

Fighting the invisible enemy: In search of the history of tuberculosis in Colonial Bengal

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Abstract: *The present article will discuss how tuberculosis came into official discussion in the context of colonial Bengal since the twentieth century and what its nature was. Tuberculosis as a social malady will be understood here in the historical context. Besides, various anti-tuberculosis actions will be examined briefly.*

Keywords: Tuberculosis, Bengal, anti-tuberculosis movement, social disease

‘Tuberculosis is now almost certainly one of the main public health problems in India, ranking probably next to malaria in this respect. It may be regarded as an epidemic disease.’¹ Tuberculosis has been around for the longest time. The disease has killed people for more than, 4000 years. Various known as ‘Consumption’, ‘Phthisis’, ‘Pulmonalis’, or ‘White Plague’; in Europe tuberculosis was rhetorically described as ‘Captain of all men of death’. It was unquestionably the greatest single cause of disease and death in the western world. The word ‘tuberculosis’ is well known today and needs no explanation, and yet it seems to have appeared in print for the first time around 1840 and came into common use only during the next fifty years. The origin of tuberculosis in humans has been the subject of great speculation. Skeletal remains in Egypt have demonstrated the characteristic changes of spinal tuberculosis, including those of a priest of Amen, dating back to some 5,400 years ago². A similar description appeared in Chinese medical texts during *Sui* (581-617 CE) and *Tang* (618-907 CE) dynasties. For Japan, the ancient medical text, the *Ishinpo* (984) mentioned one particular disease name *denshi* that described symptoms including severe weight loss, cough, lethargy and lung dysfunction³. The present essay aims to understand the underlying causes as well as its social implications. The course also shows how the greater picture of public health remains dismal even in post-colonial India.

Tuberculosis in India:

Tuberculosis was considered to be hereditary in ancient India. In ancient India Caraka described it as a “*rajyayaksma*” or “the disease of the king”⁴. In medieval India, tuberculosis (*Tapedique* in Arabic) was known as ‘sill’ and physicians used simple rainwater for its treatment. Ghalib, the poet of medieval India mentioned that poverty was the cause of ‘sill’. While tuberculosis was not a new disease in India, as a result of colonization along with urbanization and industrialization the physical and social environment of the country changed. Initially, tuberculosis was considered to be widespread in urban areas. However, after 1900, tuberculosis spread to rural areas through migrant populations⁵. These populations were mostly from laborers who had migrated to the cities and towns in search of work. Those infected had no other option but to return to their rural homes. By the beginning of the 19th century, it was generally believed that India had hardly any tuberculosis occurrence. By the middle of the 19th century, tuberculosis was thought to be common in some districts particularly among British troops, and in some areas, it was thought to be common among natives as well, such as in the districts of Madras.⁶

In colonial India, probably for the first time, a representative from India, Dr. Alexander Crombie was sent to attend the Congress on Tuberculosis in Berlin, which was held in May 1899. After his return from the Congress, Crombie submitted a report entitled '*Report on the recent congress on tuberculosis at Berlin with special reference to the prevalence and prevention of the disease in India*' to the government of India in October 1899. This was the first official documentation on the causes, prevalence and prevention of tuberculosis in India⁷. The nomination of doctor Crombie as a representative from India to attend the Congress in 1899 can be taken as a landmark in Indian history of tuberculosis. However, these reports, accepted that tubercular disease is due to the presence and multiplication of tubercle bacillus, discovered by Dr. Robert Koch. The book entitled '*Phthisis and its cure*' published in 1907 accepted a similar explanation for the prevalence of the disease. Two later reports by Lankaster in 1916 and by Cummins in 1932 also adopted a similar view. From 1860, colonial governments directed their attention to the importance of collecting proper statistics for identifying births and deaths. The organization for reporting births and deaths to the authorities was rudimentary. In the rural areas, this duty was generally conducted by the village watchman⁸. From 1900, sanitary officials concentrated on the prevalence of tuberculosis among inmates in jails. From 1885, the progressive rise of tuberculosis was noticed among the jail population, with death rates from tuberculosis in Indian jails notably higher than in England and Wales. In 1902, the Government of India gave instructions to all local governments to focus special attention on the problem of tuberculosis. From the official point of view, it was not until 1911 that medical practitioners and sanitary officials believed in the prevalence of tuberculosis in India. For the first time, the acknowledgment came from the medical professionals at the 'First All India Sanitary Conference' held in Bombay in 1911.

In the third, All India Sanitary Conference held in 1914 in Lucknow Dr. Arthur Lankester strongly argued that the situation of tuberculosis was horrible throughout India*. Dr. Lankester was the first person to have made a detailed inquiry about the situation regarding tuberculosis in India. Over eleven months he traveled throughout India and Burma⁹. Covering a distance of nearly 35,000 miles and visiting 85 cities, including 29 out of the 30 which contained a population of over 100,000 inhabitants. He visited nine princely states during his tour including Hyderabad, Mysore, Gwalior, Indore, Bhopal, Udaipur, Jaipur, Jodhpur, and Bharatpur. He spoke to many people, collecting information from both patients and medical practitioners in hospitals, dispensaries, and sanatoriums. Table 1 below by Dr. Lankester shows that the mortality from tuberculosis had been generally high in three presidency cities: Statement showing the number of deaths from tuberculosis in

Table-1
CALCUTTA, BOMBAY AND MADRAS, 1904-1919

YEAR	CALCUTTA		BOMBAY		MADRAS	
	DEATHS FROM TB	TB RATE PER MILE.	DEATHS FROM TB	TB RATE PER MILE	DEATHS FROM TB	TB RATE PER MILE
1904	1608	1.8	3548	4.57	318	0.6
1905	2052	2.4	3183	4.10	832	1.6
1906	2201	2.6	4052	4.14	736	1.4
1907	2241	2.6	3440	3.51	641	1.2

1908	2101	2.5	3023	3.09	717	1.4
1909	1919	2.3	2862	2.92	774	1.4
1910	1971	2.3	2830	2.90	459	0.9
1911	2060	2.3	2694	2.75	760	1.5
1912	1931	2.3	2794	2.85	672	1.3
1913	2196	2.5	2452	2.19	481	0.9
1914	2137	2.4	1889	1.92	738	1.4
1915	1920	2.1	1710	1.74	759	1.5
1916	1738	1.9	1902	1.94	876	1.7
1917	1539	1.7	2118	2.16	1067	2.1
1918	1826	2.0	2513	2.56	1488	2.9
1919	1889	2.1	2780	2.83	1309	2.5

Source: Arthur Lankester, *Tuberculosis in India: its Prevalence, Causation and Prevention*, Calcutta 1920, p-45.

Tuberculosis was especially severe amongst women in *purdah*. Dr. H. M. Crake, Health Officer of Calcutta, stated his experience regarding the city in the following terms in his annual report for 1913:

*'To secure privacy, efficient lighting and ventilation are discouraged, the zenana or women's apartments being usually the insanities part of the house. No wonder that tuberculosis which thrives in damp, dark, airless corners plays havoc in the zenanas'*¹⁰ There was the reluctance of the colonial government to spend money on this disease. In Great Britain, in 1922 there were 23,031 beds available for tubercular patients and in Scotland 104 sanatoria and special hospitals with 3711 beds. The greatest number of beds for tuberculosis in proportion to the population was found in Denmark, where 115 beds were available for every 100 patients in the same period. Now turning to India we find dispensaries were introduced in several of the greater cities, while the facilities for institutional treatment were very few indeed. C. Frimodt Moller in the 'Fourteenth Indian Science Congress' at Lahore in 1927 argued in his paper that, 'if beds were to be available in the whole of India in the same proportion to the population as in Denmark for instance, there should be about 3, 40, 000 beds for tuberculosis patients while we find altogether 800-900'¹¹. Major-General Sir John Megaw in 1933 estimated that there were probably two million cases of tuberculosis in India. He concluded that "tuberculosis is very widespread throughout the villages of India but is especially serious in Bengal, Madras, the Punjab and Bihar and Orissa"¹². In Bengal, there were some local surveys on tuberculosis in the first decade of the 20th century, which were carried out by Leonard Rogers (1904), Stewart and Proctor (1906-07), C.A. Bently (1911-12). These surveys revealed that the disease was widely distributed in different parts of Bengal. The Health Officer of Calcutta stated in his *Annual Report* in 1923 that Bengal's most urgently needed institution is tuberculosis sanatorium for the city of Calcutta.

Making of a social disease:

In the period under discussion in colonial Bengal, tuberculosis had been present everywhere. It was noted that someone could easily be got affected by tuberculosis germs in Calcutta by coming close contact with tubercular patients. Official and unofficial writing in this period had confirmed that the city of Calcutta was full of tubercular infected persons. It was present not only in ill-ventilated stuffy houses of poor people but also existed in the wealthier section of the city. A person could acquire the disease from visiting an educational institution, a jute factory mill, or a restaurant or a cinema. Medical men warned people not only to avoid congested areas

but also to avoid many amenities. It was noted that many aspects of colonial modernity (which are various ways led to tuberculosis) had been repeatedly attacked and criticized by the indigenous medical practitioners. Again and again, the Health Officer of Calcutta highlighted these facts.

Tuberculosis had also been present in other sections of Indian society. Pulmonary tuberculosis had long existed in the Bengal Presidency Army. Before 1941, however, no special facilities were provided in military hospitals for the treatment of soldiers suffering from tuberculosis. They were generally merely discharged on being diagnosed. Thus the policy of discharging military personnel suffering from tuberculosis before treatment was responsible for the dissemination of the disease in rural areas, particularly because most personnel were recruited from such areas¹³. Overcrowded military barracks, were bad regarding ventilation, light and volume¹⁴. In many barracks, there was insufficient air space, and sometimes beds were so close that it was difficult and often impossible to walk between them. C.H. Smith, an IMS, gave a horrible description of the habit of spitting among Gurkhas in barracks: "The Gurkhas, like most natives, is a confirmed spitter and has no objection to disposing his sputum on the barrack room floor. No attempt seems to have been made to stop it in the Gurkha sepoy. It is useless to expect the Gurkha not to expectorate, and equally hopeless to expect him to get out of bed at night and go out into the cold to spit."¹⁵

There was also the rapid growth of tuberculosis among children and students in India as well as in Bengal. The 'Annual Report of the Medical Inspection of School Children for the year 1933' revealed that many school children in Bengal were suffering from chest disease. Some 183 schools were visited in 1933 by 41 medical officers inspecting the health of 21,140 boys and 550 girls. About 414 or 1.44 % of the students were suffering from bronchitis and other complications of the lung¹⁶. It is interesting to note that, Rabindranath Tagore was enthusiastically in favour of open-air education. His educational institutions like those in Santiniketan and Bolpur had been free from ill congested of dark four wall buildings¹⁷. Meat-eating, smoking, drinking, chewing tobacco were viewed as the means through which the germ could spread from affected persons. Imitating western behaviors and attitudes had undoubtedly helped the spread of disease and extension and frequency of epidemics.

The question of tuberculosis in overcrowded Indian jails has rarely been discussed by medical historians. Colonial jail authorities had often denied the existence of tuberculosis among the prisoners. Political prisoners in colonial Bengal wrote extensively in their autobiography about their life in jail. Autobiography of Kalpana Dutta (*Smrtikotha*), Bina Das (*Srinkhal Jhankar*), Hemchandra Kanungo (*Banglai Biblob prochesta*), Upendranath Bandhopadhyay (*Nirbasiter atmokotha*) has been considered as important historical sources researchers of the freedom struggle. All describe describing symptoms of tuberculosis among their fellow prisoners.

A new phase of urban history began with the urbanization of the 19th century as the expansion of industries on the periphery of cities soon attracted millions of job seekers from the countryside within a few decades¹⁸. The population of Bengal in 1921 was 44 million and a decade later had increased to 51 million.¹⁹ The growth of Calcutta as an industrial city with its negative effects, in many ways, helped the spread of tuberculosis. The Swasthya Samachar complained of the volume of smoke emission from the factory chimneys, especially in the Manicktala area in Calcutta²⁰. A.C. Chatterjee, Director of Public Health wrote, in 1939 in *Amrita Bazar Patrica* that more than one-fifth of the total deaths of babies were due to respiratory disease, for which smoke nuisance was primarily responsible. Correspondents to newspapers expressed their

concerns about this hazard. In 1925, a person name Satya Ghosh wrote a letter to the editor of the *Calcutta Municipal Gazette* complaining of the smoke nuisance from the engine yards in Narikeldanga. He provided a vivid picture of the health hazards posed by such proximity to the residential area. In his own words, *"In daytime again, the soot deposits caused by winter dew and laid on the roofs and terrace make it impossible for people to get their clothes dried in the sun owing to their getting dirty. The location of the yards was to a certain extent permissible at a time when the surrounding tracts of land beyond the canal were a sort of wilderness. But the time has changed; these suburban places today come to occupy an important place in Calcutta. It is therefore high time for Government to remove these locomotive yards to a suitable distance far from the thickly populated human habitation."*²¹

Wealthier people could afford sanatorium treatment and sometimes they went to Madras and other south Indian states where sanatorium treatment was more available. The poor, the most affected by the disease, had no such option. The majority of people had been dying virtually untreated. A few cases were treated in medical colleges and other hospitals but the state of the Calcutta hospitals was a matter of shame. We find a horrible description of hospitals in Calcutta, eleven years even after independence. Dr. B.P. Trivedi in his presidential address of *17th Bengal Provincial Medical Conference* in 1958 stated that: *'The condition is just like the third class passenger traffic of the old days. The whole existing set up is absolutely out of date for the present needs. The sick and suffering people are simply crowded together in beds on the floor space making it impossible even for the doctors, nurses and others to move in the wards'*²²

Old enemy, new weapons:

Without proper knowledge of the true cause and mode of spread of the disease, all treatment was necessarily empirical. Towards the end of the 18th century people suffering from tuberculosis used to seek a change of air in a sunny climate. Sanatorium treatment began to appear in the 1840s but tuberculosis continued to kill people. Finally, in 1943, sixty-one years after Robert Koch's discovery of the tuberculosis bacterium, Dr. Selman Waxman at Rutgers University in New Jersey discovered a wonder drug called Streptomycin. Although the victory was not so simple and not every Tuberculosis patient was cured, some people appeared to recover but got the disease again. It became clear that some types of Tuberculosis were resistant to Streptomycin. In the 1950s, scientists came up with another antibiotic called 'Isoniazid' (INH).

To control the problem of tuberculosis, National Tuberculosis Programme was launched in 1949. The programme aimed to reduce infection in the community so that existing patients were cured. Under the programme, 547 clinics were functioning in the country. Some 284 clinics had been upgraded as district Tuberculosis centers undertaking district Tuberculosis program in India. The French scientist, Albert Guerin, had already developed the BCG(Bacillus Calmette Guerin) vaccination in 1921 for combating tuberculosis. The B.C.G(Bacillus Calmette Guerin) vaccination program was being conducted as an integral part of the national Tuberculosis control program beginning in 1951 considered to be the largest of its kind in the world with nearly 170 million people vaccinated. But the task of vaccinating the masses of a country like India was not easy at that time. Popular leaders such as Raja Gopalachari even opposed the vaccination programme. In 1955, he wrote in *'The Hindu'* newspaper: *'What one cannot, however, agree to, is the injection into tens of thousands of our children, of live bacilli when we have no authority to claim certainty of harmlessness based on the attention of bacilli'*. A.V. Raman, a former sanitary engineer in 1949 stated that *'I strongly protested in the name of India... against our boys and girls being made a sort of cannon fodder and treated like guinea pigs for the sake of experimentation'*. But at last, Bacillus Calmette Guerin(BCG) was accepted because it was not

only highly effective but it was also cheap, recommended by the World Health Organisation and United Nations International Children's Emergency Fund (UNICEF).

Is the battle over?

Tuberculosis is still not conquered worldwide. It remains a serious health problem in some parts of the world including India. According to the World Health Organization someone is infected with Tuberculosis germs every second. An estimated 1.6 million people died from tuberculosis in 2005, and in 2006 nearly 9.2 million new cases and 1.7 million deaths were reported due to Tuberculosis worldwide, with 90% occurring in low and middle-income countries. Tuberculosis is the major public health problem which India now faces. A new strain of Tuberculosis began to appear from the 1980s, called Multi-Drug Resistant (MDR) TB, resistant to the most powerful Tuberculosis drugs, Isoniazid and Rifampicin. Tuberculosis remains a leading cause of death among patients who are infected with HIV/AIDS, accounting for some 13% of global AIDS deaths.²³

So the battle is not yet over. The present situation of West Bengal regarding this disease is highly unsatisfactory. The government is failing to serve the minimum and basic requirements of the common people. There is an insufficient number of beds in the district Sadar hospitals. While Ward Health offices in Kolkata examine primary tuberculosis cases those are too few. Thus, to control, the government should take positive steps to eradicate this disease. The growth of a nation would not be possible until or unless a disease like tuberculosis is wiped away. So repeated awareness campaigns are being conducted. To draw public attention, even prominent film stars are in being involved. Amir Khan, a well-known movie star, dedicated an entire episode of his popular television series to Tuberculosis victims. An advertisement by Amitabh Bacchan, the famous Indian film star where he played the role of a taxi driver, emphasizes sputum test if coughs persist for more than two weeks. At the last, the driver did not forget to say that "Agar TB hatega, tabhito Baraga India" (*If TB is eradicated, then India will progress*).

References

¹Bengal Public Health Report, For the year 1933 by Dr. R.B Khambata, D.P.H, Director of Public Health, Bengal, Superintendent, Government Printing Press, Alipore, Bengal 1935.

²² Robert Fortuine, *Must we all die: Alaska's enduring struggle with tuberculosis*, University of Alaska Press, 2005, pp. xxi-xxxix.

³Medical historians like William Johnston argued that these symptoms must not be equated with premodern western concepts of pulmonary tuberculosis. These symptoms could also have been attributed to other forms of respiratory diseases. See, W. Johnston, *The Modern Epidemic: A History of Tuberculosis in Japan*, Harvard University Press, 1995.

⁴B.Eswara Rao, From Rajayaks(h)ma (disease of kings) to "Blackman's plague, : perception on prevalence and aetiology of tuberculosis in the Madras Presidency, 1882-1947, *Indian Economic and Social History Review*, 2006 ,43:457-469.

4. Micheal Mann, *South Asia's Modern History: Thematic Perspectives*, Routhledge: London, 2015, p-283

⁶Suvankar Dey, *The silent killer: Tuberculosis in Colonial and Post-Colonial Bengal (1911-1962)* Unpublished dissertation :Jadavpur University, 2017, pp.52-60.

⁷Bikramaditya Kumar Choudhary, Colonial policies and spread of tuberculosis: an enquiry in British India, *Journal of Health & Development*, vol.4, no. 1-4, 2008, pp.65-84.

⁸. 'Tuberculosis inquiry by Dr.Ukil' 1929, 74/29,Public Health (Sanitary) Branch, National Archives of India (NAI)

⁹ For details see introduction, Arthur Lankester, *Tuberculosis in India, Its Prevalence, Causation and Prevention*, Calcutta,1920.

⁸. 'Tuberculosis inquiry by Dr.Ukil' 1929' 74/29,Public Health (Sanitary) Branch, National Archives of India (NAI)

¹¹ *Indian Medical Gazette*, December, 1927, p.333.

¹². Sir John Megaw, Tuberculosis in India: A Key Problem, *The Asiatic Review, Proceeding of the East India Association*, October, 1938, pp,601-623.

¹³ B.L Raina and Bisheswar Prasad(eds), *Official History of the Indian Armed forces in the Second World War 1939-1945. Medical Services, Medicine, Surgery and Pathology*, Combined Inter Services Historical section India and Pakistan 1955, pp.525-529.

¹⁴ *Imperial Gazetteer of India, The Indian Empire*, Vol.1, Oxford, The Clarendon Press, 1909, pp.521-526.

¹⁵ Overcrowding in Barracks, *Indian Medical Gazette* ,Vol XLVII,1913 ,Febuary,p-59

¹⁶ 'Annual Report of the Medical inspection of school children for the year 1933' in *Bengal Public Health Report for the year 1933*, Dr. R.B. Majumdar, Bengal Government Press, Alipore, Bengal, 1935, p.85

¹⁷ A. Lankester, *Tuberculosis in India*, Calcutta, Medical Publishers, 1920, p.200

²⁰ Micheal Mann, *South Asia's Modern History: Thematic Perspectives*, Routledge: London 2015, p-283

²¹Letter to the editor of Calcutta Municipal Gazette, 30th January, 1925

²² Dr. Panchanan Bose, Heliotherapy in tuberculosis and its problems in India, *Journal of the Indian Medical Association*,Vol-31. No-4, August ,16, 1958, p.301.

²³. I have discussed this briefly in of my previous article titled, An invisible enemy: *Rajrog* in Colonial Calcutta (1911-1947), *The Quartarly Review of Historical Studies*.,Vol no-3&4, Oct 2017-March 2018,pp. 128-41.