

THE SOCIAL HISTORY OF MEDICINE IN HYDERABAD STATE AND THE STORY OF RUPABAI FURDOONJI, WORLD'S FIRST FEMALE ANAESTHETIST

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Abstract :

By the year 1885, a Medical School was started in Hyderabad. With it, many researches have been done in the Medical Field and modern methods have been invented. This school was established during the time of IV Nizam Nasir-ul-daula. Dr. Machlain, Dr. Mackenzie, Dr. Smith, Dr. Walter, Dr. Dickson and Dr. Real were the teachers. Teaching was done in Urdu medium. Edward Laurie, who became principal in 1885. Changed the medium of instruction from Urdu to English. He invited women into this field, as a result five women joined in this school and studied Medicine, among one of them is Rupabai Furdoonji. She started medicine not only in India but also in England and become world's five female Anesthetist. The social History of Medicine in Hyderabad and the contribution of Rupabai to the development of modern anesthetist as on important branch is discussed in this paper.

Key words :

Anaesthesia, chloroform, pathology. Laryngology, Rhinology, respiratory annals, surgery Anatomy, midwifery.

Introduction :

The world has witnessed, with the covid, a pandemic that has shaken and tested human survival and adaptation on this planet. The response varied from simple medication to surgeries, and later to vaccines. One of the important factors that gave Western medicine on edge over other medical systems is in surgical capabilities. Now we all take it for granted that surgeries are by default painless surgeries. But how did surgeries turn painless? The history of painless surgeries became possible only with the growth of Anesthesia in general and chloroform which was hardly 150 years old.

The story of Chloroform is one of the important stories in the annals of history of medicine and had an enduring effect on the rise and growth of anesthesiology and painless surgeries. History is always not about the Kings Kingdoms, battles, architectural wonders and monuments although these are more popular ways of learning about the discipline of History. It is also the story of generation Histories are studying aspect like environment, science, Technology and Medicine etc. the study of History of Medicine from a social perspective assumes importance as we can learn stories of conviction, resilience and societal responses that ultimately waded off the threats posed by the pandemics in the part. So it is thus a humble

attempt to bring out one of the forgotten chapters of social History of Medicine in Hyderabad state, and also it is the story of Dr. Rupa Bai Furdoonji who is known rightfully regarded in Hyderabad but remains largely unknown.

Objectives of the Study :

The main objective of this research paper is to study the social history of medicine in Hyderabad State and the life history of Rupa Bai Furdoonji and her services to the medical field. The specific objectives are:

- To examine the development of modern medical education and health care institutions in Hyderabad State during 19th Century.
- To see the role of Nizam's government in promoting medical education.
- To know the opportunities for the women in medical field.
- To examine the social and gender barriers encountered by women seeking medical education.
- To know the life history and struggle of Rupa Bai Furdoonji in medical field.
- To know that, apart from Rupa Bai, have any other women excelled in this field.

Research Questions:

The study addresses the following questions:

- How did medical education and healthcare institutions develop in Hyderabad State under Nizam
- What social, political, and institutional conditions enabled women to enter medical field in late 19th Century
- What role did HMS and Nizam government play in creating opportunities for female medical students
- What does Rupa Bai's career reveal about gender, professionalization, and social mobility in Hyderabad
- How did developments in anaesthesia and western medical education interact with the existing medical culture of Hyderabad.
- Why has Rupa Bai received relatively limited attention in conventional histories of medicine and women's history in India.

Review of Literature :

The historiography of medicine in colonial and princely India has developed considerably over the last several decades. Scholars have examined the relationship between medicine, colonialism, public health, professionalization, and indigenous society. David Arnold's *Colonizing the Body: State Medicine and Epidemic Disease in 19th Century India* remains an important contribution to the social history of medicine in South Asia.

The studies of women in modern India have similarly demonstrated the importance of gender in determining access to education and professional employment. According to Geraldine Forbes in *Women in Modern India*, examining the expansion of women's education and women's gradual entry into medical occupations, such as scholarships provides a broader framework for understanding the significance of women entering medicine during late 19th century.

However, Hyderabad occupied a distinctive position because it was not directly administered as a province of British India. As one of the largest princely states, it possessed its own government and developed significant medical institutions under the patronage of Nizams. The establishment of Hyderabad Medical School in 1846 represented a major development in institutional medical education. The school subsequently evolved into Osmania Medical College, providing the institutional environment in which women such as Rupa Bai Furdoonji could obtain medical training.

The most important modern scholarly contribution specifically addressing Furdoonji is the study by Ray and Desai, "Dr. Rupa Bai Furdoonji: World's First Qualified Lady Anaesthetist", published in *Indian Journal of Anaesthesia*. The authors reconstruct important aspects of her medical education and professional career. Existing literature provides information about the development of medical field in India and the achievements of Rupa Bai. However, comparatively less attention has been given to interpreting her career and the contribution of Mir Mahboob Ali Khan, Nizam VI, towards the Chloroform Commissions in Hyderabad State. This constitutes the principal research gap addressed by the present study. It examines the medical education, gender norms, women's professionalization, and the development/emergence of Chloroform Commissions and the development of modern medicine with these commissions.

Research Methodology :

To write this research article, I have adopted a historical, descriptive, and analytical research methodology, combining biographical analysis with the social history of medicine.

Historical Method : This method is used to construct the development of medical institutions and medical education in Hyderabad State during the 19th and early 20th centuries. Particular attention is given to Hyderabad Medical School, Afzalgunj Hospital, and the medical administration in Nizam's government.

Biographical Approach: This approach is used to reconstruct the life, education, and professional career of Rupa Bai. However, this study does not treat as biography; this approach allows the individual career of Rupa Bai to illuminate larger historical questions concerning women's education, gender relations, professionalization, and access to medical occupations.

Social Historical Approach : This study approaches medicine as a social institution, rather than examining only medical discoveries and clinical techniques. It therefore considers the relationship between medicine and factors such as gender, education, social customs, state patronage, and professional status.

Lastly, this research paper was written on the basis of primary and secondary sources which are mentioned in references.

Hyderabad's Tryst with chloroform and its place in the History of Anaesthesia Medicine

By the mid 19th century, the Western Medicine hacked by scientific inventions and discoveries began on the path of ascendancy slowly dwarfing the other healing systems of knowledge like Unani, Ayurveda etc. The first institution that was established to impart Western Medical Education in Hyderabad State was the Hyderabad Medical School. It was established in the reign of 4th Nizam Mir Farqundah Ali Khan Nasir ul-dawlah, in the year 1846.

When Nizam was fell ill because of diabetics and cured by British resident surgeon Dr. WillianCambell Maclean by using Western Medicine and Nizam was impressed with Allopathic Medicine, ordered to establishment of Hyderabad Medical School in 1843. By 1885 it evolved into premier organization for teaching and practice of medicine along with Afzal Gunj Hospital.

Dr. Edward Lawrie was pioneered a technique of delivering chloroform that put Hyderabad and Mrs. Rupabai Furdoonji on the map of world Anesthesia.

First Hyderabad chloroform Commission

In 1888 Dr. Lawrie convinced the Nizam of Hyderabad Mahboob Ali Khan to sponsor the first Hyderabad Chlorofomr Commission. He believed that the toxicity of chloroform would first affect respiratory system rather than the heart. Therefore, maintaining respiration during chloroform delivery was vital to prevent unnecessary deaths, and Dr. Lawrie was experimenting with techniques to address the respiratory dysfunctions during the administration of chloroform. The First Commission findings were published in Lancet, a prestigious peer-reviewed Medical Journal. The main criticism particular was that chloroform's respiratory. When Dr. Lawrie produced results that could prove the contrary his method his experiments and his credentials

were questioned. It was also argued that working with native doctors would lead to erroneous results. Hence Lawrie's First Chloroform experiments were subjected to medical and help of Indian assistance, whose grasp of Western unfazed by the criticism. Dr. Lawrie challenged the critics in England that he was willing to prove them a second time and insisted on repeating the experiments for a Second Chloroform Commission. His challengers were free to choose an expert of their choice and these experiments would be repeated in his presence. This challenge was accepted by the Medicine Journal Lancet from whom, most of the criticism came in the first place. This gave birth to the Second Hyderabad Chloroform Commission.

The Second Hyderabad Chloroform Commission

The Lancet Journal appointed Sir Thomas Lauder Brunton, an eminent physician whose work on the effect of drugs on the heart was well recognized, as their expert of choice and he was sent to India to oversee the experiments. In the meanwhile, the Nizam who was convinced by Dr. Lawrie that it was matter of reputation of Hyderabad state and its role in modern Medicine, agreed to sponsor the expenses of not just the expert but of the entire experiment. The Nizam therefore paid ₹1,00,000 to Lancet's expenses (which would be more than one lakh pounds today) and the journal, of course, acknowledged the sponsorship with much courtesy. The team of Dr. Lawrie conducted nearly 600 experiments in October- December 1889, when Sir Thomas stayed in Hyderabad observing them. He left in December of 1889, convinced of Dr. Lawrie's anesthesia techniques, and in the following year presented the findings of the Hyderabad Chloroform Commission in London. By 1890, the study results were published in Lancet, and Journals- Nature and Cambridge University's 400-page book Report of the Hyderabad Chloroform Commission was published by the Nizam's Government. One of the main conclusions of the Second Hyderabad Commission was that in large/toxic doses, chloroform would cause respiratory paralysis (and asphyxia), and this could be managed by changes in the dose or by artificial respiration devices. It also gave measures for safe administration of the anesthetic agent. Hence, Hyderabad experiments played a crucial role in declaring chloroform as safe drug for anesthesia.

Life of Dr. Rupa Bai Furdoonji and her contribution to World of Anaesthesia

The Hyderabad Medical School got a lease of new life during the reign of the sixth Nizam Nawab Mir Mehboob Ali Khan. The Nizam shared a vision on having women students studying medicine along with men, with Surgeon, Major (IMS) Edward Lawrie, the Chief Surgeon of British Residency, and the Principal of Hyderabad Medical School. Thus, on Lawrie's motivation, five lady scholars of Hyderabad joined the medical course. Rupa Bai was one of these five women. Before we continue further with the life story of Rupa Bai, it is imperative to understand the prevailing conditions in 19th century India for access of western medical education to women.

These were times when even basic women's education was scoffed at, ridiculed, and was considered doomsday for the society and family. In a recent book published on the Lady Doctors in colonial India. Kavitha Rao brings to light some of the early women medical practitioners, their lives and struggles. It contains biographical details of six lady doctors who fought against tall odds to become doctors, namely people like Joshi, Muthulakshmi Reddy, Rukhma Bai Raut and Mary Poonen Lukose. These stories show that these women fought patriarchy, society, caste barriers and child marriages to become doctors in life. In most of the cases, these women mostly had to face conservative husbands and retrogressive family surroundings. What binds all these stories is the fact that they fought against a system which thought that the profession they choose was not suitable for their gender.

Rupa Bai was a key participant in the Hyderabad Chloroform Commission experiments. Rupa Bai joined Hyderabad Medical School in 1885, graduated in 1889 with the degree of Hakeem-a Western Medical qualification, so named because the medium of instruction at the time in HMS was Urdu – the state language. She played a key role in Second Hyderabad Chloroform along with many other male surgeons. During the four-year course, she studied subjects like anatomy, physiology, Materia Medica, Medicine, surgery, and midwifery. When the Hyderabad Chloroform Commissions, under the supervision of Lawrie, conducted anaesthesia experiments on animals many students from HMS participated in it including Rupa Bai. Thus, she finds mention in Lawrie's book, a report on Hyderabad Chloroform Commissions (1891). It contains remarks of Dr. Lawrie that Rupa Bai could conduct experiments extending to hours independently without any support or help. Rupa's academic as well as professional work, so impressed Lawrie that he encouraged her to travel to the UK for further studies. So, in 1909, Rupa took a break from her work and went to England to join Edinburgh University from where she earned a diploma in Physics and Chemistry. These subjects were useful for doctors handling anaesthetics as there was no separate course for anaesthesiology during those days (it only became a separate department in the UK in the year 1922). It was during this journey to England that Rupa Bai met the Founder President of the Theosophical Society of India Annie Besant and Rupa set sail from Bombay to Edinburgh in the same ship. It was at this time that Dr. Besant wrote a letter recommending Rupa for a course at the University of Edinburgh. This was what she had to say commending the work of Rupa Bai "Indian Lady Doctors are so much needed in India and there are so few that to aid the women who are brave enough to take up this profession in order to help their sisters is a real service to India". Such was the impact of Rupa's work in Edinburgh that when the time came for her to return to India, Mrs. Drummond wrote to Rupa's associates in Hyderabad. She persuaded them to relieve Rupa of her duties as her expertise was required in Edinburgh. Her educational endeavors did not stop in England. Later, she also went to USA to pursue a degree in medicine at the John Hopkins Hospital, Baltimore. It was not a small achievement as during these days, as American Hospitals were strongly biased against

female gender. During this period, most of the medical schools in England and America refused admission to women candidates. Even the renowned paediatric cardiologist Dr. Taussig who founded the 'Blalock-Taussig' surgical technique for 'Fallot's tetralogy' was refused admission in Harvard Medical School of Boston just because of her gender. So, Rupa Bai getting a degree from John Hopkins truly speaks of her excellence in the field of Anaesthesiology. However, we do not have much information on how long she stayed in the USA and when she returned to India. The English lecturers had Urdu translators during the classes. It is because of Dr. Lawrie's initiative that the medium of instruction changed to English in 1885 which opened up avenues for women scholars to study abroad later.

During the year 1889-1917, Rupa Bai worked as an anaesthetist at British Residency Hospital, Afzalgunz Hospital Zenana Hospital, Hyderabad. While not much is written about her career post-1920, she is said to have retired from Nizam's Medical Service as Superintendent of the British Residency Hospital or the Chaderghat Hospital. Rupa became an anaesthetic during a time when only surgeons are considered capable enough to administer anaesthesia. Despite of our best efforts many of her biographical details are unknown. She was the only woman in field dominated by male doctors and yet she made her mark with her commitment and determination to excel in her field of study. While Lawrie was credited with directing Rupa towards the field of anesthesiology, it was Mr. Harmusji Kause from Hyderabad who brought Rupa's story to light. She preserved her original certificates and some important letters now housed at the Indian Institute of History of Medicine in Osmania Medical College, Hyderabad.



Rupa Bai Furdoonji World's First Female Anaesthetist**Conclusion**

Despite so many great achievements, the story of Rupa Bai Furdoonji is not widely known in India or even Hyderabad. This is because of combination of colonial historiography and bias towards women histories. The colonial historiography naturally emphasized the role while men and focused only on Dr. Edward Lawrie, although Rupa Bai administered and conducted various experiments independently without the assistance from Dr. Lawrie or other male surgeons. The other reason for under representation of Rupa Bai also had to do with the decreased attention given to Chloroform as anaesthetic by mid-20th century and its complete abandonment in a few decades from there. Probably owing to the positionality, i.e., Rupa Bai being from Hyderabad state and not from British India her story and achievements went unrepresented not just in the history of medicine in India but also in the recent historical work on women doctors in India. In the recent work, the Lady doctors, had personalities like Anandi Bai Joshi, Kadambini Ganguly Sen etc from various parts of India. Although this work is a commendable achievement of writing about unsung, unknown women doctors in India, this book doesn't include the story of Rupa Bai Furdoonji who can be rightly called as the World's first Female Anaesthetist. This only shows the kind of under representation that still plagues women histories. While the other experiments from Hyderabad during the same period like that of Sir Ronald Ross's experiments on Malaria parasite were remembered, Rupa Bai and her service to Hyderabad Medicine was mostly ignored and forgotten. This paper reiterates the need for a comprehensive study on Rupa Bai to retrieve a lost glorious chapter of social history of medicine in India that is truly inspiration to the posterity.

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