisprudence, geography, and criticism. The subject first named

alone concerns us here. There were two medical schools, founded by different individuals, but guided by similar scientific principles, and these were headed respectively by Herophilus and Erasistratus, two men whose fame has left their names well known to every student of medicine (even if only in connection with anatomical structures they described), and whose lives, illustrating our subject as they do, require at least a brief review here.

Herophilus was born B.C. 300, at Chalcedon, and received most of his education from Chrysippos of Knidos and Praxagoras of Kos. The former individual was especially remarkable for his disapproval of the too frequent employment of blood-letting and drastics; he endeavoured to set fractured limbs by bandaging, and recommended vapour baths for dropsy. Praxagoras wrote many medical works. Herophilus rose to considerable eminence, and his life was written by four doctors. He was a skilled anatomist, and the work he did in examining the nervous system lives to this day. He described the membranes of the brain, the choroid plexuses, the torcular Herophili (named after him), the cerebral ventricles, and the calamus scriptorius; he traced the nerves to the brain and spinal cord and recognised their sensory and motor distinctions. In the eye he described the vitreous, choroid, and retina; he remarked the form of the duodenum, and that the arteries had thicker walls than the veins, and he noted that the left spermatic vein joined the renal. In medicine he recognised the variations of the pulse, referred them to the movements of the heart, and laid the foundation for the scientific treatment of its indications. In surgery he drew attention to the fact that dislocations of the femur tended to relapse after reduction on account of the destruction of the ligamentum teres. According to Stobæus, Herophilus replied, when asked who was the best doctor, "He who knows how to distinguish the possible from the impossible."

Erasistratus was a native of Julis, in Keos, and was taught by Chrysippos of Knidos, and Metrodorus, the son-in-law of Aristotle. A good part of his life was passed at the court of Seleukos Nicator, and both Pliny and Plutarch relate that when the King's son Antiochus was ill, Erasistratus recognised, by the agitation he showed at the sight of his stepmother, that his trouble was due to his hopeless love for that lady.

Erasistratus described the cerebral convolutions, and considered their greater intricacy in man to be due to his intellectual superiority. Like Herophilus, he distinguished between the motor and sensory nerves, but, unlike him, erroneously believed the former to have their origin in the membranes of the brain. He recognised the pulmonary arteries and assumed their anastomosis with the veins, and he also described accurately the cardiac valves,

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