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PIONEERING UNANI SCHOLARS AND THEIR CONTRIBUTIONS TO THE DEVELOPMENT OF UNANI MEDICINE: A NARRATIVE REVIEW

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Abstract

Unani medicine is an ancient system of healing that originated from the ancient civilizations of Mesopotamia, Egypt, and Greece. It is derived from the medical traditions of ancient Greece, particularly those developed by Hippocrates (Buqrat) and Galen (Jalinoos). Later, Arab and Persian scholars during the Islamic Golden Age refined and expanded these medical principles, resulting in what we currently refer to as Greco-Arabic or Unani medicine. This period, often referred to as the Golden Era of Unani medicine. Several Unani scholars significantly contributed to the evolution of the Unani medical system throughout the centuries. Their contributions led the way to contemporary medicine. Hence, this review focused on compiling the contributions of renowned physicians in the development of Unani medicine.

Keywords: Unani Medicine, Greco-Arabic Medicine, Unani Scholars

Introduction

Assyro-Babylonian medicine is the most primitive medical system developed among the people of southern Mesopotamia in the Babylonian civilization during the fourth millennium BCE. These medical learnings were extended to Egypt and advanced by the significant contribution of Imhotep (2667-2648 BCE), who was known as “God of Medicine” in ancient

Egypt. This medical system was substantially based on spiritual healing, although there was considerable evidence of using herbal medicines. Important treatises such as the Smith and Ebers Papyri, documented during this period, describe disease descriptions and therapeutic methods.[1][2]

Unani medicine is an ancient system of healing that is recognized by the World Health Organization (WHO) as a method of traditional and complementary medicine.[3] Its origin can be traced back to the ancient civilizations of Mesopotamia, Egypt, and Greece, where early methods of healing were employed and recorded. The term 'Unani' is derived from 'Yunan', the Arabic and Persian word for Greece.[4] Unani medicine is derived from the medical traditions of ancient Greece, particularly those developed by Hippocrates (Buqrat) and Galen (Jalinoos). These foundations were later preserved, enriched, and expanded by Arab and Persian scholars during the Islamic Golden Age over centuries, resulting in what we currently refer to as Greco-Arabic or Unani medicine.[5] The exchange of ideas through trade and conquest enabled Greek physicians to inherit and further develop this medical wisdom, ultimately giving rise to the classical roots of Unani medicine. Early Muslim scholars integrated Greek medical knowledge with their own insights. Translated Greek and other ancient texts into Arabic, preserving and expanding medical knowledge.[1][5]

This period, often referred to as the Golden Era of Unani medicine (1300-800 AD), saw the emergence of renowned physicians such as Ibn Sina (Avicenna) and Al-Razi (Rhazes), whose enormous works shaped medical thought for centuries. These scholars, along with many others, enriched Unani medicine by systematizing clinical knowledge, introducing new therapies, and emphasizing holistic healing approaches. Their legacy laid the foundation for the continued growth and global recognition of Unani medicine today.[4][6]

Recognition of the contribution by these scholars is utmost important and is the driving energy for the sustainable advancement of the Unani system of Medicine in the world. Hence, this narrative review focused on compiling the collective contribution of great scholars of Greco-Arabic medicine. Data were extracted from the search engines such as PubMed, Google Scholar, ScienceDirect, and Research Gate using the major keywords “Unani Medicine”, “Greko Arabic Medicine”, “Unani Scholars”, “Contribution of Unani Physicians”, etc.

1. Hippocrates (Buqrat) (460–377 BCE)

Unani Medicine originated in ancient Greece and is deeply established in the teachings of the Greek philosopher and physician Hippocrates (460–377 BCE), also known as Buqrat, who is widely considered the "Father of Medicine." He transformed the practice of medicine by separating it from superstition and magic, highlighting medicine as a science grounded in environmental observation and hereditary factors, concentrating on prevention, diagnosis, and treatment of diseases. As an honor, it is still followed that the Hippocratic Oath is an ethical rule and code of conduct in the medical practice. Hippocrates laid the concept of Humoral theory (Akhlat), where the body is constituted of four humors, namely: Sanguine, Phlegm, Yellow Bile, and Black Bile, and which is responsible for the uniqueness of a particular individual. Imbalance of these four humors leads to disease, while harmony of these leads to a healthier state of body. In case of disease, the physician must reverse the imbalance in these four humors to bring the patient back to a normal state. Thus, he introduced a holistic approach to medicine. He was the first one to introduce numerous medical terms such as *symptoma, diagnosis, therapy, trauma*, and *sepsis*. Further, he has advanced several medical specialties like neurology, surgery, urology, orthopedics, and acute medicine. He has further contributed to the preventive health, which in turn is preserved by the Quwat e Mudabbira (Self-Preservation Power).[7][8]

2. Galen (Jalinoos) (131–210 CE)

Succeeding in Hippocrates's footsteps, Galen, another prominent Greek physician who was also famous in Rome, developed upon Hippocratic theories and made substantial contributions to anatomy, physiology, and pharmacology. He was an excellent anatomist, credited with the invention of arteries transporting blood, not air. He discovered medical tools for surgery and dissection. He dissected the animals to explore the anatomy and came up with the findings of distinguishing the seven pairs of cranial nerves, distinguishing the arteries and veins, and explaining the valves of the heart. Furthermore, he categorized the diseases and symptoms based on their anatomical significance. He initiated the use of pulse, a clinical tool to evaluate the disease. He developed a model for the study of the spine and outlined the vertebral column, spinal cord, and nerves emerging from the spine, which demonstrated his neuroanatomical and physiological knowledge.[9][10][11]

3. Ali Ibn Sahl Rabban al-Tabari (838-870 CE)

Rabban Tabari was a Persian physician and eminent figure in the Islamic Golden Era, inspired by the medical teachings of Hippocrates and Galen. His medical wisdom was a blend of

Persian and Greco-Roman medicine. His remarkable contribution to medicine is the authorship of the book Ferdous al Hekma (Paradise of Wisdom), which covers symptomatology, organ-specific diseases, and therapeutic recommendations. This book is commended and adopted by scholars like Edward Granville Browne and has been translated into several languages.[12] Furthermore, he contributed to occlusion therapy for patients with reduced vision by advocating for covering the healthy eye to improve vision in the weak eye in his book Ferdous al Hekma; thus, he pioneered occlusion therapy for amblyopia.[13] He initiated different subspecialties in medicine, especially pediatrics and pediatric infections. He explained the skin manifestations and involvement of lymph nodes in tuberculosis. He explained about the Indian medical system in Ferdous al Hekma and he translated the book into the Syriac language.[14]

4. **Abu Bakr Muhammad Ibn Zakariya Al Razi (Razhes) (865 - 925 CE)**

Zakariya Al Razi was a renowned Iranian physician who was also a musician, known as "Father of Muslim Medicine", studied alchemy and philosophy, and later medicine under the guidance of Ali Ibn Sahl Rabban al-Tabari. He was a great Muslim physician who greatly influenced medicine, especially in Europe. He was the director of hospitals in Al Rayy and Baghdad in Iran. He initiated the practice of selecting hospital sites by looking at air quality. He has contributed to the advancement of medical science by authoring around 244 books, including the comprehensive encyclopedia Kitab Al Hawi Fit Tibb, featuring 23 volumes covering a wide range of topics, including diseases and symptoms, treatments and therapies, anatomy, physiology, pharmacology, surgery, pediatrics, neurology, ophthalmology, infectious diseases, mental health, etc. As he was a chemist, he discovered sulfuric acid and ethanol. He established case history writing in medical practice. He was the first one to write a monograph on pediatrics, known as Practica Puerorum, and wrote a book on spiritual medicine known as Kitab al Tibb ar Ruhani. Further, he authored a book named "Doubts about Galen" on critiquing Galen's Medical wisdom. He had also emphasized the ethical practices of physicians.[5][15][16][17]

Another remarkable work was Kiatb al Mansoori, consisting of ten volumes that collectively cover practical and theoretical knowledge. The first six chapters deal with theory on anatomy, physiology, pathology, diet, hygiene, and surgery. The remaining chapters focus on practical aspects of diagnosis, treatment, toxicology, therapy, and practical surgery. Another treatise named Al-Judari wal Hasabah was the first book to explain smallpox and measles. He

stated how to distinguish smallpox from measles. He also wrote a book on home remedies named Man la Yahduruhu Teb, which includes 36 chapters for the public to utilize in the absence of a physician. In this book, he has mentioned diets and drugs that are easily available.[17]

5. Abu Ali al-Husayn ibn Abd Allah ibn Sina (Avicenna) (980-1037 CE)

Ibn Sina, a renowned Persian physician and philosopher, has been privileged for his impact on medicine, whose medical knowledge has been applied over centuries in different specialties for various diseases and used in universities worldwide. He was involved in studying various disciplines, including philosophy, metaphysics, natural sciences, literature, mathematics, and science.[18] The "Qanun fi't tibb" (Canon of Medicine) is a treatise authored by Ibn Sina consisting of five volumes covering basic medical principles, drugs, diagnosis, and treatment of diseases, conditions not specific to one bodily part, and compound preparations. It remained the most influential medical textbook for six centuries. He highlighted the principles of quality, quantity and dose to be considered when selecting a medicine for treatment. Furthermore, he described the seven rules for assessing the potency of a drug through experiments, even in human bodies. He emphasized disease prevention and explained the clinical features of gastrointestinal diseases, especially gastritis and gastric ulcer, similar to Western knowledge.[19] In his book, he explained the percussion technique to differentiate intestinal obstruction and ascites. He described the importance of pulse in diagnosing specific diseases and physiological conditions like pregnancy. He also mentioned lifestyle modification as the first basic and least complicated step, while drug therapy, manual therapy, and physiotherapy are the other two basics for treating diseases. He emphasized the role of nutrition therapy in the management of disease through fasting, dietary restriction, and food modification. He treated neurological diseases such as epilepsy and recorded the differences between central and peripheral facial palsy. He examined cervical diseases using a speculum. He also demonstrated surgical procedures for treating infertility due to the blockage of the birth canal by cervical or vaginal mass.[20]

6. Abu Qasim Khalaf Ibn Abbas Al Zahrawi (Albucasis or Zahravius) (936–1013 CE)

Al Zahrawi, known as the Father of modern surgery, due to his revolutionary contribution to surgical practices and medical ethics. He served as the court physician of the Caliph Al-Hakam II during the golden age. He authored a significant encyclopedia in the field of surgery named

Al Tasreef Liman ‘Ajaz ‘Aan Al Taleef (The Clearance of Medical Science for Those Who Can Not Compile It), consisting of 30 volumes. This work expanded knowledge on surgery, medicine, pharmacology, midwifery, psychotherapy, dietetics, therapeutics, medical chemistry, and knowledge on weights and measures. Three chapters were dedicated to describing the surgical procedures and techniques. He was the first to perform thyroidectomy and explained the procedures of eye, ear, and throat surgeries. He provided a complete explanation of tracheostomy and tonsillectomy. He pioneered 200 surgical instruments, describing the probes, scalpels, surgical knives, and hooks. The sketches of these surgical instruments were recorded in the book. Additionally, he launched dental equipment and artificial teeth made from animal bones. He introduced devices to examine the ear and urethra, instruments for removing or inserting objects into the throat, and tools to remove nasal polyps. He utilized cauterization as therapy for several diseases. He treated dislocation and fracture by reduction and setting methods. He described treatment for anal fissure and the removal of urinary calculi. He used ligatures to stop bleeding from vessels and explained stitching using catgut. He was the first to explain ectopic pregnancy.[21][22]

7. Ibn Rushdh (1126-1198 CE)

Abu Al Walid Muhammad Ibn Ahmad Ibn Muhammad Ibn Rushd, also known as Averroës or Avén Ruiz or Averrhoes in the West, was called with the preeminent name as the “Prince of Science”. His contribution expanded to several fields, including philosophy, Islamic law, medicine, astronomy, mathematics, physics, and geography. His career expanded as a judge in Seville and Cordoba, and later he was appointed as Chief judge. Further, he served as the Court physician to the Caliph in Marrakesh. His major contribution to the philosophical field was a book named *Tahafut al Tahafut* (The Incoherence of the Incoherence), written as a counterargument against Ghazali’s critique of philosophy; “The Incoherence of the Philosophers”. He authored 20 books in medicine, among them *Kulliyat Fi A-Tibb* (“*Generalities on Medicine”*), which is one of his greatest contributions. This treaty covers seven subdivisions, including Tashrih al a’lda’ (Anatomy of Organs), Al-Sihha (Health), Al-Marad (Disease), Al-’Alamat (Symptoms), Al-Adwiya wa ‘l aghdhiya (Drugs and Foods), Hifz al sihha (Hygiene), and Shifa al amrad (Therapy). He also wrote a book on “A commentary on The Qanun fi‘t tibb” (Canon of Medicine) of Avicenna. His explanation in the field of neurology ranged from early insights into Parkinson’s disease and retinal sensitivity

to the photoreceptors in the eye. He was the first to prescribe medicines for sexual and erectile dysfunction, with single or combined drugs and foods orally, while he also employed topical or transurethral routes to treat a few patients. Further, he acknowledged the use of Theriac (Antidote), especially in treating poisoning and serious illnesses. However, he stated that overuse of this can lead to changes in the human constitution, resembling poison.[23][24]

8. Ibn al-Nafis (1210–1288 CE)

Ibn Nafis, also known as Ala ad-Din Abu al-Hasan Ali Ibn Abi-Hazm-al-Qarshi, was one of the renowned Arab physicians during the golden Islamic era. He greatly contributed to the development of the fields of medicine, anatomy, and physiology. He was regarded as the Father of Circulatory Physiology, as he was the first to describe pulmonary circulation of the blood. Before his explanation, it was described that blood from the right side of the heart reaches the left side via openings in the interventricular septum, but he stated that this right-to-left blood flow is through pulmonary circulation. This remarkable discovery was mentioned in one of his manuscripts titled Sharah al Tashreeh al Qanoon, or "Commentary on the anatomy of Canon of Avicenna".[25] He also commented on the concepts mentioned by Avicenna regarding the heart, that the right side of the heart nourishes it; instead, he stated that the heart is nourished by the blood vessels that spread through the body of the heart. Further, he corrected that the heart has only two ventricles, not three, as said by Avicenna. His contribution to other fields of medicine includes the explanation of regeneration, where new parts replace old body parts. Furthermore, he described that the gallbladder has no direct connection to the intestine; it is reached by connecting to another duct before it enters the intestine. In the field of ophthalmology, he mentioned that the eyeball is controlled by six eye muscles, and the optic nerve crosses to the opposite side before it reaches the brain.[26]

Conclusion

The involvement of ancient Greek, Arab, and Persian scholars was instrumental in modeling Unani medicine into a comprehensive system of healing. Understanding their work not only highlights the historical evolution of medical knowledge but also emphasizes the sustainability of Unani principles in contemporary healthcare.

Conflict of Interest

The authors declare that there is no conflict of interest.

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