The Suez Canal under Quarantine: Sanitary History of the Mediterranean Gateway (19th–21st centuries)

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Abstract. The Suez Canal is ranked among the most significant engineering feats in human history. Besides its geopolitical and economic impact, however, the Canal became a subject of sanitary concern right from the beginning of its operation in 1869, which coincided with the fourth pandemic of cholera. Sanitary efforts during the 19th century focused on humans and merchandise distributed through the Canal in the frame of the theories of contagion and contamination. Contact with Asia via maritime trade routes entailed increased possibilities of dangerous pathogens and infectious diseases invading the Mediterranean and – by extension – Europe, as evidenced by the cholera and plague epidemics in Egypt. The sanitary significance of the Suez Canal was further demonstrated in the early 20th century when the cholera biotype El Tor was discovered in the Sinai Peninsula. After the Second World War the health systems evolved by incorporating all guidelines of the World Health Organization, whereas special provisions were established for pilgrims traveling to Mecca. The Suez Canal continues to serve as one of the most important global commercial hubs of the 21st century. Accordingly, health security remains a global priority, while strict adherence to international health regulations and epidemiological monitoring represent key elements in safeguarding health in the Mediterranean region.

1 Introduction

The connection of the Mediterranean Sea and the Red Sea, through the construction of the Suez Canal, is one of the greatest achievements in human history. The Suez Canal was opened on 17 November 1869 and connects the Mediterranean town of Port Said with that of Suez in the Red Sea. We note that Port Said lies thirty kilometers southwest of the old Byzantine port of Pelusium, which, according to Byzantine sources, was the starting point of the First Pandemic of plague (Justinian’s Plague) in 541 A.D. [1] The history of the Suez Canal is turbulent, and the region has always been an epicenter of imperial competition, international crises and military conflicts (Sinai Campaign 1955, Suez Crisis 1956, Six-days War 1967, Yom Kippur War 1973).

Actually, the Suez Canal is not just a chapter of Egyptian history, but one of 19th century European imperial expansion and the Cold War of the 20th century. Also, the sanitary history of the region is an integral part of European politics, economy, diplomacy, and geo-strategy.
The early sanitary history of the Suez Canal and the events in the region must be studied on the basis of two focal points: European colonialism and the management of cholera pandemics. Just six years after its opening, and due to financial collapse, Egypt was forced to sell its shares of the operating company to the British. In 1881, following a wave of violence against Mohamed Twefik Pasha, British and French forces broke out in major cities of the country. [2] The unstable political situation in Egypt, which was nominally part of the Ottoman Empire, and the endangered safety of the Canal “forced” the British to invade the country (bombardment of Alexandria, assaults in Port Said and Suez, battles of Kassassin and Tel el Kebir). In 1882, the British took control of the country and Egypt became a British Protectorate.

These dramatic events took place during the fifth pandemic of cholera (1881-1896), which originated in India (Bengal) and soon spread around the world. The disease was the great scourge of the century, but European countries were divided with regard to their support to competing medical theories. Despite the meetings in five International Sanitary Conferences (Paris 1851, Paris 1859, Istanbul 1866, Vienna 1874, and Washington 1881) marked differences persisted between the various national delegations on quarantine procedures and the nature of the disease. A typical example was the British standpoint that the cholera from India was not contagious. [2, 3]

In 1885, the 6th International Conference was held in Rome and the main topic was the coordination of quarantines in the Orient. The Conference turned into a British scientific victory. According to the decisions agreed upon, ships coming from India were free to enter the Canal if a medical inspection certified that the crew and the passengers were free of the disease. Actually, it was an extremely risky approach for the public health of the region, the European countries and the British trade, taken on the grounds of scientific facts about the incubation period of the disease and the communication of the date of departure of ships from Indian ports. [2, 3, 4]

In the 7th Conference of Venice in 1892, the European delegations agreed that the danger of cholera was more closely associated to the route of Muslims pilgrims than to merchant ships. [3, 5] The delegations introduced a mixed model of sanitation and quarantine measures in order to avoid unpredictable epidemiologic events in the European territory. But the effects of the 1892 Conference went far beyond the theoretical conception of public health protection. Europe’s mounting scientific supremacy consecrated the internationalization and de-nationalization of Constantinople’s and Alexandria’s sanitary councils initiated in previous years. Most significant was the fact the consuls of European countries became the majority of members in both institutions [2, 4, 6].

In Venice, the British delegates argued that even infected ships could pass the Suez Canal without further quarantine procedures, but France and other countries rejected this proposal. Meanwhile, the Italians proposed the internationalization of the Ottoman Sanitary Services in order to protect Muslim pilgrims. The Ottoman Empire immediately refused to engage in any negotiation on the issue [4]. At the same time, the occupation of Egypt by the British led to changes in the quarantine procedures in force in the Canal. The British introduced a precarious sanitary model. The region of the Suez Canal was a neutral zone though under British protection; therefore, it was easy for British merchant ships to avoid the quarantine measures and sanitary regulations of the Egyptian government. But tight, new quarantine measures were introduced by the Egyptian Board of Health for ships arriving from the ports of India or from Aden. The report of the British representative in the Ottoman International Health Board to the Secretary of State in London is indicative: “…if Britain did not begin to act like a civilized member of the community of nations, the two Middle Eastern Boards would place all Indian ports under permanent quarantine…” [2]. In other words, the strict quarantine for ships arriving from the “Jewel in the Crown” would cause irreversible damage to British trade.
Another aspect of the story was the United States’ interest in the sanitary status in the Suez Canal and above all, in the network of information collected by the delegates and the sanitary inspectors in Ottoman Empire and Egypt, as seen in the following dispatch:

“Alexandria, Egypt, December 24, 1897. Lazaretto at Aden. I send by this mail a newspaper containing a letter from Aden and enclose a translation of the same. The general health in these parts is good. There is nothing of importance to report. Legation of the United States, Constantinople, May 10, 1898. I beg herewith to enclose report No. 191 of Dr. Zavitziannoof the International Sanitary Commission. I call your attention to the fact that there has been 1 fatal case of bubonic plague on a steamer at Suez.

Report 191... The Russian sanitary representative has proposed to take some sanitary steps in order to prevent the spread of the evil in Turkey... The French sanitary representative communicated some extracts from the reports of the French Consul in Djiddah... in spite of the orders given by the central authorities of Constantinople, there was a continual commerce between Djiddah and Ras-el-Assuad. The inhabitants of Djiddah as well as the pilgrims are so much incited against the sanitary officials...it would be impossible to have the city of Djiddah isolated. The military forces could not resist the population...

Public Health Reports, May 13, 1898. [Translated in this Bureau from the Veröffentlichungen des KaiserlichenGesundheitsamtes, Berlin, April 20, 1898]. Bulgaria-Passengers arriving from Red Sea shall not leave the ports of Varna and Burgas without having first undergone rigid disinfection of all their baggage and effects. The coast of Red Sea, with exception of Suez, is considered infected. Legation of the United States, Constantinople, May 18, 1898. The pilgrims have already begun their departure from the Hedjaz. Nine thousand have already embarked, of whom 6,000 came back to the Mediterranean ports of Turkey. Before passing from the Suez Canal they must undergo quarantine at El Tor” [7].

The fear of Muslim pilgrims became a prominent issue on the eve of the 20th century. Indicative is the report “Cholera in Arabia” issued by the British delegate to the Ottoman Board of Health:

“Pilgrims leaving the Hedjaz by sea will do so only by the ports of Jeddah and Zambo. Before entering these towns, and again before embarking, they will be subjected to a medical inspection, and any sick persons will be isolated, and their clothes and effects disinfected or burnt. Pilgrims going southwards by sea will undergo a preliminary quarantine of five days at Camaran. Those coming northwards will undergo a quarantine of ten days at El Tor. Instructions have been given to embark, as far as practicable, the Russian pilgrims and the Turkish pilgrims returning north upon separate vessels. All of these will undergo quarantine at El Tor. They will then pass the Suez Canal "in quarantine," that is, with guards on board and without communicating with the shores. The Turkish pilgrims will have to undergo a further period of ten days' quarantine in a Turkish lazaret before landing; while the Russian pilgrims will be forbidden to land anywhere on Turkish soil, and will pass the Dardanelles, the Sea of Marmora, and the Bosphorus "in quarantine”, just as they had passed the Suez Canal”, [5, 8]

Apart from cholera, other endemic diseases attracted the attention of the British authorities in the Canal. Parasitic diseases, like malaria and bilharziasis, were important sanitary issues for the Egyptian authorities and for British troops in the zone of Suez. At his Presidential Address in the Royal Society of Medicine (1917), Dr. Lieutenant-Colonel George Buchanan noted:

“In Egypt, the Suez Canal region needed and received close expert attention in consequence of the existence of large areas in which Celiapharoensis and other
anopheline carriers in Egypt bred out, particularly certain areas irrigated or swamped by blind outflows from the Sweetwater Canal. Certain of the occupied oases in the south and west were also notorious for malaria. The railway steam disinfecting vans introduced in the Suez Canal area at the instance of Colonel Hunter are examples in point, enabling the kits of several hundreds of men to be disinfected at one time by turning on steam from the locomotive which takes about the vans. These researches gave the opportunity of a sound system of prophylaxis based on ascertained facts, such as that the degree of risk of a given source of fresh water can be established by search for the implicated molluscs, that the cercariae, though they can work through a sand filter, can only survive in water for about forty-eight hours after leaving the snail host; that while practically unaffected by bactericidal doses of free chlorine, and by many other dilute disinfectants, cresol in quantities such as 1 oz. to 60 gal. destroys the parasite rapidly. The system promptly established on such facts was deservedly successful, and bilharziasis has not occurred as a serious epidemic among the troops. It consisted essentially in securing adequate delay of the water before drinking in places like the Suez Canal zone, which are dependent on the so-called Sweetwater Canal". [9]

2 Rats and plague in the Suez Canal

Plague was another medical issue of importance for Egypt. From the 19th century the disease continued to appear almost every year in endemic regions across the country. The ports and the stations of the Suez Canal had a great problem with rats, and plague outbreaks were regularly recorded. During the Second World War, a scheme for the control of rats was introduced by the Epidemic Section of the Ministry of Public Health in order to protect the mainland against the spread of plague from the ports of the Suez Canal Zone. In 1941, fifteen rat-control stations with the necessary equipment for trapping or poisoning rats were set up in the Zone. The sanitary mission was well planned, and no case of plague was reported in the mainland between 1941 and 1945.

Nevertheless, outbreaks and sporadic cases occurred in the Suez Canal and the Customs area. [10] In 1942 the disease reappeared in Port Said and in early 1943 a severe epidemic was recorded in Suez, as well as in the British camps on the west bank of the Canal and the Bitter Lakes. The disease was isolated in the Canal Zone by the Egyptian health authorities but until 1945 more than 1,000 cases were reported in the region of Suez and Ismailia. After the end of the war, the newly arrived Dichloro-diphenyl-trichloroethane (DDT) was used for the control of the plague. It was used in 1946 in Alexandria, Port Said, Suez and the remaining foci of the disease in the country. After the use of DDT, the disease disappeared from the Canal. [10, 11, 12]

The 1954 Plague manual of the World Health Organization (1954) mentions special references and geographical lists of the natural foci in Middle East. More specifically, in relation to Palestine, the manual refers:

“While plague cases or even limited epidemics had been met with in Palestine after the British occupation at the end of the First World War, the disease appears to have been absent during the period 1925-40. However, the infection, presumably imported from the Suez Canal Zone, reappeared at Haifa in 1941. Jaffa became involved in the winter of 1942-43”. [13]

3 The cholera epidemic of 1947

In April 1946, the countries of the Pan-Arab League (Saudi Arabia, Iraq, Syria, Lebanon, Yemen, Transjordan, and Egypt) presented their proposals to safeguard Muslim pilgrims
from cholera to the *Office International d’Hygiène Publique* in Paris. Unfortunately, the next year, an outbreak of cholera in Egypt would become a controversial issue of great epidemiologic interest. According to the preliminary report by the Egyptian Ministry of Public Health, the outbreak was reported on September 22, 1947. One of the actions of the health authorities was the protection and epidemiologic surveillance of pilgrims:

“As the pilgrimage season had already started at the beginning of October, about 7,000 pilgrims had already been transported to Jeddah. On 25 October, a pilgrimage ship was due to leave Suez. This was stopped and an *arrêté* was passed to suppress the pilgrimage, while those pilgrims coming from infected areas to Suez were quarantined in Moses’ Wells for six days, inoculated, and allowed to return to their homes. The Egyptian medical mission which usually accompanies the pilgrims was notified of the situation. Ships carrying pilgrims from other countries were allowed to pass through the Suez Canal under quarantine with examination at Port Said and Suez”.[14]

Five months after the outbreak, more than 20,000 cases and over 12,000 deaths had been recorded in the country. According to the report, this was tragic evidence that quarantine mechanisms in Suez were not effective in the case of a cholera outbreak. Three years later, a new report was presented to the World Health Organization during the Third World Health Assembly (May 13, 1950) by the Egyptian Delegation.[15] Based on further research by epidemiologists, new facts were presented about the origin of the epidemic. According to the report, the origin had been a cholera outbreak in India and Pakistan in the last week of August 1947 as a result of the population exchange of millions of Muslims and Hindus between the two countries after their split on 15 August 1947. “Patient-zero” in Egypt was recorded on 22 September 1947. The patient was a worker in the British military camp adjacent to Quorien village. Surprisingly, evidence was found that cases of cholera had occurred in the Canal Zone as early as 11 September 1947. The sanitary defense of the Suez Canal had been infiltrated not by sea but by air. According to a new report:

“British troops began their withdrawal from India on 15 August 1947 and utilized the Suez Canal Zone as a quarantine station for the troops on their way to the United Kingdom. The aerodromes in the Suez Canal Zone used by the British troops received aircraft directly from outside Egypt and were not subject to the quarantine supervision of the local health authorities”. [15]

### 4 The sanitary future of the Suez Canal

In the 21st century, health security in the Suez Canal remains a priority, while strict adherence to international health regulations of the World Health Organization constitutes a key element. The present chapter of the modern sanitary history of Suez is still developing around the new challenge posed by the SARS-CoV-2 virus. According to the guidelines issued by Egyptian health authorities in March 2020:

“All vessels arriving for Suez Canal Transit and/or entering Egyptian Ports will be subject to the examination by the Medical Quarantine. Special attention will be given to those vessels coming from Chinese ports and/or any other hot spots. If any crew members are suspected of being infected or any actual case is detected, the vessel will be held from transiting the Canal or entering the ports”. [16]

### References


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