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SARAJEVO'S PRESS ON THE CHALLENGES OF CHOLERA IN BOSNIA AND HERZEGOVINA (1892–1894)

Abstract: Cholera is an extremely contagious, bacterial infection that attacked European countries in several epidemic waves during the 19th century. Scientific discoveries in the field of microbiology identified the causative agents of this disease and the ways of its spread. With the development of health care and the improvement of sanitary conditions, the disease could be kept under control to some extent. The territory of Bosnia and Herzegovina received an organized system of public health care only after the establishment of the Austro-Hungarian administration, which as such could provide a more effective barrier to infectious diseases. In this paper, based on daily newspaper writings, we will analyse the impact of the cholera epidemic that threatened the area of Bosnia and Herzegovina at the end of 1892, and from the autumn of the following year it began to claim its victims in that region as well. Our primary goal is to determine, through the analysis of daily newspaper reporting, how the Austro-Hungarian administration dealt with the challenge of the cholera epidemic, what measures it undertook and what results they brought. The important questions that we will pay attention to in this work are related to the number of people suffering from cholera, the direction of spread of the infection, as well as the percentage of mortality during the epidemic itself.

Keywords: cholera, Bosnia and Herzegovina, Austria-Hungary, epidemics

Non MeSH: press, Sarajevski list.

Introduction

According to the decision of the Congress of Berlin (1878), Austria-Hungary received an international mandate and the right to carry out the military occupation of Bosnia and Herzegovina. Since then, the real power and administration of this area

was in the hands of the Monarchy, although the sultan, until the annexation (1908), was considered the legitimate sovereign of Bosnia and Herzegovina. [1 p21-4] The first years of the Austro-Hungarian occupation passed in an effort to make the transition from the Ottoman to the new administration system without sudden changes. Thus, the reforms in the field of healthcare came gradually.

Namely, the public health care system in Ottoman Bosnia was at a very low level. This is evidenced by the fact that the first form of organized health care facility was the Waqf (Vakuf) Hospital. The hospital was opened only on October 8, 1866. In the middle of the same year, it was laid the foundation stone for the construction of the Military Hospital. [2 p62] Despite these efforts, public health care remained inaccessible to the majority of the population throughout the entire existence of the Bosnian Eyalet.

With the establishment of the Austro-Hungarian administration in Bosnia and Herzegovina, the health care system expanded. In addition to military hospitals, new hospitals intended for the population are being built and opened, firstly in the county centres, and later in larger cities. Thus, by January 1896, 22 hospitals were operating in Bosnia and Herzegovina. [3,4]

The new administration invested significant funds in the modernization of the health system. Since it lasted a full 40 years, there was always space and need for improvement in the field of healthcare. In this context, the year 1892 is very important. The Austro-Hungarian administration then made a decision to build a modern General National Hospital, which should be organized according to the pavilion principle and it was planned that hospital had to have a capacity up to 300 beds. After two years, it was built, and in the middle of 1894, it started working. Then the Waqf Hospital lost its primary activity and assumed the role of a psychiatric institution. [2 p64-5]

Also, it is important to point out that Austria-Hungary brought to Bosnia and Herzegovina a defined framework of methods, means and measures for the fight against infectious diseases.

Cholera as an infectious disease and its epidemics

Cholera is a severe, acute, infectious disease whose clinical picture is characterized by vomiting, diarrhoea, large loss of fluids and electrolytes and finally hypovolemic shock. Sudden fluid loss, which can be as much as 10-12 litres per day, leads to disruption of blood flow and kidney function and eventually death. The causative agent of the disease is the bacterium *Vibrio Cholerae*. It is a Gram-negative, curved, comma-shaped rod that is highly motile. [5 p140-1] This discovery was only made in the 1880s. Until then, it was believed that the cause of infectious diseases was "bad air", that is, miasmas or poisonous vapours that are released during the decomposition of matter. Only at the beginning of 1884, Robert Koch managed to isolate *Vibrio Cholerae* during his stay in cholera-affected Calcutta (India). He labelled it the main cause of cholera. [6 p191,193-4]

It is known that the causative agents of cholera enter the body with contaminated water or food. If they survive the stomach acid, they reach the small intestine, where

they reproduce and release exotoxins. The usual incubation period lasts for a maximum of five days. [5 p141] The treatment of cholera is mostly symptomatic, therefore in the 19th century the mortality from this disease was very high. Because of the suffering to which the patients were exposed, cholera was often called the dog's death or blue terror. The escalation of the disease was rapid. The sudden loss of fluids turned patients into shrivelled figures, with bluish skin, sunken eyes, and protruding teeth. [7 p173]

During the 19th century, several cholera epidemics affected the European continent, starting in 1817, when cholera from India finally reached Europe via Asia. This was followed by four more pandemic waves until the end of the century. [8 p122–23]. The area of the Bosnian Eyalet was affected by cholera on several occasions, such as in 1835, 1855 and 1866. [9 p203] After the establishment of Austro-Hungarian rule, cholera was recorded in Bosnia and Herzegovina in 1886–1887, then in 1893–1894, and in 1913 as a direct consequence of the transit of armies and the Balkan wars.

Cholera in 1892 and protection measures in Bosnia and Herzegovina

In the second half of the 19th century, the press emerged as the primary means of information. In Bosnia and Herzegovina, during the Austro-Hungarian administration, the *Sarajevski list* (under that name since 1881) played an important role in this respect. The paper was published three times a week and it was the official newspaper of the new administration. [10 p87–93] In addition to the informational role, the *Sarajevski list* also had an educational role, which was especially evident during times of diseases and epidemics. It was the same during the cholera era. In that period, the newspapers *Bošnjak* and *Bosnische Post* also stood out with their reporting on cholera.

The European public was aware of the cholera epidemic that in the first half of 1892 affected the south of Russia and the area around the Black Sea. News from the infected area confirmed the thesis that the epidemic would be difficult to keep under control. Because of this, countries in the immediate neighbourhood began to introduce quarantine measures. Such measures were introduced in Istanbul for the arrivals of all ships from Black Sea ports. [11] Bulgaria and Romania reacted similarly. In particular, it took care of the transport of goods and passengers coming from the infected area. It is known that disinfection measures were taken in the Kingdom of Serbia, a sanitary and police service was formed, and a sanitary cordon was established on the banks of the Sava and Danube rivers, which functioned until the beginning of November 1892. [12 p360–7] Similar measures were implemented by other European countries. Some went to the extreme in this regard. The Austro-Hungarian Ministry of the Interior issued an order to pay special attention to all dogs and cats coming across the border. Those animals found to be without an owner were to be euthanized. [13]

The Austro-Hungarian Council of Ministers for Joint Affairs (abbreviated Joint Ministry) played an important role in adopting sanitary measures, while the lower administrative authorities of individual provinces were responsible for their implementation. Thus, on July 29, 1892, the National Government (Landesregierung) for Bosnia and Herzegovina, on the basis of a decree of the Joint Ministry, ordered the restriction of the transit and import of rags, old clothes, ropes, linen and bedding from Russia. A

month later, according to the suggestions of the Joint Ministry, it extended the ban to fruits and vegetables, caviar and fish, as well as other animal products. The Joint Ministry tried to find a balance between preserving, even if limited, economic activity and suppressing the infection. [14,15]

However, despite caution and the application of anti-epidemic measures, the spread of the infection could not be prevented. In the summer of 1892, cholera reached Western Europe. One of the hardest hit was the large commercial city of Hamburg.

The cholera epidemic in Hamburg broke out in the second half of 1892, more precisely on August 16. The extent of this epidemic is evidenced by data according to which in the first epidemic wave, which covered the period from August 16 to October 23, 1892, there were 18,000 patients, of which 8,200 died. In the second, the post-epidemic wave, as Robert Koch called it, which lasted until the beginning of March 1893, 64 cases and 18 deaths were recorded. [16 p207]

The Joint Austro-Hungarian Ministry acted promptly and banned the import of goods from Hamburg and Altona on August 30, and seven days later extended the ban to the entire German Empire. [17]

The danger of cholera spreading to Bosnia and Herzegovina was felt by the public already from the summer of the same year. We noticed that on the pages of the *Sarajevski list*, news was appearing that called on citizens to be careful against the spread of the epidemic. Namely, at that time, Robert Koch's theory about the causes and way of spreading the disease itself was already known. The application of sanitary measures could provide protection to a certain degree. However, the specific geo-strategic position of Bosnia and Herzegovina and the extensive trade activity were both a blessing and a curse during periods of great epidemics.

With the first autumnal months of 1892, news about the spread of cholera in Europe appeared more and more frequently on the pages of the Sarajevo's press. It was known that in addition to Hamburg, Vienna was also hit, and Budapest even harder. The feeling of panic and distress was additionally strengthened by the cognition that the infection was spreading further in the area of Slavonia, namely in the border regions and cities along the Sava River. During the month of November 1892, it became known that the border town of Jasenovac was affected by a cholera epidemic. *Sarajevski list* diligently followed the development of the infection in that area, as well as the number of patients and deaths. According to official data, in the period from October 27 to November 6, 1892, 40 people fell ill in Jasenovac, of which 16 died. [18]

In order to prevent the infection from crossing the border, the Austro-Hungarian administration ordered the introduction of anti-epidemic measures in Bosnia and Herzegovina. Cholera hospitals were ordered to be established in all urban and rural municipalities. It is planned to house the homeless, beggars, then private servants without proper accommodation, as well as travellers. The rest of the population had the obligation, if a suspicious case appeared in the household, to isolate such a person from the rest of the family members. [19]

A special set of measures were adopted by the administration related to recommendations regarding the burial of persons who would die of cholera. It was recommended that the deceased should be placed in a special mortuary, i.e., in a coffin made

of boards. Before closing the coffin, the body should have been doused with 5% or 10% carbolic acid (phenol). After that, the funeral could take place with the recommendation that as few people as possible attend it. [20]

In Sarajevo, as the largest city, a special health council was formed that met every seven days. It gave recommendations and prescribed sanitary measures in the city itself. Special attention should be paid to the cleaning of canals and riverbeds, as well as sanitary conditions in the markets. Also, craft shops, especially butchers and tanneries, were under special supervision, because the raw materials they used in their work could become a source of infection. Similar councils operated in other county centres as well. [21]

A sanitary cordon was established on the northern border. Barracks that served as temporary quarantine in which goods and travellers who were suspected of being ill with cholera or arriving from an area affected by the epidemic were constructed. Such improvised medical examination stations were constructed in Brčko, Šamac, Bosanski Brod, Gradiška, Dubica and Dobljin. Every person suspected of being infected had to be examined and monitored by a doctor for five days. If a disease is detected, such a case must be immediately reported to the administration by telegraph. [22]

Despite the organized system for disease detection and further action in case of infection, false rumours about cholera in Bosnia and Herzegovina appeared already in the autumn of 1892. To what extent the population believed in such information is evidenced by the fact that the daily press had to be actively involved in calming the panic and denying such rumours. There was a famous case in Pale (near Sarajevo), when it was rumoured that cholera outbreak had broken out in a local inn. Therefore, due to the specificity of the situation, the administration ordered an extraordinary visit by a doctor from Prača, who confirmed that there is no cholera in the area. [23] A little bit later, it became known about the case of a soldier who entered the territory of Bosnia and Herzegovina from Croatia via Brod and showed suspicious symptoms. Therefore, as a precaution, he was sent to Sarajevo by train in a separate compartment and placed in the cholera hospital in Koševo. After examination, it was found that the patient does not have cholera. [24]

One of the important measures that was practiced at that time was reflected in raising awareness among the population about cholera as a disease and measures to protect against it. There is a well-known case when the county physician Dr. Leopold Glück held a public lecture on this very topic on December 2, 1892 in a Muslim reading room in Sarajevo. [25] Also, the newspapers published in Bosnia tried to act educationally and draw the attention of the population to the necessity of respecting anti-epidemic measures and raising sanitary standards. On several occasions, the *Sarajevski list* published educational articles about cholera as a disease and the measures that each individual should adhere to in order to avoid infection.

Those measures were related to washing hands before eating, using boiled water in the household, avoiding dairy products and food that contains a large amount of water (watermelon), as well as mandatory reporting of all suspicious cases to a doctor. To maintain stomach health, it is advised to drink a glass of water with 2-3 drops of hydrochloric acid after a meal. The most important measure, which was always cited first,

was the recommendation to people to go about their usual business as if cholera were not present and not to allow fear to dominate them. [13,26] The press, due to its availability, was certainly the most important tool that calmed panic and called for composure, because cholera in Bosnia was not "some new disease". The population also had vivid memories of previous epidemics, especially the one that lasted from 1886 to 1887.

The application of sanitary measures and the timely response to all suspicious cases contributed to the fact that the territory of Bosnia and Herzegovina was saved from the outbreak of a cholera epidemic in 1892. However, the situation in the following year was significantly different.

Cholera in Bosnia and Herzegovina (1893–1894)

All sanitary measures that were introduced in the previous year were applied at least during the first half of 1893. At that time, it seemed that cholera had not only receded, but that all trace of it had been lost. Still, population should have been on caution.

European countries, after the difficult Hamburg experience, tried to meet the possible new appearance of cholera as ready as possible. Mutual cooperation was imposed as an imperative. Already in April 1893, a sanitary convention of European countries was adopted in Dresden. With it, the rulers of Austria-Hungary, Germany, Russia, the Netherlands, Belgium, France, Luxembourg, Italy, Montenegro and Switzerland (Federal council) agreed on prescribing and introducing joint sanitary measures aimed at suppressing the cholera epidemic. On July 7, 1893, the National Government implemented the provisions of the aforementioned convention on the territory of Bosnia and Herzegovina. [27]

Since passenger and commercial traffic was not suspended or restricted during the spring and summer of 1893, important trading cities, especially those in the border area, proved to be extremely vulnerable when it came to cholera infection. The city of Brčko located on the Sava River, right on the border with Croatia, was in exactly such a position. It enjoyed the reputation of an important river port and a significant trade centre.

The first cases of cholera appeared in Brčko on September 22, 1893. At that time, five patients were recorded, two of whom died. [28] After a few days of lull, the infection quickly spread throughout the surrounding towns and districts. In the period from October 16 to 22, 1893, 85 people fell ill from cholera in Brčko District (35 died). The infection was also recorded in Gradačac District, namely 54 patients (24 deaths), in Gračanica District 31 patients (8 deaths), in Bijeljina District four patients (1 death), in Donja Tuzla District 35 (15 deaths), and in Maglaj District five patients (2 deaths). In the following week, the infection was also noticed in the Zvornik District, and there was a threat of cholera spreading to the county of Travnik in central Bosnia. [29]

In total, during the month of October 1893, 490 cases of cholera were recorded in eight districts and 72 populated places in Bosnia and Herzegovina, of which the highest number was in Brčko District, 262 cases. A total of 237 adults and 16 children died, making the mortality rate an extremely high up to 51.63%. [30] The mere cogni-

tion that half of all those infected would lose the battle with cholera seemed very devastating.

The epidemic did not falter even during the month of November. Thus, in the period from November 1 to 8, 1893, there were 12 cases of cholera in Brčko District (2 deaths), nine in Gradačac District (4 deaths), 30 cases in Gračanica District (8 deaths), 18 in Donja Tuzla District (9 died), in Maglaj District two patients (1 died), in Derventa District one patient (1 death), in Bugojno District 10 patients (4 deaths) and in Jajce District two patients (1 died). [31]

In the following week, new cases of cholera infection were reported in the mentioned districts. In most districts, the numbers were significantly lower than the number of reported cases in the first week of November. There was only a significant increase in the number of infected people in the districts of Bugojno and Jajce. Fifteen new cases were recorded in Bugojno, and seven in Jajce. An additional problem was that the infection appeared and spread among the workers on the Donji Vakuf–Jajce railway construction. Twenty of them were infected with cholera. [32] The severity of the infection in this area is also evidenced by the decision of the Austro-Hungarian administration to introduce all-day duty at the telegraph station, so that new cases could be reported in a timely manner.

The disease among the railway workers could even become a hotspot from which the infection could spread further towards central Bosnia. In order to prevent such a scenario, between Jajce and Donji Vakuf, in the town of Vinac, a hospital was established for the emergency reception of all suspicious cases. The head of the sanitary department from Sarajevo, Dr. Josip Unterlugauer, was sent to the field to personally supervise the implementation of the prescribed measures. By the end of 1893, the spread of cholera in that area was stopped. Therefore, twenty-four-hour duty at the telegraph was cancelled in January 1894. [33,34]

In total, during November 1893, 306 people fell ill with cholera in 44 places in nine districts, of which 117 adults and 21 children died. Mortality was slightly lower than the previous month and amounted up to 45%. Over time since the first case of infection, as well as with the application of sanitary and quarantine measures, the death rate has gradually decreased. In the month of December, it amounted up to 39.54%, that is, out of 306 sick cases, 121 had a fatal outcome. [35]

In January 1894, the cholera epidemic was entering its final phase, so only three cases of infection were recorded at that time, and all three were in Brčko District. [36]

The application of sanitary measures, as well as the existence of cholera hospitals in populated areas, limited the mass spread of the infection among the population itself. Nevertheless, the figures of 1,105 infected by the end of January 1894, of which 512, i.e., 46.33% died from cholera, truly depict the scale of the epidemic.

According to the analysis of the National Government, which referred to the first two months of the infection, the most affected by cholera were farmers and mostly those who belonged to the poor class, followed by wage earners and other workers. It is interesting that during October and November 1893 there were only three sick merchants. When it comes to the religious structure, no religious community stood out

among the patients. Roma were also severely affected by the epidemic, especially in Brčko, Gradačac and Donja Tuzla. [37]

Conclusion

In conclusion, we can say that although cholera epidemics affected the territory of Bosnia and Herzegovina since the first decades of the 19th century the basis for more effective ways of fighting this infectious disease was created only after the discovery of the causative agent and the method of transmission of this disease.

After the occupation and establishment of a new administration by Austria-Hungary, in Bosnia and Herzegovina, the establishment of an organized health care system began. In addition, the new administration actively worked on the suppression of infectious diseases. Namely, Austria-Hungary inherited a well-organized and repeatedly applied system of anti-epidemic measures, with which it relatively successfully resisted infectious diseases.

After the appearance of cholera in the border area in 1892, its further spread was prevented by the application of sanitary and anti-epidemic measures.

With the administration's decision to introduce strict quarantine measures at the border itself and to establish cholera hospitals in all populated areas, the epidemic that broke out the following year in 1893 remained limited only to north-eastern and part of central Bosnia. However, the victims it left in that confined space remained a silent reminder of the last cholera epidemic in the 19th century.

The press, and especially the *Sarajevski list*, played an important role in the time immediately before the epidemic itself, as well as during it in the period from 1893 to 1894. As an official newspaper during the Austro-Hungarian administration, *Sarajevski list* was at the very source of information. In addition to being informative, newspapers proved their educational role precisely during the cholera epidemic.

Rezime

Tokom 19. vijeka borba protiv zaraznih bolesti predstavljala je veliki izazov, kako za medicinsko osoblje, tako i za države onoga vremena i njihovo stanovništvo. Kolera je upravo bila takva bolest. Izrazito zarazna, sa visokim procentom letaliteta. Kolera nije bila nepoznanica ni u Bosni i Hercegovini. Naime, ona je tokom 19. vijeka u nekoliko navrata napadala stanovništvo na tom prostoru. Ipak, medicinska otkrića na polju mikrobiologije doprinijela su otkrivanju uzročnika bolesti i razumijevanju načina njihovog prenošenja, pa su samim tim i obrasci borbe protiv zaraze umnogome unaprijeđeni.

Primjena efikasnijih i sistematičnijih antiepidemijskih mjera počinje u Bosni i Hercegovini tek od vremena austrougarske uprave. Uticaj Austrougarske na tom prostoru ogledao se i u izgradnji modernog zdravstvenog sistema, koji je kao takav bio potpuna nepoznanica u otomanskoj Bosni. Sve su to bili bitni faktori koji su doprinosili obuzdavanju epidemija zaraznih bolesti.

U ovom radu su analizirani članci sarajevske štampe, prvenstveno *Sarajevskog lista*, koji govore o epidemiji kolere, a odnose se na period od 1892. do početka 1894. godine.

Nastojali smo kroz analizu članaka utvrditi kako se austrougarska uprava nosila sa izazovima koje je nametala epidemija kolere, kakve mjere je u tom pogledu preduzimala i kakve su rezultate one polučivale.

Utvdili smo da je uprava još 1892. godine, pri pojavi kolere u neposrednom susjedstvu, pravovremeno djelovala uvođenjem karantinskih mjera na samoj granici. Potom je osnivanjem kolernih bolnica po svim naseljenim mjestima, nastojala osujetiti dalje širenje zaraze. Formiranjem zdravstvenih vijeća u većim gradovima uveden je direktan nadzor nad provođenjem sanitarnih mjera. Preko stranica *Sarajevskog lista*, stanovništvo je bilo pravovremeno obaviješteno o svim odlukama uprave u pogledu epidemije kolere, budući da je od druge polovine 19. vijeka štampa postala primarni izvor informacija. Primjetili smo da je upravo ovaj list imao i edukativnu ulogu, a isticao se i pri smirivanju panike kod stanovništva.

Zahvaljujući primjeni antiepidemijskih mjera, kolera koja je u jesen 1893. godine izbila u Bosni i Hercegovini, ostala je ograničena samo na teritoriju sjevero-istočne i dijelove centralne Bosne. Proaktivnim djelovanjem prevenirano je njeno dalje širenje.

Ključne riječi: kolera, Bosna i Hercegovina, Austrougarska, epidemija, štampa, Sarajevski list.

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