

'Burdwan Fever': Outbreak, Causes and Effects in Colonial Bengal

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Abstract: Colonial Bengal experienced several epidemics at different times due to different diseases like Cholera, Malaria, Plague etc. Among them, Malaria took one the most devastating form. Mainly rural parts of the country were affected badly by this epidemic. There were a lot of causes behind this epidemic and the colonial government reacted to this according to their governing policies. The great poet Rabindranath Tagore came forward with his unique idea of environmental development and worked hard to eradicate malaria. This paper will attempt to discuss how the ecological disbalance caused this situation and how the colonial authority reacted to it. This will also discuss the measures taken place and how Tagore's idea of eradication of malaria worked.

Keywords: Fever, Malaria, Quinine, Mosquito, Epidemic, Rabindranath Tagore

Almost a hundred and fifty years ago a massive and terrible epidemic broke out in southern Bengal- Malaria or the 'Burdwan Fever'. From a colonial perspective, before the advancement of western medical sciences, the mortality rate was considerable in India. A lot of people used to die because of the epidemic that was caused by low immunity power as they did not have access to a healthy diet during that time. Besides the frequent famines in colonial India, epidemics became a common cause for the people. One of the major causes of these epidemics was 'Burdwan fever' or malaria. As per the British annual sanitary records, during 1860-1947, the number of deaths by 'fever' accounted for half to three-quarters of the total registered deaths¹. It was malaria that caused the fever. Like cholera and plague, this became a reason to be feared. Many writers wrote on this disease and its effect on public life and psychology (Sarat Chandra Chattopadhyay's '*Arokkhoniya*'², Sukumar Roy's poem '*Satpatra*'³, '*Agnishwar*' by Banaphool⁴, etc). In the 1820s two major epidemics broke out in colonial Bengal, one is Malaria, and the other, cholera. Later scientists discovered that Malaria spreads by a specific insect- the mosquito. The disease, malaria, spread in many parts of Bengal but it showed its most devastating nature in the district of Burdwan(now Barddhaman). Thus it was named after it- 'Burdwan fever'.

Since the discovery of the cause of malaria- mosquito, it has been at the centre of the discussion between the scholars. Though there is no such hard-core proof in the ancient Indian literature like *Atharva Veda*, *Charaka Samhita*, *Susruta Samhita* that the mosquito is the main agent of malarial fever, some scholars believe that the people of ancient India knew about this agent⁵. This hypothesis became stronger by the mention of mosquito net by the Venetian traveler Marco Polo in the thirteenth century⁶. After long research, it was Ronald Ross who won the Nobel Prize in 1902 for discovering the germs of malaria and demonstrating the importance of mosquitoes in the spread of the disease and the whole experiment was done in Calcutta. After being influenced by his research, researchers tried to demonstrate the relationship between malaria and the decline of ancient Greece (fourth century BCE). They tried to discuss this matter in light of the arrival of malaria in Greece and the beginning of the fall of the civilization⁷. Though this hypothesis was highly debatable, it is clear that malaria was a worldwide issue. In the colonial subcontinent, malaria became a major issue to be discussed. Contemporary British naval medicine men like John Clark⁸ wrote that Bengal had a very unhealthy atmosphere and fever, lever complaints, dysentery, diarrhoea were common. The writings of James Johnson⁹, James Annesley¹⁰ William Twining¹¹ addressed the issue of tropical diseases to the ruling colonial authority. James Annesley believed that to invent and use the medicines in India one should take into account the climate, seasons and geographical distribution of diseases. So his topographical and statistical reports have been described as a "preliminary attempt to put this idea into practice"¹². In contemporary writings, malaria had been described as a mobile, peripatetic agent¹³. It has been found that the germ of malaria had been found not only in tropical areas but its germ had been found in the high altitude areas, places with very different temperatures and other places with different kinds of characteristics also¹⁴. But the major high breeding areas of mosquitos were like the swamp areas, stagnant water bodies, etc.

The nature and characteristics of malaria were very confusing to the medical practitioners. They were puzzled by the ambiguous nature of the disease. The medical practitioners of India were aware of the name malaria and had information about it but still, they were not clear about 'what is malaria?'. Malaria was figured as a painful agent that could be cited to explain a wide variety of maladies. Such maladies ranged from diarrhoea, nausea, headache, infection of the eyeball, abscesses on the female breast or in the ear and secretion of pus or general unbeatable malaise. Malaria is also figured as a cause of cardiovascular arrests that could endanger one's life¹⁵. In the scenario of Bengal, malaria was not an alien disease, people were aware of this fever and its result. But previously it had not spread like an epidemic or over a large geographical area. In the colonial period, it spread over substantial areas of lower Bengal with great effects. W.W. Hunter recorded in the late nineteenth century about the depopulation of the Kasimbazar area of

Murshidabad by a malarious fever in 1814¹⁶. Some scholars think that this happened due to a definite climate or other ecological changes¹⁷. These ecological changes caused changes in the area signifying the growth of this disease.

Obstruction of waterways and ecological disbalance

Obstruction of the drainage system and the conversion of running water streams into dead rivers would no doubt have largely increased the number of suitable breeding places of Anopheles mosquitoes, the main agent of this disease. Besides, in all the rice-growing districts of Bengal, paddy was grown right up to the doors of the village house. In such countries where a major part of the year the land was a swamp, the breeding rate of mosquitoes was naturally very high. Other important changes in the fauna of the areas undergoing depopulation were the notable decrease in the number of fish, and there would be a good increase of certain mammals like wild hogs. Both these changes were important from an economic point of view. The reduction of fish meant a decrease in food supply with adequate protein content, and the increase in wild hogs meant greater damage to crops during periods of scarcity.

The Eastern Bengal Railway was constructed in the 1850s. During the period 1872 to 1891, a total length of 1576 miles of railway tracks was laid. This was the high noon for malaria. The Commissioners of Presidency and Burdwan divisions were asked to find if the blockage of drains by the construction of roads and railways was the cause behind this malaria and health issues. But the Commissioner of Presidency Division replied that the laying of railways and roads had nothing to do with drain blockage. Most of the local officers and authorities agreed with that view except the magistrate of 24 Parganas. He stated that Haleeshuhar and Barasat were those places where the epidemic might be caused because of blockage of drains by road and railway construction¹⁸. In between 1904 to 1907, a large number of people died due to fever mainly malaria in Murshidabad. It was the time when the Eastern Railway made its path in Murshidabad. But sanitary reports did not accept the connection between railway construction and malaria.

The sanitation and hygiene system was very poor in colonial Bengal. The Civil Surgeon of Birbhum stated in 1880 that "It is reported that in Birbhum, village sanitation is still in a very primitive state. The value of communal hygiene is not understood, tanks being polluted and rubbish allowed to accumulate promiscuously."¹⁹ In October 1906 the Government of Bengal framed a Drainage Committee under Captain Stewart and Lt. Proctor to examine the role of obstructed drains in the spreading of malarial fever in the Bengal Presidency division. This specific Committee, in their report, suggested the Government frame a Drainage Department under the Public Works Department. The Drainage Committee Report(1907) pointed to several factors which could create this kind of situation. Silted up rivers, natural channels

and '*khals*', the high subsoil water level and the humid condition in the villages pushed up the incidence of malaria in many parts of central and western Bengal. Blocked water courses surrounded by swamps and stagnant water bodies choked with weeds created a good condition for breeding and multiplication of *Anopheles* mosquitoes²⁰. They suggested that there should be a sufficient supply of quinine whenever necessary. On the other side, the British authority was never ready to accept their faults in managing the sanitary system. C.A. Bentley who served as a Sanitary Commissioner and Director of Public Health in Bengal used to put the causes on the agrarian system. In his words, "the question of rural malaria is so closely bound up with that of agriculture that the one cannot be properly understood without some knowledge of the other"²¹. He suggested the improvement of agriculture and public health, housing in a particular area in a single scheme. He named this scheme 'bonification'²². By 1909, after a lot of meetings, debates and contradictory arguments, the government agreed to accept the lack of a sufficient drainage system and proceed to introduce a Drainage Bill in Bengal. Several anti-malarial operations were initiated at some selected places by the government. Dinajpur Anti-malarial operation at Dinajpur was one of them which began in 1909 and continued till 1912 when it was repealed because of unimpressive outcomes²³. This disease accounted for depopulation in Bengal. However, one should not lose sight of the associated phenomena such as climatic changes bringing in deficient harvests, changes occurring in flora and fauna, as well as changes in crop pattern all indicative of an overall decline in the general health condition of the people of Bengal.²⁴

In the case of the Burdwan district, rivers played a vital role in the expansion of fever malaria. There are the rivers like Damodar, Ajoy and Bhagirathi. These were used for agriculture as well as navigation. These rivers are the natural drainage system of this district. After the initiation of developmental projects like the construction of railways and roads in Burdwan, embankments were built on the banks of these rivers. The main intention behind the development projects was to make the colonial rule more powerful and to bring the idea of the power of western 'civilization' to the native countrymen. But these embankments left a great influence over the whole ecology of this area. It disrupted the ecological balance. Therefore, these commercial projects brought different kinds of natural calamities and diseases. In the Settlement Report of Burdwan, it had been mentioned that the spread of the fever was generally connected to the consolidation of the embankments to the east of the Damodar and the obstacles which were created to the drainage system due to the making of the railway and road embankments. This conception is confirmed by the fact that the southern parts of the river Damodar suffered less²⁵. This ecological misbalance caused a greater problem to agriculture also. All these combined and caused famines at different times. In rural Bengal, there were different types of vegetation. Among them '*Kuchoo*', '*Mankuchoo*', '*Lao*', '*Shim*' and '*koomra*' would be spared

if methodically cultivated in the fields''²⁶. These were the kinds of vegetation that could help the growth of mosquitoes.

In some cases, the nature of the crop production also made the pathway for mosquitoes. Before the coming of the British cotton and European sugar mills, the cultivators of Bengal used to produce these crops. These were commercial crops and also very thirsty crops. But after the advent of European products peasants stopped producing these. For irrigation, the water from the water bodies was carried out before the fallen leaves and other materials could rot in the water and the proliferation of mosquitoes was therefore non-existent. Instead of these, the peasants started to grow potatoes which required less amount of water for irrigation. In the villages of Bengal, there were plenty of ponds and other water bodies. The months of jute production and processing i.e. September, October and November were notoriously malarious. The reason behind it was that jute had to be rotted in water for several days for processing and these places used to be the breeding houses for the mosquitoes²⁷.

Malaria or the 'Cinchona disease'?

There were two ways of getting rid of Malaria- one was the preventive measures and the other was the medical treatment. Medical scientists were searching for a remedy for malaria. They found that Quinine could be good medicine for this. Quinine was first isolated in 1820 from the bark of cinchona trees. Bark extracts have been used to treat malaria since at least 1632²⁸. The "malarial epidemic" owed its identity to quinine. Advertisements were vigorously reiterated in the official registers at various times in the 1850s. The colonial authority acknowledged Quinine not merely as an antipyretic, but also as a preventive measure. They wanted to secure the lives of British army personnel first because the army was the key power to the government. So This remedy of malarial fever was being suggested to the higher authority of the government. In certain regiments in British India, consuming a certain dose of quinine with breakfast was mandatory²⁹. However, quinine was being seen as the only remedy for malaria. And the government started to produce more and more quinine for Bengal as well as for Madras and Bombay's presidency. Quinine was also being brought from England. Certain publications like *The Calcutta Journal of Medicine* cited the epidemic as a result of coming to the quinine. Its editorial described it as a 'cinchona disease', which was born out of consuming regular doses of quinine to be away from the intermittent fever. It argued that while quinine relieved the body from mild and temporary forms of intermittent fever, it plagued the body with a worse and enduring disease: cinchona disease. This theory became very popular among the people and a Bengali journal *Chikitsasammilani* expressed its fierce anger to the colonial government by saying that this government was making our countrymen sick and ill by giving them quinine at very low cost in the name of precaution and revival from malaria. They published an

editorial named 'Quinine is Malaria'³⁰. A Bengali article entitled '*Malaria Rahasya*' or the 'Malaria Mystery' of the early twentieth century rejected quinine by labeling it as a poison. It also described malaria as an 'airy-fairy word', and an 'imaginary unfounded idea'³¹. But the greater danger lay elsewhere i.e. the proper distribution of quinine mixture. A contemporary Sanitary Officer in his report expressed his tension about the mixture that was given to the countrymen of rural Bengal. The officer actually could not believe the local quack practitioners. Therefore, he suggested the use of "reliable sources" to distribute the medicine. As the "pure quinine" was produced only in Britain and its pure substitute was not been discovered in India the epidemic became the opportunity for the colonial officers to test the other options to cure malaria. Interestingly we found the mention of the concept of "pure" and "not-pure" quinine in Saratchandra's novel '*Lalu*'. In a letter in July 1872, the Lieutenant Governor instructed the Inspector General of Civil Hospitals to 'take the opportunity of the epidemic to test the capabilities of the cinchona bark'³². Through such tests, the reliability of the quinine substitutes could be assured even if "pure quinine" had to be indented from England. It was that foreign medicine by which the government tried to colonize the body and mind. In 1900, the British established quinine as the best protector against malaria. As the natives were scared to take this medicine, the colonial government sometimes made pictorial advertisements with the photos of Lord Shiva³³. This way they tried to make it common to the commons. On the other hand, to the common Bengali people, this fever became an everyday reality. Saratchandra in his '*Arokkhoniya*' showed this beautifully by calling it "*maloyarir jwar*" which made the young village young women weak, ugly and unmarriageable³⁴.

Tagore's view and responses to Malaria

Besides the government's efforts to prevent malaria other people thought about it. Birbhum was a very badly affected district of the Burdwan division. From 1871 onwards, this disease attacked here almost every year till 1907. Birbhum observed a lot of casualties and the rate of death per millennium was very high³⁵.

The great poet and humanitarian Rabindranath Tagore had a noble idea of rural reconstruction. He thought if the development of rural people cannot be done then the whole country would go back because the majority of the people of India were from villages and they were mostly peasants. Before setting up his two dream projects at Santiniketan and Sriniketan he planned his idea of rural reconstruction at Shilaidaha and Patisar situated in eastern parts of Bengal. Then in Birbhum, he thought about rural reconstruction in Sriniketan. In Tagore's words, the main motive behind this whole idea was,

"No life can be imaged more joyless than that of the present-day villages. And those in whose life there is no health or joy fell easy victims to sudden calamity or disease. The villager has long suffered

from outside. The Land lord's deputies, the bailiffs, and the police have all persecuted them...When I wrote *'The Swadeshi Samaj'*(1904) this idea was formulated in my mind. I cannot take responsibility for the whole of India...If I free only one or two villages from the bonds of ignorance and weakness, there will be on a tiny scale, an ideal for the whole of India...Our aim must be to give these few villages complete freedom, education for all..."³⁶

Therefore we found that the whole idea of rural reconstruction came to Tagore's mind in 1904 and its implementation had been started from 1922 and onwards, after the foundation of Sriniketan, the abode of prosperity. There, his colleagues like Leonard K. Elmhirst, C.F. Andrews³⁷ and W.W. Pearson³⁸ helped him in that project in many ways. Among them it was Leonard. K. Elmhirst, a philanthropist and agronomist, should be given the credit for starting the project at Sriniketan. Primarily its name used for this purpose was 'School of Agriculture' and the name Sriniketan may have come in 1924³⁹. Many foreigners helped in this whole project financially also. Sudhir Sen rightly said, "In a unique way it has combined Indian philosophy, British enterprise and American finance"⁴⁰. There they found that the people were suffering from immense pain to different diseases and the most important point was that there were no such dispensaries for treatment. Surul, a neighbouring village of Sriniketan, was a decaying village infested with malaria, monkeys and mutual mistrust. Elmhirst worked on rural reconstruction while training a group of students and teachers from the *ashrama* of Santiniketan. Improvement of village health received priority. A cooperative malaria society was formed by him, Kalimohan Ghosh and Gopal Chattopadhyay in Sriniketan during 1922-23. In 1923, the Sriniketan dispensary, which was principally devoted to the work of malaria prevention, began functioning⁴¹. Like many other Indians Tagore also believed that the British government's policy was behind this situation. In a meeting of Central Co-operative of Anti-Malaria Society he expressed that because of the making of embankments on the river, blockage of drains for the making of railways and roads malaria was spreading⁴². Rabindranath knew that in that hour of emergency everybody should stand beside others. He put stress upon the cooperative system. Harry Timbres⁴³ was the person who initiated to give a practical shape of Tagore's vision of a co-operative system in the field of health. This unique experiment- Health Co-operative Society was started at Benuria, a village 3 kilometers west of Sriniketan⁴⁴. The members of the Health Co-operative Society, *Palli Mangal Samities*, *Bratibalakas*(the boy scouts) arranged health talks on malaria and other diseases, lantern lectures motivating the villagers to get vaccinated and most importantly the free supply of quinine to villagers⁴⁵. These volunteers were also working on cleanliness, sanitation and good hygiene which are the key factors of preventing mosquitoes. They were creating mass awareness among the villagers too.

In countries like UK and USA the workers, engineers became very careful

after the incident of malaria in colonial India. They became aware of the 'man-made malaria'.

The 'Burdwan fever' or malaria spread from the 1860s onwards in different parts of Bengal. This was the time when a lot of Bengali writers were writing medical manuals, cook-books and other literature pieces, in which they were saying about the debilitated Bengalees. Observing the nature of this disease was a significant reason behind the debility of native Bengalis and on the contrary, because the debility of the people (because of improper diet, lack of physical exercise, etc) could not resist the germs of malaria⁴⁶. There were no such linear causes that could be attached to this epidemic. This epidemic shows the relation between different aspects like medicine and governance; medical and natural sciences; how the bureaucracy reports and which diagnostic methods they were using and the nature of the pharmacy industry etc. This epidemic also showed the conflict between the will for 'improvement' by the governing authority and the reactions of the governed natives.⁴⁷

Notes and References

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