

# Epidemics and Infectious Diseases in Colonial Bengal: A Historical Study

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## ABSTRACT

The critics argue that British medical policy in Indian sub continent especially in Bengal was impregnated with British self-interest not guided by the spirit of altruism. British medical intervention to tackle the outbreaks of epidemic diseases is considered as one of the important aspects of western medicine in India. That these diseases were a cause of concern for the colonial rulers is an undeniable fact. One of the terrible aspects of the Public Health of Bengal was the outrageous death-rates among the people from a number of diseases. The prime killer such as Small-Pox, Cholera, Kala-Azar, Tuberculosis, Leprosy, Malaria etc., were chief among the maladies and Bengal suffered from waves of epidemics of these diseases.

**KEYWORDS:** Public Health, Epidemics, Disease, Malaria, Cholera, Tuberculosis, Small-pox, Kala-azar

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## INTRODUCTION

Epidemic means mass as different from isolated cases of illnesses. Greater portion of epidemics tend to have a natural cycle. They come and go for no apparent reason. Even in the absence of medical intervention they seem to vane and then reappear again. The exact apparatus of the cyclic nature of epidemic is not well understood but many relate to mutational changes in the micro organism, acquisition of immunity by population, and other factors. Perhaps for this reason epidemics, while causing havoc, have not caused the extinction of any civilization<sup>1</sup>.

One of the terrible aspects of the Public Health of Bengal was the outrageous death-rates among the people from a number of diseases. The prime killer such as Small-Pox, Cholera, Kala-Azar, Tuberculosis, Leprosy, Malaria etc., were chief among the maladies and Bengal suffered from waves of epidemics of these diseases. In Bengal, Kala-azar, cholera and group of deficiency diseases were "permanently housed in villages". The struggle against the diseases constituted an important chapter in the history of public health<sup>2</sup>.

### Epidemic and Health policy:

The critics argue that British medical policy in Indian sub continent especially in Bengal was impregnated with British self-interest not guided by the spirit of altruism. Medical historians of the western world like David Arnold is of the opinion that it was not only meant for the benefit of the colonial rulers, it also spread beyond that and that is an undeniable fact. The rulers primarily concentrated on how to provide the best hygienic, sanitary, and medical facilities to the military and civil population of their own race. It was not

devised as a part of welfare policy. The health policy was primarily aimed at catering to the needs of civilians and soldiers. It was mainly extended to urban areas to safeguard the Europeans in the mines, plantation, factories and administrative centres.

British medical intervention to tackle the outbreaks of epidemic diseases is considered as one of the important aspects of western medicine in India. That these diseases were a cause of concern for the colonial rulers is an undeniable fact. But the question has been raised whether this concern was for the Indian people as a whole or for the army, European civilians, plantation, trade, and industry. It is evident from the historical fact the government started taking measures against these diseases when they posed serious threat to plantation, trade and industry. The government was least concerned about the impact of the malaria epidemic on the native civil population. It was only when the epidemic fever threatened the health of military personnel that the government intervened and took some ameliorating steps. However, the government adopted few health measures, both preventive and curative, when epidemics broke out<sup>3</sup>.

There were several legislations for the prevention and control of diseases. The Indian Penal Code (1860) contained provisions (sections 269-271) to check the spread of infectious diseases dangerous to life. The government of India also delegated powers under Epidemic Diseases Act, 1897 (Central Act III of 1897), to the local Governments, so that temporary regulation could be issued regarding all the

dangerous epidemic diseases or such diseases. The Indian Railway Act, 1890 (Indian Act IX of 1890) gave the railway administration power to refuse to carry persons suffering from infectious or contagious disorder unless with special permission. The Indian Ports Act, 19087 (India Act XV of 1908) also contained provisions for prevention of danger arising to the public health by the introduction and the spread of any infectious or contagious disease from vessels arriving at or sailing from ports. Rules for the protection of passengers in river streams against the spread of Plague and other epidemic diseases by person travelling in such streamers were contained in the Indian Inland Steam Vessels Act, 1917. As per the Bengal Village Self- Government Act, 1919, the village 'chowkidar' was required to give direct information to the Union Board, of the outbreak of any epidemic disease among men or cattle. Under rule 13 Bengal Emigration Rules, 1923, it was mentioned that "emigrants suffering from ordinary complains shall be removed to the hospital in the place of accommodation and those having cholera, smallpox or other infectious diseases and those suspected of infection shall be dealt with immediately under rule 40 of the Indian Emigration Rules, 1923". Chapter XIV of the Bengal Municipal Act (1932) empowered the Municipal Commissioners to take steps in the event of the outbreak of any dangerous disease. The rural public Health organisation scheme was introduced in 1927, to avoid delay in distribution medical assistance to the affected areas<sup>4</sup>.

#### Smallpox:

Smallpox is considered to be an ancient disease and most likely originated in Africa. Smallpox might have been introduced in Indian subcontinent due to the trading relations with Arab merchants, and this infectious disease might well have killed 300-500 million people in the worldwide until it was finally eradicated in 1979<sup>5</sup>.

Smallpox, known as "Basanta Rog" was one of the foremost epidemic diseases in Bengal. The main feature of infectious diseases is that they increase in incident in a particular weather and season, just as smallpox was most prevalent in the first half of the year in Bengal. Calcutta seemed to serve as a central disseminating focus of smallpox infection where epidemic of a serious nature once broke out in 1838 and yet again in 1848-50 and 1856-58.

A severe recrudescence of smallpox in epidemic intensity occurred in 1919-20 with 36190 in 1920. The curve of this quinquennial epidemic which reached its climax in 1928 spent its force by 1929 when deaths from smallpox fell to 20407 as against 43558 in the previous year. The downward curve continued during the following years but the mortality from smallpox again showed a considerable increase in 1933. The cycle rotation of smallpox reached its lowest point in 1935 with 7548 deaths. But it rose suddenly in 1936 with 46267 deaths which was the highest in India. The disease acquired a deadly association with famine and prevailed in a severe epidemic form during 1943-1945.

Smallpox caused a great loss of life in Bengal. This was due to defective system of vaccination and the absence of the system of compulsory re-vaccination<sup>6</sup>. This is something to keep in mind that vaccination reached India in 1802, just 4 years after Jenner's original report, but it was not systematically introduced before 1927. Even the supply was grossly inadequate. There was no serious agenda, program or attempt to eliminate the disease. Indian native people continued to suffer. Unfortunate superstitious people

invented *Sitala Mata*, the goddess of the disease with a hope to protect them through her grace, which went in vain<sup>7</sup>.

#### Cholera:

This water born disease known as "murree" or "ola-utha" or "vishchikha" in rural Bengal. It is need to be mentioned that Asiatic cholera spontaneously developed in India or in other words, India was its home. Bengal was spotted out as the chief epidemic home of cholera in the World. Six pandemics of cholera occurred between 1817 and 1923. The first epidemic begins in Krishnanagar on the Hooghly River in 1817. There was little doubt however that in 1816 cholera was already becoming epidemic in Bihar. A record states that during a pilgrimage in Bengal in 1783, 20,000 people died due to cholera. The population of British India in 1921 was 318,942,000. In 1821 and 1824 half a million and 300,000 cases were recorded. During the last part of the 19<sup>th</sup> century, annually 2-8 lakhs of people died of cholera. During 1923-1934, the number of deaths due to cholera amounted to 2,490,401, average 207,533 per annum. Derozio and David Hare died of cholera 1831 and 1842 respectively<sup>8</sup>.

In Bengal, cholera was due more or less to the absence of pure drinking water especially in the rural areas. Another factor, in the dissemination of cholera among people who dwelt amidst fair sanitary condition, was contaminated milk supply.

As regards anti-cholera measures, certain preventive steps early notification, disinfection and educative propaganda were approved and circulated to the Commissioners of Divisions. Disinfection of sources of water-supply, tanks, wells, river-ghats, houses, dobas etc., was carried out. Extensive propaganda was also organised throughout the divisional healthy units<sup>9</sup>. But vaccine supplied was too meagre to cater to the need of the country. Moreover, practically no sincere attempt was made to improve water sanitation, especially in rural areas<sup>10,11</sup>.

#### Kala-azar (Leishmaniasis):

Leishmaniasis is a disease caused by unicellular nucleus-containing protozoa (a parasite, not a bacteria or virus) of genus *Leishmania*. There are three main types of leishmaniasis: coetaneous, mucosal and visceral. The visceral leishmaniasis is known in India as Kala-azar (kala means black; azar means fever); India accounts for most cases of kala-azar, caused by *L. donovani*. Kala-azar is mainly a disease of the tropical region. The symptoms of Kala-azar are similar to those of malaria except that the duration of an episode of fever can be weeks<sup>12</sup>.

There was no district or village in Bengal which was not infected by this fell disease; kala-azar is believed to have existed in Bengal for over a century and a half. In 1824-25, in Jessore, there was an outbreak of a fever (*Jwar Vikar*), accompanied with certain complications, frequently seen in kala-azar. After the first outbreak in jessore district, gradually after 1832, epidemics started appearing in Nadia, South 24 Parganas, Dhaka and other districts of Bengal including Hooghly and it caused many deaths. In 1925 deaths from kala-azar numbered 16766, the trend on mortality began to show steady increase from 1933 with 13447 deaths and kept up its upward move up to 1938, number of deaths was 21642; mortality rate kept increasing till 1944-45<sup>13</sup>.

As to the curative measures, it may be pointed out that there were only a few experts for the treatment of kala-azar

patients came to Calcutta for treatment resulting in overcrowding of the city hospitals. Moreover, kala-azar was generally treated as malaria, as facilities for examination of blood were inadequate or non-existent in the rural areas with result that the period of suffering was unduly and fatally long.

The fact is that Government did next to nothing to eradicate the disease. The voluntary organisations, without the reputation of the efficiency of the bureaucracy, had a better record to show<sup>14</sup>.

#### **Tuberculosis:**

Tuberculosis is a specific infectious disease caused by a bacterium called *Mycobacterium tuberculosis* which enters into a human body through invisible particle of moisture, on which the tubercle bacilli float in the air when these particles are inhaled by human beings. Tuberculosis was one of the terrible scourges that Colonial India Encountered. It became a major health problem in British India especially in Bengal causing enormous mortality and morbidity. It was severer than cholera or smallpox and took a serious toll from amongst the adult and working members of the community<sup>15</sup>. In Bengal, tuberculosis was mostly due to protein deficiency. An imperfect protein nutritional with over-abundance of sweet, fats and starch sapped the vitality of the people who became quickly infected with tubercle bacillus. Unhygienic habits and customs, poverty bad housing conditions, congestion and overcrowding also helped the spread of the disease<sup>16</sup>. The serious problem of tuberculosis in the Bengal province, especially after the famine of 1943, it witnessed from the Governments documents and other official and unofficial observations. Tuberculosis alone killed nearly one lakh of people in Bengal every year. On a very modest computation, ten lakhs of people suffered from this infectious disease and formed the force for the spread of infection, noted Sir David Ezra, in course of his presidential address at the 10<sup>th</sup> Annual General Meeting of the Tuberculosis Association of Bengal held on March 23, 1939<sup>17</sup>. In Bengal, where thousands of people died every year due to tuberculosis, there was only one hospital at Jadavpur and that too was founded by private individuals. The tuberculosis problem of Bengal was immense but the measured adopted by colonial Government to eradicate this infectious disease were inadequate and callous<sup>18</sup>.

#### **Leprosy:**

Bengal was the worst province in all over India as per the number Leprosy cases. Leprosy constituted a major public health problem in Bengal during colonial era. To a large extent leprosy was a social and economic problem. Poverty, bad housing with overcrowding, poor diet, presence of debilitating disease, and lack of health education contributed to the spread of infectious disease like leprosy. Medical experts believed that modern industrialization and better communications led to an increase of leprosy in some areas of the country. Industrial labours migrated from their native places to industrial regions where lepers were numerous, contracted the disease and returned to their places with leprosy infection and started spreading it.

As per the census of 1921, it was revealed that there were in India 102513 lepers cases of which there were 48 per million in Bengal. According to 1931 census report, there were about 21000 cases of leprosy in the district of Bengal. Most of the research work in India in connection with

leprosy was done at the School of tropical Medicine. The results of the work enabled the doctors to diagnose the disease at a much earlier stage and to recognise a number of previously unidentified manifestations of the disease. However the problem of leprosy remained unsolved. There is no doubt that anti-leprosy work offered many challenges but no intelligent and organised efforts were made by government to eradicate or check this loathsome and cruel disease. Anti-leprosy work was done largely by private agencies assisted by Government. But it was quite impossible for them to undertake the responsibility of the Government<sup>19</sup>.

#### **Malaria:**

One of the many 'benefits' which Bengal derived from British rule malaria was one. Bengal produces cases and deaths due to malaria to the extent nearly 40 p.c. of the total number of cases and deaths that occurred from this disease in the whole of India. But the mortality from malaria was only a partial index of the seriousness of problem. In the early sixties of the nineteenth century when outbreaks of epidemic fever first attracted serious attention in Bengal, the occurrence of the disease was ascribed to the haphazard construction of railway embankments which restricted the natural flow of water. As per Raja Digambar Mitter, first Indian member of 1863s Malarai enquiry committee of Government, who emphasis the theory of 'Embankment' was the prime reasons behind the rapid growth of Malarial epidemics. Mitter pointed out how in a 'continuous line of villages from Ichapur to Chakdaha', 'a severe type of fever...broke out exactly in the order of time in which the railway embankment progressed and passed along their eastern borders'<sup>20</sup>. In 1921, malaria occurred in a severe form with 737223 deaths; the severity, however, slowed down slightly in the period between 1922 and 1927. The number further increased to 763220 in 1944 after which it gradually slowed down.

As regards anti-malaria grants, it may first be noted that originally, 1926, anti malaria grants were distributed to the district boards to be spent through selected union boards and registered village health societies, up to a limit of Rs. 200 and Rs. 100 respectively for expenditure on such small anti-malaria works and jungle cutting, kerosinizing etc. grants for quinine were also made by the Government. However, this system of doling of small grants was found ineffective<sup>21</sup>.

#### **Conclusions:**

Devastating epidemics in the empire took millions of lives especially in Bengal. The imperial Government basically adopted no such bigger step to contain or eradicate epidemic, infectious diseases which clearly shows the double standards, where health was promoted in its own country and demote in colonies.

It is also worthwhile to mention here that malaria, plague, and cholera virtually disappeared in England from 1864, 1841, and 1866 respectively. But its colonies continued to suffer bitterly from these menaces. This is surely double standard adopted, for so many epidemics the entire empire cannot deny its responsibility. Many oppressive measures were enforced and many death-dealing experiments were carried out, native people of our country were debarred from the scientific field. The nation became crippled with no real progress<sup>22</sup>.

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