

EDITORIAL

MEDICAL SCIENCE LANGUAGES ACROSS HUMAN HISTORY

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The Edwin Smith Papyrus is written in *ancient Egyptian language* around 1,600 BC. The earliest foundations of Ayurveda medicine is written in *Sanskrit* dating from about 600 BC. The foundational text of *Chinese* medicine is the *Huangdi neijing*, (Yellow Emperor's Inner Canon), written 5th century to 3rd century BC. The oldest written sources of western medicine are the Hippocratic writings from the 5th and 4th centuries BC written in *Greek*. During the Middle Ages (800–1,500 AD), *Arabic* was the language of medicine in most parts of the world. Scholars from different parts of the world were gathered in '*Bait ul Hikma*' at Baghdad. They translated scientific works from Greek, Syriac, Pahlavi, and Sanskrit into Arabic. After Renaissance (14th AD), in Europe, both Greek and Arabic works were translated into Latin. *Latin* supplanted Greek as the preeminent medical language and remained so until the early 1800s. Then followed the era of the national medical languages. Since the 1950s, *English* has been the principal language of the medical profession. The global language of medicine in the 21st century is English.

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The Edwin Smith Papyrus is one of the oldest surviving texts of medical literature (medical papyri) and is the world's oldest known surgical document. The Edwin Smith (Surgical) Papyrus is written around 1,600 BC in the hieratic script of the ancient Egyptian language. It is traced to about the 16th to 17th century BC but actually it is the only surviving copy of part of a much older treatise on trauma surgery from about 3,000 to 2,500 BC.¹ The Atharvaveda, a sacred text of Hinduism dating from the Early Iron Age, is one of the first Indian texts dealing with medicine. The Atharvaveda also contains prescriptions of herbs for various ailments dating from about 600 BC. The foundational text of Chinese medicine is the *Huangdi neijing*, (Yellow Emperor's Inner Canon), was written during 5th century to 3rd century BC.²

The oldest written sources of western medicine are the Hippocratic writings from the 5th and 4th centuries BC. Catarrh (downflow), diarrhoea (throughflow), dyspnoea (bad breathing) and melancholic (pertaining to black bile) are the remnants of Greek legacy. At the beginning of the first century AD, Aulus Cornelius Celsus wrote *De Medicina* in Latin. He imported a few Greek terms directly and he Latinized other Greek words, writing them with Latin letters. So, in his and other Latin texts some of these words are the original Greek ones, while others are Latin equivalents introduced by Celsus and his successors.³

The Early Middle Ages or Middle Ages in Western Europe is the period of history after the fall of the Western Roman Empire which is called the Dark Ages (the period between about 500 and 1,000 AD). That was marked by economic, intellectual, and cultural decline in the western Europe – a period of intellectual darkness and barbarity.^{4,5} During this period, world saw

a new phenomenon –the Islamic Golden Age (800–1,550 AD) during which Islamic Empire grew and *Arabic* became the language of medicine in major parts of the world. Many Islamic physicians made outstanding discoveries in all aspects of medicine by building upon the knowledge of Galen and the Greek. They also added their own discoveries. They wrote their thousand pages' books in *Arabic*. They also translated scientific works from Greek, Syriac (the language of eastern Christian scholars), Pahlavi (the scholarly language of pre-Islamic Iran), and Sanskrit into Arabic. Scholars from different parts of the world were gathered in '*Bait ul Hikma*' بيت الحكمة at Baghdad which was established in 830 AD. The most notable Islamic scholar in the history of medicine was al-Razi. Al-Razi, known to the Europeans as Rhazes (may be spelt Rhases, Rasis, Rasi or ar-Razi) (850–923 AD), was at the forefront of Islamic research into medicine. A prolific writer, he produced over 200 books. Rhazes was also famous for his work on refining the scientific method and promoting experimentation and observation. His most famous achievement, when asked where to select a location to build a hospital in Baghdad, was to hang meat in locations around the city, and select the spot where the meat rotted the least. Al-Razi wrote extensively on the crucial relationship between doctor and patient, believing that they should develop a relationship built upon trust and, as the doctor had a duty to help the patient, the patient had the duty to follow the doctor's advice. Al-Razi wrote extensively about human physiology and understood how the brain and nervous system operated muscles.⁶

After Renaissance (French= 'Rebirth' —the period of new growth of interest and activity in the areas of art, literature, and ideas in Europe during the 15th and 16th centuries)⁷, when Greek was no longer widely

understood, both *Greek* and *Arabic* works were translated into Latin, and the era of medical Latin began. Medical Latin continued to be ordinary Latin with the admixture of numerous Greek and Latin medical terms. In Britain, William Heberden's *Commentarii* was probably the last notable medical work to be written in Latin. It appeared in 1802 and Dr Johnson referred to the author as *ultimus Romanorum* (the last of the Romans). In other countries medical Latin survived a little longer: in Denmark, hospital doctors wrote patients' notes in Latin until 1853. Then followed the era of the national medical languages, such as medical English, medical *French*, medical *German*, medical *Italian* and many others. A few of these, especially French, German and English, replaced Latin as vehicles for international communication, but most of the others were only used nationally.³ Today, all the most influential medical journals are written in *English*, and English has become the language of choice at international conferences. We have entered the era of medical English. Whereas in former times new medical terms were derived from classical Greek or Latin roots, now they are often, partly or wholly, composed of words borrowed from ordinary English, e.g., *bypass* operation, *clearance*, *base excess*, *screening*, *scanning* and doctors from non-English-speaking countries now have the choice between importing these English terms directly and translating them into their own language. English acronyms such as AIDS, CT, MRI and PCR are widely accepted and have almost become a noun in their own right.

Greek was the chief language of medicine until around 300 AD when Roman scientists began replacing it with Latin. As the Roman Empire grew, Latin supplanted Greek as the pre-eminent medical language and remained so until the early 1800s. Since the 1950s, English has been the principal language of the medical profession. The global language of medicine in the 21st century is English. It is used by contemporary physicians in the same manner that Greek and Latin was used in earlier times.⁸

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