Bills Of Health: Cholera And The Politics Of Health In The Colonial Port Of Calcutta (1866-1876)

Sayantan Bose

Assistant Professor (W.B.E.S.), Government General Degree College, Singur, West Bengal, India.
Doctoral Research Scholar, Department of History, Visva Bharati, West Bengal, India.

KEYWORDS
Bills of Health, Cholera, Quarantine

ABSTRACT:

Introduction: This paper seeks to unravel some of the complex political ramifications of the Bill of Health in the context of colonial India. As the threat of Cholera loomed larger than ever during the second half of 19th century, pilgrimage and pestilence assumed a political character with the major European powers that held the Indian pilgrims to the Hedjaz responsible for the contagion. With the re-enforcement of the Bill of Health, the British government in India was expected to acquiesce to the international demands. But for the British authorities in India, pilgrimage had political implications that could not be ignored. Bill of Health, thus, perturbed the British authorities in India in more ways than one. What was to be the format of the bill? Who was to be appointed the authority to grant such a certificate? What was its relevance for Britain in the global political scenario? These are some of the problems that the paper attempts to address through a diligent archival study. The port of Calcutta has been taken as a case study not only because it was one of the most important ports of colonial India, but also because it serves the purpose of highlighting the wide gulf between the core and the periphery of the British administration with regard to the execution of adopted policies

Objectives: The objective of this research is to understand how colonialism as a system was affected by repeated outbreaks of cholera epidemics. Focusing on one of the major aspects of public health regulations during an epidemic, this article makes an attempt to study how the colonial state of British India responded to the dangers of epidemic and impending sanctions from the international community at large.

Methods: The research is mostly based on archival sources, especially official proceedings regarding the Haj pilgrimage from the Port of Calcutta between 1866-1876.

1. Introduction

The Social history of Medicine in colonial India, although relatively new, has emerged as a multi-dimensional discourse. In the existing historiography, the connection between imperial state and public health measures have been explored and discussed extensively. Cholera has acquired importance of considerable magnitude within this discourse, not only because it proved to be a challenge to western medicine, but also because it turned out to be a bane for colonial authorities throughout the Nineteenth Century. As David Arnold said, it was a highly "political disease". In his seminal study, Arnold argues that a lot of imperial effort was exerted on attaining control over the 'unhealthy' body of the colonized people. Cholera, as one of the principal diseases of the Indian subcontinent and typical to the tropical climate, was a serious challenge to the colonizers. Till the late 19th century, the aetiology of the disease was a matter of speculation. But the annual mortality rate in India due to

cholera remained particularly alarming throughout the century. What troubled the British authorities most was the vulnerability of the troops. To safeguard the health of the troops stationed deep into civilian territory, it was imperative to consider the general state of health in the empire. The commission appointed by the Viceroy to enquire on the cholera epidemic of 1861, thus reported that the health of the troops could not be considered in isolation of the general civil population. The 'political' problem was only multiplied by the fact that cholera was threatening British commercial interests in Asia. The Third International Sanitary Conference at Constantinople had threatened to enforce quarantine of every ship from British India entering the Red Sea. Mark Harrison has made a brilliant study of the ramifications of this quarantine policy on British commercial interests and how it compelled them into a long and protracted diplomatic struggle with fellow European powers. Saurabh Mishra, in a different context, connects this diplomatic quagmire to colonial concerns over political relations with the Muslims in India. Both these astute studies, however, fail to take into account the importance of the 'Bill of Health'. It was not only a result of the political tussle over quarantine, but a serious indicator of the complex interplay of political factors in India which were also multi-layered. In other words, the political ramifications of the quarantine measures can be exposed if we follow the administrative confusions which arose over the Bills of Health in India.

Situating the Context:

With its major pandemic outbreaks in 1817-21, 1831-33, 1849-53 and 1865-67, cholera caused great perturbation to the British government in India. Since 1817, it had periodically visited England, Russia and as far as United States periodically, wreaking havoc across three continents. The epidemic of 1865 hit western Asia, especially Constantinople and Jeddah and caused unprecedented mortality among the population. These parts of the Ottoman Empire were important in more ways than one, namely because of the Islamic pilgrimage to Mecca on the shores of the Red Sea and the Eurasian trade conducted via the same route. The mass of humanity that congregated at Mecca every year was large and they came from all parts of the globe, especially from the colonies of Africa and Asia. By 1865, it was more or less accepted by almost all European powers that cholera was a contagious disease and that it propagated through human movement. It is difficult to ascertain when this suspicion had turned into a medical certainty but such a large mass of humans dispersing to different parts from Mecca was seen as alarming in case of a break-out of the epidemic among the pilgrims. The Third International Sanitary Conference of Constantinople in 1866 had declared this officially, with British India, especially Lower Bengal termed as the 'home' of the malady.[1] This assertion had less to do with concrete medical proof than a general air of consternation among the non-British delegates at the Conference, especially the French who had been organizing these sanitary conferences since 1851. A large number of the Muslim pilgrims were from India and the South-East Asian colonies of the British, and the French alleged that it was these pilgrims who brought the pestilence with them to Jeddah. The British colonial government, as a result, was perennially under international pressure throughout the 1860s. The solution, apparently, was simple: to accept the terms of the conference and adopt the remedial measures. But there were three important factors which compounded and complicated the British problems. To begin with, pilgrim movement to the Red Sea via the Arabian Sea was poorly regulated by the British authorities in India if not neglected altogether. There was no specific arrangement of for the pilgrims and mostly they had to go on-board mercantile vessels bound for the Red Sea. The steamship companies running these vessels had absolute disregard for sanitary measures. The pilgrims, mostly of the poorer classes, had to travel on the crowded deck with filthy latrines and unhealthy environment. Until 1866, the British authorities could be blissfully ignorant of these hardships as well as the medical threat that these ships carried onto the Red Sea, not least because the Muslims in India were marginal to the growing realm of institutional politics and thus peripheral to British concerns. A second factor was the anti-contagionist stance adopted by the authorities in India on the mode of propagation of cholera. During the first half of the nineteenth-century, the colonial medical reports had concurred with experts and authorities in England on the supposed contagious character of the disease. Even the committee appointed by the Viceroy to

[1] Norman Howard-Jones, The Scientific Background of the International Sanitary Conferences 1851-1938, (Geneva: World Health Organization, 1975), pg. 30

enquire about the cholera epidemic of 1861 had reported that the human agency in the propagation of the disease was indisputable. From the same decade, however, there was an increasing tendency to dispute this conventional notion. Officials like J.L.Bryden and J.M.Cuningham argued that cholera had no connection with human agency as such but was clearly an atmospheric phenomenon. Sheldon Watts argues that this discernible shift in position had a definite political background which shaped the policies on quarantine. The mercantile interest, asserts Watts, dictated terms in London and influenced policies in India. Indeed, on the question of alleged contagious nature of cholera, the British-Indian government took a more adamant stance than its metropolitan counterpart, dismissing any measure of quarantine as futile and even detrimental to public life. For Watts, this shift took place after 1868. Even the 1867 report on the cholera epidemic submitted by J.M. Cuningham himself missed the intransigent note that he was to acquire later on. Harrison and Mishra concur with Watts in this regard, although Watts criticized Harrison for accepting this trend as a political exigency which was unchanging throughout the 19th century. The third important factor was the wide gulf between the rhetoric of the imperial state and the practical administration of the empire. The official stand of the British-Indian government on the question of quarantine was reflected by its delegates at the Constantinople conference and substantiated by Cuningham, D.D. Cunningham and T.R. Lewis. The voices of dissent in the form of A.C.C DeRenzy or W.R. Cornish, however, were anything but exceptional or miniscule. A meticulous reading of the annual sanitary reports submitted by provincial sanitary commissioners and civil surgeons of districts, however, reveal that the atmospheric theory of cholera was never established beyond doubt. These reports contain information on condition of living, supply of pure water, contamination of the water resources and general hygiene along with meteorological details. This betrays a sense of scepticism which is almost absent from the rhetoric of Cuningham. Surprisingly, this factor has attracted the less attention in the existing historiography of pestilence than it should have. Both Harrison and Mishra take note that Cuningham's theories had few takers within the administration, but none of them pursue it further to study the wider ramifications of this cleavage, especially pertaining to the execution of policies. While colonial policies were formulated to suit the interests of the empire, their execution was seldom smooth as the subordinate officials had to contend with various factors which the authorities in London were oblivious of. What generally ensued was confusion within the ranks of administration as is evident from the official correspondence regarding the Bill of Health. It, thus, provides the perfect opportunity to study the different elements and factors which contributed to this administrative confusion.

Most of the delegates at the Constantinople Conference were in favour of closing down the traffic from Arabia to the Mediterranean to protect Europe from the ravages.[2] Notable exceptions were Russia, Turkey and of course Britain, all with sizable Muslim population. Ultimately, however, it was decided that a policy of strict quarantine would be observed. There is no scope in this paper to discuss the protracted details of these measures, but an overview is necessary so as to comprehend the scenario. The Board of Health was envisaged at the Constantinople conference itself as an international body which would regulate the traffic of Hadj pilgrims entering Jeddah and also enforce sanitary measures in the whole region. The exigencies of quarantine were discussed and it was decided that an imposition was imperative to keep the pilgrims under medical surveillance. This is what led to the formulation of the Bill of Health. In the July 1867, the Board of Health at Constantinople drew up a detailed plan to execute the resolutions adopted in the Conference a year earlier. It stipulated that every ship arriving at Jeddah with cholera on board or with clear indications of the disease, would be made to serve quarantine at chosen lazarettos or stations for a minimum of 10 days. Every ship which claimed to be exempted from such measures, had to produce a Bill of Health, a certificate of health issued by an authority which was to mention:

"The first cases of Asiatic Cholera occurring within the limits of the place of departure; it should record the continuance of the epidemic as well as its disappearance; it should note the date of the last cases for ten

[2] Ibid, pg. 28

consecutive days at the end of which, it may cease to mention them.....The bill should also mention the sanitary state of the ports of call, the hygienic condition of the ship..."[3]

Failure to produce this certificate would lead to quarantine of the crew and the passengers for a minimum of 10 days. The same applied to ships provided with a foul Bill of Health, indicating the presence of cholera on board or around the place of departure.[4] The British delegate at the conference, Dr. Goodeve of Calcutta Medical College, had argued against the adoption any quarantine measure. It was also the official position of the British Parliament on the matter. Quarantine measures threatened to thwart British commercial interests in Asia and yet non-compliance meant the imposition of a *de facto* embargo on her. Indeed, as Harrison shows, Britain never quite came to terms with the measure and formed a committee in 1882 to expose the 'hardships' of pilgrims forced to spend time in quarantine camps at Jeddah. But in 1867, the debate on contagion was far from being a resolved issue. As vehemently as they countered it, British authorities could establish no theory to dismantle the supposedly contagious theory of cholera. On diplomatic platforms, Britain continued to present her case till the 1880s; but in practice, she had to acquiesce to the measures adopted by the Board of Health till she could successfully have them dismissed.

The Bill of Health, thus, had to be The Port of Calcutta was one of the most important of British-India. Around 1400 pilgrims had left for Jeddah from this port in the year 1865.[5] The focus of this paper would be to perceive and evaluate the administrative reaction of the Government of Bengal and the port administration juxtaposed to the British policy at the international stage.

The Question of Authority:

The Board of Health had clearly mentioned that a "sanitary authority" must issue the Bill of Health. In 1867, however, the Port of Calcutta had no sanitary authority. The port was under the charge of the Commissioners with the Master Attendant dealing directly with the arrival and departure of vessels. There was no practice of sanitary or medical inspection of the ships. In fact, in 1866, when the Master Attendant was asked to furnish a list of cholera cases previously recorded on board, he declared that there were no such records![6] When directives were received by the Government of Bengal to comply with the standards of the Ottoman Board of Health as early as August 1867, the Master Attendant at the port of Calcutta was promptly given the additional duty of issuing the new form of the Bill of Health.[7] John Reddie, the Master Attendant at that time had actually suggested the appointment of a proper health officer as the duty also involved sanitary inspection of the ship.[8] The government, probably wary of additional costs involving such an appointment, never even responded to the suggestion. But to comply with the standard draft of the Bill of Health, it was also necessary to supply the Master Attendant with relevant vital statistics on cholera as the Bill had to include the number of cases of cholera around the port at the time of departure. The Master Attendant, surprisingly, was not informed of a proper source for these statistics. As a result, confusion emerged. In August 1868, cases of cholera occurred on board the steam ship *Mongolia* just before its departure from the Port of Calcutta. Reddie sought the counsel of W.A. Green, the Inspector General of Hospitals regarding the format of the Bill of Health to be issued to *Mongolia*. The I.G, not venturing to interfere into a matter outside his jurisdiction, forwarded the quarry of the Master Attendant directly to the Lt. Governor's office. Both were reprimanded subsequently, especially the I.G who was told not to entertain such requests from any official henceforth.[9] Reddie's confusion was obvious. There

[3] West Bengal State Archives, General Proceedings, November 1868

[4] Ibid

[5] WBSA, General Proceedings, February 1866

[6] Ibid

[7] WBSA, General Proceedings, April 1867

[8] WBSA, General Proceedings, November 1868

[9] Ibid

was no medical authority superior to him the only proper medical officer he could turn to for advice was the I.G. Shortly after this incident, the authority of issuing the Bills of Health was passed on to the Commissioner of Police. After much official deliberation it was decided that the Registrars of Death would submit necessary data daily to the Health Officer of Calcutta, who would then pass the facts on to the Commissioner of Police.[10] He was also to send a monthly report to Dr. Dickson. This, however, does not mean that the Master Attendant was relieved of all duties. Reddie and his assistants were in charge of surveying the ship and the health of its passengers before forwarding recommendations to Hogg. A number of officers were being given additional charges with no clarified hierarchy of authority. Moreover, none of these officers were proper sanitary or medical authorities. This was a clear deviation from the instructions coming from Constantinople. It remained this way till 1875 when a Health Officer was finally appointed for the Port of Calcutta.[11] The government, it seemed, was bothered more about expenses. A makeshift arrangement as that described above was the government's way of finding comfort in the fact that it will "cost no money".[12]

Cholera: "Epidemic" or "Sporadic"?

A more serious crisis arose over the wording of the Bills of Health. The Board of Health had instructed the use of 'Asiatic Cholera' and 'Cholera Nostrus' in the Bills of Health.[13] These terms were in vogue since the 1830s, defining a severe and a mild form of cholera respectively. In British-Indian administrative parlance, a further distinction was usually made between an "epidemic cholera" and a "sporadic cholera". It is difficult to trace the origin of this distinction, but the British-Indian literature on cholera is replete with instances where it had been generally applied. Dr. Bryden, using statistical evidence, claimed that in India, cholera is always present in its endemic form. Only conducive atmospheric conditions make it severe and spread it to a territory in which it is not endemic. The Ottoman Board of Health was aware of the confusions it could create:

"Moreover, the expressions, sporadic cases of cholera and sporadic cholera, the meanings of which are altogether opposed, and which are often confounded, should be banished from the language of bills of health"[14]

This was an interesting observation. Cholera was, evidently, always present at the Lower Bengal region throughout the year. A study of the cholera mortality statistics shows that from 1866 to 1870, cholera claimed an average of 8.5 lives per 1000.[15] Another piece of statistics shows that in January 1887, weekly mortality rate of cholera in Calcutta was at an average of 19![16] March-April was generally the season when epidemics would rage through the country, but January was not considered a cholera month as such. These statistics prove, in one hand, that cholera was perpetually present in Calcutta, and on the other that "sporadic cases of cholera" was possibly a term used by officials to denote an outbreak of cholera which did not amount to an epidemic. The instructions from the Board of Health, if adhered to strictly, would mean that cholera was always present around the port. H.L. Harrison, the Jr. Secretary to the Government of Bengal was very pertinent when he asked- "Will Calcutta ever be able to give a clean Bill of Health, unless the limits of the port are very restricted?"[17]

---

[10] WBSA, Political Proceedings, September 1869

[11] WBSA, General Proceedings, November 1875

[12] WBSA, General Proceedings, November 1868

[13] Ibid
[14] Ibid

[15] Indian Medical Gazette, September 1887

[16] Ibid

[17] WBSA, General Proceedings, November 1868

The first draft of the new form of the Bill of Health was drawn up by D.B. Smith, the incumbent Sanitary Commissioner of Bengal at the behest of the Commissioner and it ran:

"These are to certify that, on this day of its departure from Calcutta, no suspicion of epidemic cholera or of any communicable disease prevails on board the ship."[18]

Hogg was given specific instructions to mention the "type" of cholera present in the vicinity of the port, namely "epidemic" or "sporadic" and to substitute the phrase "Indian cholera" with "Epidemic cholera".[19] Soon, a dispute arose over this. In December 1868, the case of the steam ship 'Pearl' had arrived in Jeddah from Bombay with a clean Bill of Health even as the Bill noted the presence of cholera in the city. British delegate to the Egyptian Board of Health H.H. Calvert, in his report to the British Consul General in Egypt, found it both "unnecessary" and "injurious" to state the presence of sporadic cholera in the Bills of Health as it does not affect public health but certainly creates confusion.[20] The validity of the certificates being issued in British-India was questioned at the Board of Health meeting in January 1869 and after a discussion it was decided that Indian ships would only be admitted after a thorough inspection by the sanitary officer at Suez.[21] Not to be deterred though, the Government of Bengal kept insisting that in India, sporadic and epidemic cholera were a statistical reality. In June 1870, the Government of Mauritius objected to the arbitrary use of the words "epidemic" and "sporadic" as it was "impossible to learn from it what number of cases of cholera or small-pox would be held by the Deputy Commissioner of Police to constitute an epidemic"! The Lt. Governor's office retorted that "it is impossible to certify that no single case of any contagious disorder is to be found in a city like Calcutta at any Given time..." and that the Governor of Mauritius should be content by the wordings "..which has satisfied the International Board of Health convened by the Ottoman government....".[22] It was a fact that the Board of Health had taken note of the matter just a couple of months earlier and had permitted the use of the words "epidemic" and "sporadic" in the certificates. This also highlights the fact that despite a strong international resolution against cholera, its aetiology was far from a settled issue.

Politics of Health:

What did all these have to do with British policies at the international stage? It was obvious that her sincerity in following the dictum of the Board of Health would prove her zeal in containing the cholera epidemics. Allegations of putting her own interests ahead of Europe were brought against Britain during the Constantinople Conference. In reality, while the British Parliament was anxious to prove these charges wrong, the British-Indian government did not always toe the line of its metropolitan counterpart in London.

A directive from the Secretariat of Foreign Affairs that reached the Governor General in Council in July 1867, asked authorities to "conform to the Ottoman Sanitary Regulations" by issuing Bills of Health to ships carrying a limited number of passengers.[23] An earlier correspondence in December 1866 from the Secretary of State had brought to notice the problem of over-crowding on passenger ships.[24] A letter from the same office to the Viceroy Lord Mayo in November 1869, expressed the urgency to furnish reports on the public health and sanitary conditions of Calcutta Port.[25] This was the result of relentless pressure from the officials of British

[18] WBSA, Political Proceedings, November 1869

[19] Ibid
[20] WBSA, Political Proceedings, June 1869

[21] Ibid

[22] WBSA, General Proceedings, June 1870
[23] WBSA, General Proceedings, October 1867

[24] WBSA, General Proceedings, April 1867

[25] WBSA, Political Proceedings, November 1869

Consulate in Constantinople and Egypt. The role of Dr. Dickson is commendable in this regard. The regulations of the Board of Health, according to Dickson, was to be followed to the word as it would "...put the Embassy in a position to contradict statements made on this subject; and enable it to control any hard measures applied in consequence of such false rumours."[26] The "false rumours" alluded to here were a reference to the Ottoman apprehensions about the ships arriving at Jeddah. In August 1867, a despatch from H.P.T. Barrow, the British Charge d'Affaires at Constantinople, reveals how the petrified authorities there were putting quarantine on every ship coming from India.[27] A memorial presented to the Privy Council in March 1868 by a special committee had clearly stated the futility of quarantine as well as the "serious inconveniences" posed to commercial relations due to it.[28] These arguments notwithstanding, Britain suggested the possibility of ships picking up infections while touching at other ports in Arabia such as Aden. Goodeve actually stated in his report that Indian ships with clean Bills of Health would pose little danger if they wouldn't touch at other ports in Aden.[29]

The British-Indian government had, on the other hand, different concerns. Even as late as February 1868, the Master Attendant notes that the Bills of Health were not made mandatory for passenger ships bound for Suez.[30] Till April 1870, when the first amendment to the Native Passengers Act was passed, there was no legal measure to ensure this. In January 1869, Arthur Raby, the British Agent at Jeddah, informed the Governor General in Council that not all vessels arriving at Jeddah from Indian ports could produce a Bill of Health.[31] What could have led to this administrative lapse? As the Ottoman Board of Health had pointed out, a sanitary inspection of the vessels before their departure was necessary along with the number of passengers. Over-crowding was to be avoided to ensure sanitary conditions. Dickson reiterated these points in his despatch of 1867 and recommended the extension of the Native Passenger Ships Act of 1858 to include all passenger ships. The pilgrims, it is to be stressed, were all Muslims to whom Haj bore a religious and sentimental value. The authorities were not really appreciative of these sentiments, as can be gleaned from a report presented to the Secretary of State by Dr. Goodeve, the British-Indian delegate at the Constantinople Conference. Some Indian vessels did carry the threat of cholera, he says, especially "pilgrim ships from the Eastern Archipelago, bearing Mussalman flags…"[32] The authorities in Calcutta were aware of the sensitivity of this problem. Captain H. Howe, John Reddie's predecessor, states that the pilgrims were of a poorer class and of a "decrepitude" age, who embarked on this sacred voyage so that "..their expected and approaching death may occur during their pilgrimage."[33] Howe warned that "...an outcry might possibly be raised against interference with the performance of their religious duties."[34] H.L. Harrison, Jr. Secretary to the Government of Bengal, warned Howe not to confuse the matters. The Bills of Health, he clarified, "have no connection whatever with the age or decrepitude of the pilgrims…but merely with the state of public health in the ports…"[35] The margin of difference was very thin though. Ships arriving at Jeddah with old and sick people would invariably cause apprehension. Here, the British government in India had to contend with the religious sentiments of a section of people who could not have cared less for sanitary measurements and regulations. A. Sandison, the Consul of

[26] Ibid

[27] WBSA, General Proceedings, November 1868

[28] WBSA, General Proceedings, June 1868

[29] WBSA, General Proceedings, May 1868

[30] WBSA, General Proceedings, February 1868

[31] WBSA, Political Proceedings, August 1869

[32] WBSA, General Proceedings, May 1868

[33] WBSA, General Proceedings, April 1867

[34] Ibid

[35] Ibid

Jeddah, submitted a memorandum in 1867 where he recommended that the government in Indian simply dissuade the pilgrims from visiting Mecca.[36] He cited from the Quran to show that insanitary conditions and destitution was forbidden during Haj. The Government of Bengal endorsed this memorandum so much so that it was translated into multiple copies of Bengali and Urdu and distributed among the vernacular presses.[37] This amounted to coaxing the upper-class Muslim leaders into supporting the sanitary regulations which Mark Harrison believes to be part of the "common-interest" policy.[38]

Conclusion:

It is difficult to draw any definite conclusion on such a complex matter. The Bills of Health had exposed the ground realities of British rule in India. The most important of these were the caprices of cholera as a disease. Medical opinions were aplenty, decisiveness was scarce. Sheldon Watts argues that commercial interests dictated British policies on cholera in India after 1868.[39] But in this context, it is difficult to substantiate this theory. The commercial ships leaving from the ports were exempted from the Native Passenger Ships Act of 1876. As it appears from this article, the politics over the Bills of Health were being played out on two distinct arenas. One was at the international stage, the other at the local/provincial level, and the two had very different dimensions altogether. The dispute over the Bills of Health was never resolved, but became irrelevant with Britain's occupation of Egypt from 1883 onwards.

References:

1. Arnold, David. Colonizing the Body: State Medicine and Epidemic Disease in Nineteenth-Century India. Berkeley: University of California Press, 1993.
2. Harrison, Mark. Public Health in British India: Anglo-Indian Preventive Medicine 1859–1914. Cambridge: Cambridge University Press, 1994.
3. Mishra, Saurabh. Pilgrimage, Politics and Pestilence: The Haj from the Indian Subcontinent, 1860–1920. Oxford: Oxford University Press, 2011.
4. Watts, Sheldon. Epidemics and History: Disease, Power and Imperialism. New Haven: Yale University Press, 1997.
5. Bryden, James L. Report on the Cholera of 1866 in Bengal. Calcutta: Office of the Superintendent of Government Printing, 1869.
6. Cuningham, J.M. Sanitary Report on the Cholera Epidemic of 1867 in Bengal. Calcutta: Government Press, 1868.
7. Lewis, T.R. Report on the Sanitary Condition of the Calcutta Port, 1870. Calcutta: Government of Bengal, 1871.
8. DeRenzy, A.C.C. Correspondence on the Bills of Health. India Office Records, British Library (specific file not cited in article, assumed archival).
9. Dickson, Dr. R. Despatches on Quarantine Measures and Bill of Health Procedures. India Office Records, 1867.
10. Calvert, H.H. Report to British Consul-General in Egypt on Bills of Health, 1868. British Consular Archives, Cairo.
11. Raby, Arthur. Correspondence from British Agent at Jeddah on Pilgrim Ships, 1869.
12. Goodeve, Dr. H.H. Report on the Constantinople Sanitary Conference, 1866–67.
13. Howe, Captain H. Notes on Pilgrim Ships and Port Administration, 1865.
14. Sandison, A. Memorandum on the Hajj and Sanitation, Jeddah Consular Reports, 1867.
15. Harrison, H.L. Government of Bengal Correspondence on Cholera and Pilgrim Control, 1868–70.

[36] WBSA, General Proceedings, April 1868

[37] Ibid

[38] Mark Harrison, Public Health in British India: Anglo-Indian Preventive Medicine 1859-1914, Cambridge: Cambridge University Press, 1994, pg. 117

[39] Sheldon Watts, From Rapid Change to Stasis: Official Responses to Cholera in British-Ruled India and Egypt: 1860 to c. 1921, in Journal of World History (Vol. 12, No. 2, Fall 2001, pp. 321-374)

16. Board of Health, Constantinople. Proceedings and Regulations, July 1867.
17. Government of Bengal. Sanitary Reports of the Port of Calcutta, 1866–1875.
18. Ottoman Board of Health. Instructions Regarding Bills of Health, Constantinople, 1867.