



Hakim Ajmal Khan: Transforming Unani System of Medicine Through Scientific Research and Legacy

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Abstract

Hakim Mohammad Ajmal Khan was a distinguished Unani practitioner hailing from the esteemed *Khandan Sharifi*, a dynasty noted for their expertise in medicine, in the annals of Indian history. His birthdate is February 11, 1868 and he was born in Delhi. At the age of 28, he was designated as the court physician for the Nawab of Rampur. His exceptional clinical expertise was highly regarded by the general public during that period, and he was bestowed with the prestigious title of *Masih Al-Mulk*, which means "healer of the nation," by his disciples. He was a proficient individual who excelled in the fields of medicine, politics, and social work. He was one of the founding members of Jamia Millia Islamia University and Ayurvedic & Unani Tibbia College in Delhi. He was an intellectual who pioneered the incorporation of contemporary procedures and scientific principles into the development of Unani Medicine. The scientific investigation of Asrol (*Rauwolfia serpentina* L.) and the extraction of reserpine, ajmaline, ajmalicine, form the basis for the development of novel medications and the confirmation of the therapeutic effectiveness of natural drugs used in Unani Medicine.

Keywords: Ajmal Khan, Masih Al-mulk, Reserpine, Ajmaline, Asrol, Hypertension

Introduction and Background

Hakim Muhammad Ajmal Khan belongs to India's most famous Delhi based respected family known as *Khandan-i-Sharifi*, which was not distinguished in only Delhi but this family was most reputed throughout the country, Ancestors of this family were deeply associated with Mughal Empire. From very binging the family have so many eminent physicians e.g. Hakim Wasil Khan, Hakim Akmal Khan Hakim, and Hakim Ajmal Khan, but the family was renowned with the Hakim Sharif Khan (1722-1807). He was a personal physician of 17th Mughal Emperor Shah Aalam II, and the house was named Sharif Manzil located at Delhi's most popular street *Gali Qasim Jaan* at *Ballimaran* Area [1].

Birth

Hakim Ajmal Khan was born on 11th February 1868, at Sharif Manzil in the capital city of India, he was the 3rd son of the family, his father Hakim Mahmood Khan (1820-1892) was also a well-known Unani physician and highly experienced in diagnosing with pulse observation method. He completely upheld their family traditional occupation which was continued from Hakim Sharif Khan [1,2,3].

Education and Training

Educational journey of *Hakim Ajmal Khan* has been started at home as per their family's tradition at the age of 3rd Year. After that, he joined a local Maktab (traditional school) where he began his initial religious studies. After completing basic and fundamental education he starting memorizing the Holy Quran from Moulavi Da'im Ali who was joined as Imam at Jama Masjid Moradabad, and Hakim Jamiluddin. Ajmal Khan memorized full Quran in very short period of time, showing his extraordinary exceptional latent abilities. After learning Holy Quran by Ajmal Khan moved towards traditional teachings of Persian, Arabic and logical studies. He studied logic and philosophy with Moulavi Abdul Haque and Moulavi Abdur Rashid Baig, learned calligraphy with Moulavi Raziuddin Khan, and other subjects like Astrology, Mathematics with Mirza Ubaidullah Baig, and Hakim Jameel. At the age of 15 years Hakim Ajmal Khan had learned Physics, Islamic Jurisprudence, Arabic Literature, Hadith, Detailed Commentary and explanation of Quranic Knowledge. He was fluent in Persian and Arabic languages, and learned working knowledge of English with Colonel Z. Ahmed [1,4,5,6].

Ajmal Khan completely focused on learning Unani Tibb, pulse perfection and learned family traditional books with his elder brothers. He learned Al-Qanoon from Hakim Gulam Raza and clinical practice from Mahmud Khan and Abdul Majeed Khan. He was influenced by Hakim Wasil Khan for knowledge of clinical practices and medicines. In 1901, Ajmal Khan left Rampur following the death of his eldest brother, Abdul Majeed Khan after throwing over the position of the Afsar-ul-Atibba and the personal physician of the Nawab [1,4,5,6].

Commencement of Work

In 1892, when Hakim Ajmal Khan was 24 years old, he joined the Nawab of Rampur as a personal physician. This was an important turning point in his career, It not only boosted his reputation but also gave him the chance to learn and grow in a culturally rich and intellectual environment. During his stay at Rampur (1892-1902) Hakim Ajmal Khan focused on improving his knowledge of the Arabic language and literature. He got the chance to learn in the guidance of the renowned Arab intellectual Tayyib Makki, an eminent scholar of Arabic Literature. He was also appointed as chief officer at government library, and got benefitted with rare manuscripts of languages and medicines. He received an honoured of *Haziq-ul-Mulk* in 1908 *Qaisar-e-Hind* in 1915 from British government [1,3].

Vision

At the first Tibbi conference in 1906, Hakim Ajmal Khan deeply expressed his concerns in his own words as *"In this time of enlightenment, we are living in the era of competition. The current state of Unani medicine shows this clearly that the new writings have stopped completely, and our curriculum is limited and not enough for present time period. We are thinking that Avicenna's 'The Canon of Medicine' is sufficient, and there is no need to any up gradation, although, this absolutely not the same, there are so many new diseases are existing now and will be detected day by day require detailed scientific documentation. We forget the Galenus, as his books are not included in our curriculum but the Western medical system has translated all Galenus books, we lost huge part of Unani Medicine, if we do not unite friendly for serving and preventing Unani and Ayurvedic so remember that we will lose everything which is remain now in our hand."* [1,5].

Mission

Ajmal Khan's perspective had been changed significantly when he returns from his trip to Europe in 1911. During his visit to European countries like England, France, Germany, Austria, and Turkey, he realized the importance of modern science and education. When he come back to India, he compared these modern advancements and technics with what was happening in his own country. Ajmal Khan noted that the goals of Madrasa Tibbiya, which was created to teach Unani medicine, had not been fully achieved. He emphasized the need for a new Unani and Ayurvedic institution that not only focused on theoretical knowledge but also provided detailed practical training. This would help produce doctors who are highly skilled in both surgery and medicine, making them valuable contributors to society [1].

Aim and objective, in his own words

“Our main objective is to stabilize Vedic and Unani systems of medicine on the strong foundations and make in them such timely changes as could make them more useful. All these reforms, it is hoped, will be accomplished gradually and ultimately, we shall be successful in seeing a time when our medicines will be used by those brethren of ours who at present, used imported medicines from the Europe. When we reach this stage, it will be considered that we have achieved our goal, and succeeded in our efforts” [7].

Ajmal Khan Also express his plan on 19th March 1916 at foundation stone laying ceremony of Tibbia Collage Karol Bagh as “*There are some colleges and schools in India for teaching Unani and Ayurveda, but we need to establish an Institute that can complete our needs and improve the quality of education. This college should offer formal education in traditional medicine, including anatomy and surgery, and also benefit from essential aspects of Western medicine.*” [1,8].

Contributions of Hakim Ajmal Khan

Ajmal Khan contributed in so many areas, including education, politics, social reform, and especially in Unani and Ayurveda medicine. His work had a lasting impact on Unani system of medicine.

Established the Anjuman-e-Tibbia

In 1905, Hakim Ajmal Khan established the *Anjuman-e-Tibbia* to look after the *Madarsa Tibbia* (Unani school), which had been started by his late brother Hakim Abdul Majeed Khan in 1883 and formally inaugurated in July 1889. After the unexpected death of his elder brother Hakim Wasil Khan, the *Madarsa Tibbia* became the sole responsibility of Ajmal Khan who liquidated the *Hindustani Dawakhana* company by purchasing all its shares on behalf of the school and earmarked its income to meet the expenses of the *Madarsa Tibbia*. This organization was officially registered in August 1911. Anjuman-e-Tibbia, originally established to manage the Madarsa Tibbia, was reorganized into a Board of Trustees responsible for overseeing the Ayurvedic and Unani Tibbi College [6,9].

Establishment of Hindustani Dawakhana

Earlier, in 1905, the Unani and Ayurveda Company, established by Hakim Ajmal Khan's elder brother Hakim Wasil Khan to produce genuine medicines, was transferred to *Anjuman-e-Tibbia*. This led to a focus on improving the quality of medicines, and in 1908, the company was renamed *Hindustani Dawakhana*. The Dawakhana was started to produce higher quality medicines and to support the financial needs of the College. Located in Ballimaran, Delhi, the Dawakhana was inaugurated by the Raja of Shahpur. During Hakim Ajmal Khan's lifetime, the annual net profit of the Dawakhana was about two lakh rupees, all of which was spent on the College. In 1911 the School and the Dawakhana were placed under the control and management of the *Anjuman-i-Tibbia*, registered under Act XXI of 1860. Later on, the *Anjuman-i-Tibbia* was converted into a Board of Trustees in 1915 [7].

Hakim Ajmal Khan was also honoured with the prestigious title of *Haziqul Mulk*, which translates to "Wise of the Nation." This recognition was a testament to his dedicated services to the people and his unwavering efforts to promote and modernize the indigenous systems of medicine, particularly Unani and Ayurveda practices. Khan's contributions were manifold and touched various aspects of healthcare, education, and social reform [4].

Initiation of All India Ayurvedic and Unani Tibbi Conference

In February 1906, Ajmal Khan initiated the All India Ayurvedic and Unani Tibbi Conference to unite practitioners of traditional Indian medicine (Vaid and Hakims) on a same platform. The first session of this important conference was held in Delhi on 26-27 November 1910, and was chaired by Raja Ram Kishan Kumar, a prominent figure from Sahaspur Bilari [1,10].

The main goals of the conference were to address the problems faced by traditional Indian systems of medicine and to encourage unity among practitioners. It aimed to be a permanent organization that would support and protect Ayurveda and Unani medicine. This was in response to a proposal from the British Medical Association of Bombay that suggested a Medical Registration Act,

which favoured registration of allopathic doctors only leaving Unani and Ayurveda doctors. The act defined the Unani and Ayurveda medicine unscientific, and proposed a ban on their practice [4,5].

Key decisions made during the conference included:

1. Unity of Vaidas (Ayurvedic physician) and Hakims (Unani physician) to address shared challenges and to improve their practices.
2. Research on indigenous medicinal plants to better understand and use their healing properties.
3. Medical Courses, a proposal to introduce full courses in physiology and surgery in traditional medical schools to improve education for practitioners.
4. Salaried Vaidas and Hakims, it was proposed to appoint salaried Vaidas (Ayurvedic practitioners) and Hakims (Unani practitioners) to provide stability and recognition.
5. Pharmacopoeia Compilation, a plan to create a comprehensive pharmacopoeia for Ayurvedic and Unani medicine to standardize practices and serve as a reference.

The annual meetings of All India Ayurvedic and Unani Tibbi Conference were held regularly in different cities of India i.e., Delhi, Lucknow, Amritsar, Patna, Rampur, Bombay, Karachi and Hyderabad during the period of Ajmal Khan. These sessions played a significant role in raising voice against Government's moves against the traditional medicines of India. These sessions were instrumental in promoting and protecting indigenous medical systems, fostering unity among practitioners, and addressing various issues faced by the traditional medical community [4,5].

Ajmal Khan was a strong supporter of communal harmony. He was very much popular in Vaidas and Hakim and jointly launch a movement against the Government for the recognition of the indigenous systems. In 1919 he convened a joint conference of Vaidas and Hakims to establish Unani and Ayurvedic Colleges throughout India. These measures were intended to strengthen the indigenous systems of medicine, promote their acceptance and integration, and ensure their preservation in the face of colonial pressures and the growing influence of Western medical practices [6].

Establishment of Tibbia Collage Karol Bagh New Delhi

Ajmal Khan sought to raise the standards of the *Madarsa Tibbia* and develop it into a college that met modern standards. His aim was to persuade people of India and Government to recognize the importance of supporting and advancing traditional Indian system of medicine. In 1912, during a meeting of the Anjuman-i-Tibbia, he worked towards this goal. He stated in his monologue "*The Madarsa Tibbia cannot meet the goals we have set. We need a great institution that can provide complete education in Indian medicine, including both theory and practical skills. Our aim is to train local doctors who, in addition to their knowledge of Unani and Ayurvedic systems, can also become skilled surgeons. In the past, Unani medicine made great strides in surgery, but this was later neglected by Hakims. Similarly, Ayurveda has a glorious history of achievements by its ancient surgeons.*" [1].

Ajmal Khan purchased a piece of land in Karol Bagh, Delhi at a very modest price for setting up the College. He had invited Lord Hardinge to lay the foundation stone of the collage building, initially, the Viceroy was reluctant to lay the foundation stone of an institution for an outdated system of medicine as per his view. Nevertheless, Lord Hardinge ultimately consented due to Ajmal Khan's exceptional reputation. On March 29, 1916, the Viceroy of India personally placed the foundation stone for the proposed Tibbia College. The Viceroy, advised Ajmal Khan to standardise and modernise the system and to make arrangements in the proposed Tibbia College for imparting instructions in surgery and anatomy on the western lines. The Tibba College building, whose foundation stone was laid by the Viceroy, was finished by 1920, and finally inaugurated on 13th February 1921, by Mahatma Gandhi. The total cost of construction was Rs. 6,71,405 at that time [6,7].

In his welcome address to the audience, during the stone laying ceremony of Tibbia College he said "Your excellency, the Ayurvedic and the Unani systems of medicine are quite ancient. The people in India irrespective of place, financial conditions, education, believes in traditional systems for their medical requirements. Ayurvedic and Unani system are still serving in big cities like Bombay, Calcutta and Madras where Western system of medicine is popular. The education of Unani and Ayurveda is taking place in the clinics of Hakims and Vaidas pr from privately run Institutions only. We should not feel reluctant to get benefitted from modern

system of medicines whereas required. It is the time to establish colleges for imparting quality education of Unani and Ayurveda along with some subjects like surgery.” [1,6,7]. Ajmal Khan’s untiring efforts succeeded in terms of education and 407 physicians completed their education from *Madarsa Tibbia* till 1921 [8].

Establishment of Women’s Medical Collage

In 1908, Hakim Ajmal Khan founded the *Zanana Tibbi collage* which was an innovative medical college for women in India. He necessitated the urgent need for medical care facilities specifically for women and saw its importance of providing women with access to healthcare and medical education. His initiative aimed to recognise a critical gap in healthcare system. The establishment of the *Zanana Tibbi collage* was a great step toward empowering women through education and caring public health. By focusing on training female medical practitioners, the school ensured that women, who often faced social and cultural barriers to accessing healthcare, could receive medical treatment from female doctors. This was especially important in a conservative society where women were often hesitant to seek medical help from male doctors [6].

The *Zanana Tibbi collage* was officially inaugurated in January 1909 by Lady Dean, the wife of the Lieutenant Governor of Punjab. Her intimacy highlighted the importance and authenticity of the institution, along with the support of the colonial administration for this constructive initiation. Ajmal Khan’s vision for the *Zanana Tibbi collage* was the part of his larger commitment to uplift educational system and social reform. He believed that educating women and integrating them into the medical profession was essential for the overall development of society. He was strong supporter of women empowerment, self-dependency and women education. In his own words “*When we provide opportunities to women to have their share in education, the ideas appear to be novel, something new and unheard to our elite class. But no plan of education will ever be complete unless the seed of sympathy for women finds its place in it.*” [1,6].

Contribution in Research and Development

In July 1926 Ajmal Khan established a separate department in the Tibbia College to carry on research in modern sciences named as *Dar-ul-Tahqeeqat* [6].

The Director of the department, Dr. Salimuzzaman Siddiqui, shared the visionary idea behind the institution. He said "The intention of establishing the Ayurvedic and Unani Tibbi College was to produce an environment where these traditional medical systems could be learned using modern techniques. The idea was to train the students of indigenous system of medicine with all modern techniques including modern methods of diagnosis and surgery. He also believed that traditional knowledge of medicine should be updated in line with modern science. To do this, he organised a Committee to develop new textbooks from the ancient medical literature. Hakim Ajmal Khan personally guided this committee until his untimely death." Ajmal Khan convinced Dr. Salimuzzaman Siddiqui to join the Tibbia College to develop research in indigenous medicines. On his request Dr. Siddiqui proposed three departments i.e., (1) Department of Chemistry, (2) Department of Pharmacology and (3) Department of Botany [7,11].

The drug ‘*Dawa-us-Shifa*’ was used by Ajmal Khan for the management of nerves and brain ailments. Its main ingredient is *Rauwolfia serpentina*, it was studied in *Dar-ul-Tahqeeqat* and five alkaloids and six non alkaloids were extracted from this plant. The alkaloids were given the name ajmaline, ajmalinine, ajmalicine, reserpine etc. The name of the alkaloids was given by the name of Ajmal Khan. These alkaloids were found to be effective in high blood pressure. It was proved to be first drugs to control high blood pressure. Some modern American and European pharmacies have reproduced products in modified form under different names originally developed by Hindustani Dawakhana, such as Serpasil [7,11].

Vedic Dawakhana and Ayurvedic Rasayan Pathshala

In 1923 Ajmal Khan established a separate and new section within the college named as Vedic Dawakhana and Ayurvedic Rasayan Pathshala. It aimed at preserving the ancient Vedic medicines and promoting the Ayurvedic System of Medicine [6].

Ajmal Khan as a Unani Physician

Ajmal Khan in his clinics generally used compound formulations and Kushtajat as per their family traditions. According to family tradition, *Masih-ul-Mulk* never accepted any fees or gifts from patients at clinic at his residence. He was charging one thousand rupees per day whenever called for consultation outside Delhi. He often provided treatment for needy patients at his own expense. His clinic was always over crowded with patients whom he examined regardless of their rank, position, caste or creed. Even with the heavy crowds and high demand at the clinic, he always stayed calm and polite. He always examines pulse of the patient and never prescribe any treatment without pulse examination. His was master in diagnosis of the disease and expert in prescription. His prescriptions were commonly having pure Unani medicines along with some Ayurvedic medicines, such as Malti Basant etc. [6,12,13].

Ajmal Khan also developed several liquid medicines (*Arqiyat*), including liquid camphor (*Aab-i-Kafur*), liquid sulfur (*Aab-i-Gandhak*), liquid iron (*Aab-i-Aahan*), liquid ammonium chloride (*Aab-i-Naushadar*), and liquid gold (*Aab-i-Zahab*) which he used extensively in his clinics [14].

Ajmal Khan as a writer

Maseeh-ul-Mulk Hakim Ajmal Khan's research efforts in Unani Medicine are a significant part of his diverse achievements. From a young age, he showed his strong interest in the field of research. He wrote several short but most important works on medical topics, which are distinguishing his intellectual talent and research skills with others. However, these important contributions have not received much recognition in academic or medical circumstances. Many biographers have either overlooked these works or mentioned them only in brief. It might surprise some to know that all of these treatises were written in Arabic. In Urdu, Ajmal Khan wrote just single treatise named as "*Risala-e-Ta'oon*". [15].

Ajmal Khan wrote following books:

1. Al-Qaul al-Marghoob fi al-Ma' il-Mashroob.
2. Al-Sa'atayah.
3. Al-Tuhfah tul-Hamidiyah fi al-Sina'at al-Taklisiyah.
4. Al-Bayan-ul-Hasan bi Sharh-il-Ma'joon al-Musmma ba Akseer al-Badan.
5. Araq Al-Muzhirah-til-Musmirah
6. Khamsa Masa'il.
7. Al-Wajizah
8. Muqaddimah al-Lughat al-Tibbiyah

Some unpublished work of Ajmal Khan is as follow:

1. Risalah fi Tarkib al-Adwiya wa Istikhray Darajaatiha.
2. Al-Muhakamah bayn al-Qarshi wa al-'Allamah.
3. Hashiyah Sharh al-Asbab (ila Mabahis al-Sarsam).
4. Al-Lughat al-Tibbiyah [15].

Ajmal Khan carefully recorded his daily clinical practices in form of dairy. His deep insights, drawn from his vast knowledge and experience, provide valuable contributions to various medical fields, including treatment, prescriptions, medical diagnostics, and their clinical outcomes. These writings also delve into his medical theories, practical studies, and their wider impact on society, thereby enhancing the understanding of medical sciences. These writings are Kitab al-Nabz, Afadat Maseeh-ul-Mulk, Bayaz-e-Ajmal, Dastur-ul-Ilaj, and Haziq. In addition to these works, Ajmal Khan has authored annotations on numerous medical books, each offering distinct insights. One particularly notable annotation is found on an Arabic manuscript titled *Al-Ma'jun fi al-Tib*; documented by Dr. Malik Muhammad Idris Khan and housed in the library of Tibbia College, Delhi. These annotations by Ajmal Khan hold considerable value, and their compilation and editing would represent a significant service to the discipline of medicine [15].

Conclusions

Ajmal Khan was a versatile genius from a reputed family of Unani physicians. He got the knowledge of Unani from his family members. He was a Hafiz (who memorize full Quran) and a distinct Unani physician of his time. He was a politician, freedom fighter, social workers and a strong supporter of Unani and Ayurveda systems of medicines. He was popular in masses and at the same time he had good relations with Nawabs, Raja and British government officers including viceroy of that time. He was a writer, poet and overall, a good human being. He established Tibbia College at Delhi and helped others to establish Tibbia College in different parts of India. He was founder member of the Jamia Millia Islamia University. His clinical expertise and diagnosis made him a known personality at that time. He was the first person who have integrate the modern scientific methods in traditional Unani system of medicine for its development.

Additional Information**Author Contributions**

All authors have reviewed the final version to be published and agreed to be accountable for all aspects of the work.

Concept and design: Mohd Noman Taha & Hafsa Abdul Rehman Patel

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