## Ali ibn Abbas al-Majusi and Medical Ethics

On the Occasion of September 18, World Medical Ethics Day

Medical ethics is primarily a field of applied ethics and Iranian physicians have too much attention, paid to it. Majusi was an Iranian physician, who was a pioneer in medical ethics.

Ali ibn Abbas al-Majusi (c.925-994) known as Masoudi, was born in Ahvaz City, located in the southwest part of Iran on the banks of Karun River. Ahvaz is the capital of present Khuzestan Province. Majusi, known to Europeans as Ali Abbas or Haly Abbas, (1-3) came from a Persian family with Zoroastrian forebears, but he himself was a Muslim(1,2).

He is considered as one of the greatest physicians of his time. He rapidly rose to fame because of his medical encyclopedia called The Complete Book of the Medical Art (in Arabic: Kitab al-Maliki) which is a textbook on medicine specially psychology and psychophysiology and also contains many ethical parameters(1,2). He completed the book circa 980. Kitab al-Maliki was dedicated to Amir Adhud al-Dawlah Fana-Khusraw, the ruler of Persia who was founder of hospitals in both Baghdad and Shiraz and the Royal one named Kamilu Sina'at (1,2,4).

Kitab-al-maliki is among the most systematic, practical and concise medical encyclopedias consisting of twenty treatises on the theory and practice of medicine. First half of each chapter includes some discourses regarding medical theories and the second part is about practice of medicine. Every topic comes with examples and clinical observations (1,2,4).

He describes medical ethics and the importance of a healthy relationship between the physician and patients. The book provides details on a scientific methodology that is similar to modern biomedical researches and the author also refers to his studies on using indigenous medicinal plants, animals and mineral products as a therapy (2,4,5).

Neuroscience and psychology were discussed in The Complete Art of Medicine as well. Majusi described how the physiological and psychological state of a patient can affect one another (3). He recognized the important connection between the psychological and physical health, discussed metrology, hygiene, human behavior, surgery, childbirth, poisons (their symptoms and antidotes), drug addiction and abuse, and upheld the principals of the Hippocratic Oath. He found a correlation between patients who were physically and mentally healthy and those who were not, and concluded that joy and contentment can improve the quality of life. He believed that misery was the result of unnecessary sadness, fear, worry and anxiety (1,2). Majusi emphasized on propagation of health measures to preserve a healthy body and mind including a healthy diet, rest, work, bathing and physical exercise. He especially laid greater stress on maintaining the health through diet and natural healing (1).

He also discussed the neuroanatomy, neurobiology and neurophysiology of the brain. He described the brain as the center of sensation and movement, and explained spastic and flaccid paralysis in spinal cord disease. He depicted the spinal cord and its 31 pairs of nerves, 8 cervical, 12 thoracic, 5 lumbar, 3 sacral, 3 coccygeal, and a single nerve below the coccyx. He described 7 pairs of cranial nerves, each covered intra-cranially by two layers of dura, a thin intima layer containing blood vessels, and a thick layer for protection (1,3).

He also discussed the following neurologic conditions: headache, stroke, epilepsy, dementia, coma, schizophrenia, skull fractures, hot and cold meningitis, vertigo, epilepsy and hemiplegia.

He discussed various mental disorders including sleeping sickness, memory loss, hypochondriasis and love sickness.

Additionally, there is a rudimentary conception of the capillary and venous systems in the book (1,2).

Al-Majusi gave an interesting, surprisingly accurate, and almost modern description of pleurisy. He defined theoretical medicine by recognizing three domains: knowledge of human nature, knowledge of things not part of the human nature and knowledge of things outside the realm of the normal condition of the human body. He proved that the motions of the uterus during delivery are the reason for the baby not to come out but to be pushed out (1,2,5).

There is no firm evidence that al-Majusi himself ever left Persia to work elsewhere. The Complete Book of the Medical Art was translated several times into Latin and used in European universities until the 18th century (1,2).

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## Maryam Javanbakht M.D.

Email Address: javanbakht@nritld.ac.ir