



Epidemic Diseases, Biological Weapons, and the Relationship of Religion with COVID-19

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ABSTRACT

As a result of the spread of the COVID-19 virus all over the world, starting from China in 2019, curiosity about the course of the epidemics that took place in history has increased. Many outbreaks have occurred in history, and many precautions have been brought against these diseases. Islam is a religion based on hygiene and cleanliness, both physically and spiritually. In the history of Islam, Hz. Prophet has many pieces of advice about the precautions to be taken against epidemics. In addition to outbreaks in the world, another factor that affects people both physiologically and psychologically and is released in a controlled manner is the microorganisms used as biological weapons. These weapons cause more chaos and terror than epidemics.

Moreover, even small amounts are enough to destroy millions of people. COVID-19 is the last pandemic in the world, and its effects are still ongoing. Although some claim that this virus is a biological weapon programmed in the laboratory, genetic sequencing has proven it to be natural.

Keywords: Epidemic, Pandemic, Disease, COVID-19, Bioweapon, Tibb al-Nabawi, Health

Salgın Hastalıklar, Biyolojik Silahlar ve COVID-19 ile Din İlişkisi

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Öz

COVID-19 virüsünün 2019 yılında Çin'den başlayarak tüm dünyaya yayılmasıyla birlikte tarihte gerçekleşmiş salgın hastalıkların seyrine karşı merak da artmıştır. Tarihte pek çok salgın hastalık gerçekleşmiş ve bu hastalıklara karşı birçok farklı önlem alınmıştır. İslam hem bedenen hem de ruhen hijyeni ve temizliği esas alan bir dindir. İslam tarihinde Hz. Peygamber'in salgın hastalıklara karşı alınması gereken tedbirler konusunda birçok tavsiyesi bulunmaktadır. Dünyada salgın hastalıkların haricinde insanları hem fizyolojik hem de psikolojik olarak etkileyen ve kontrollü olarak salınan bir diğer etkenler biyolojik silah olarak kullanılan mikroorganizmalardır. Bunlar salgın hastalıklardan daha fazla kaos ve terör ortamı yaratırlar. Üstelik çok küçük miktarları dahi kitleleri yok etmeye yeterlidir. COVID-19 dünya üzerinde görülen son pandemidir ve etkileri halen devam etmektedir. Kimileri bu virüsün laboratuvarında programlanan bir biyolojik silah olduğunu iddia etse de doğal bir virüs olduğu genetik dizilimiyle kanıtlanmıştır.

Anahtar sözcükler: Salgın, Pandemi, Hastalık, COVID-19, Biyolojik Silah, Tıbbi Nebevi, Sağlık

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Introduction

Epidemic diseases are defined as diseases that infect a large part of humans, animals, and plants in a short time. Epidemics that have spread to a certain area are epidemics, and epidemics that have spread to the whole world are pandemics ^{1,2}. Pandemics are epidemic diseases that infect many countries simultaneously and spread over a wide area. Plague, Cholera, Spanish Flu, Typhoid, Swine Flu, and COVID-19 are among the epidemics and pandemics that have affected the world throughout history ³.

Perspective on Epidemic Diseases in Islam and the Tibb al-Nabawi

H. Prophet Mohammed said: "If you are aware of the presence of plague in a place, do not go to that area and stay where you are. If Plague disease starts in your place, do not leave your place." His words drew attention to the quarantine practice for the first time in the world. "Anyone with an epidemic disease should not go near a healthy person." and "Escape from a leper like a lion." He demanded that precautions be taken against infectious diseases ^{4,5}. While such precautions were taken against epidemics in the Islamic world, quarantine was applied in Europe for the first time after centuries in 1377 in Dubrovnik and Venice. The first quarantine application was made by the World Health Organization (WHO) in 1952 ⁶. H. Prophet did not only restrict the quarantine practice to humans but also recommended that healthy animals and diseased animals be kept in separate areas. However, which states that a Muslim should wash at least once in seven days to maintain hygiene and that Allah has a right to that person, he draws attention to the importance Islam attaches to cleanliness in the hadith ⁷. Along with these recommendations, he stated that diseases are a means of patience and gratitude for those who believe. He recommended that people who get sick seek healing, seek treatment and be patients ⁸. As a matter of fact, from time to time, the Prophets also experienced difficult times related to diseases. Prophet Ayyub's patience, fortitude, and tawakkul attitude in the face of serious illnesses is a very important and meaningful example for Muslims ^{9,10}. When H. Prophet visited a patient and noticed that the patient's pain was increasing, he advised the relatives of the patient to bring a doctor for the patient. In response, the patient's relative asked H. Prophet surprisedly, "You say bring a doctor too, Rasulallah?" replied. H. Prophet said, "Yes, Allah has not given an incurable disease!" He recommended seeking a cure for diseases. H.

Prophet stated that physical health began with maintaining oral hygiene and suggested that people should clean their mouths and teeth ⁸.

According to Islamic Historians, in a plague epidemic that took place in 639 years, thirty thousand people, including his companions such as Ebu Ubeyde bin Jarrah and Muaz bin Cabal, lost their lives due to the plague. When H. Omar went to Damascus with the Islamic Army; when he approached Damascus, he was informed that there was a plague epidemic at their destination, and the Companions disagreed about whether to go to the city or not. H. Omar consulted with the Companions, then stopped the army and sent it back. Thereupon, the army commander, Abu Ubeyde bin Jarrah, asked H. Omar: "Are you running away from the destiny of Allah, Omar?" When asked, H. Omar replied, "Yes, we are fleeing from one destiny of Allah to another destiny of Allah" ¹¹. Among the interesting events, the Egyptian King Mukavkis and the Greek Emperor Heraclius sent a doctor with many gifts to the H. Prophet. Even though days and months have passed since the gift was presented, the doctors said to H. Prophet, "O Mohammed! We have come here to serve You, but until today no patient has come to us. If you'll excuse us, we'd like to go now." they said. In response to this statement, H. Prophet said, "Know that even if you stay here for years, no one will come to you. Islam has shown the way not to be sick. My Companions also pay attention to cleanliness. They do not eat anything unless they are hungry and get up from the table before they are full." When the doctors replied, they returned to their country. However, it was stated that the European people were fighting diseases in these times. Madrasahs and hospitals opened in the cities of Cordoba, Baghdad, Ghazni, and Isfahan, which were the capitals of Islamic Civilization during the Middle Ages, became famous health centers ¹².

Perspective on Epidemic Diseases in Christianity

The power of the priests, the right of the Church to speak, the punishment of scientists, and the nursing duty in hospitals by nuns were among the common practices in the Christian world. Under the influence of these practices, a famous mathematician like Pythagoras was burned to death along with his students as a result of the Church's fury. Galileo contraried with the Church in the field of science and died blind in 1642 while imprisoned at home. Copernicus hid his work so that he would not be excommunicated and tried in the inquisition. Columbus claimed that the world was round as a

result of his research, and these claims angered the Church. The Church tortured Columbus for this claim. Giordano Bruno, who claimed that the center of the universe is not the world, was burned to death at stake. Servetus was burned to death with his works because of the geography book he wrote¹³. Ignaz Philipp Semmelweis, an Austro-Hungarian scientist, and doctors was known as the "savior of mothers." He made sure that the postpartum fever disease was partially defeated with the advice of hand washing. In 1865, he faced the reaction of the Christian clergy in Europe and was imprisoned in a mental hospital. He died in a mental hospital from a wound on his hand¹⁴.

The Development of Medicine as a Science and Searching for Solutions to Epidemics in the Islamic World

Ali bin Rabben et Tabari wrote the first Medicine book, Firdaws al-hikma, in the 850s. El-Razi mentioned Measles and Smallpox diseases in his work Al-Hawi in the 865s. Avicenna wrote the book El-Kanun Fit'tib, which was used as a coursebook in Europe from the 980s until the 1650s. Abul Kasim al-Zahravi became the unforgettable surgeon of Andalusia in the 1000s, and he wrote the medical book Al-Tasrif, which consists of 30 chapters¹⁵⁻¹⁸.

Akşemsettin explained the existence of microorganisms in 1460, firstly. In 1150, a training and research hospital was built for the first time in Damascus, and the first private practice became operational. In the 1270s, patients were treated by the music in the Sifahiyeh Madrasah in Sivas, and the first eye surgery in the world was performed here^{19,20}. While such positive developments were experienced in the Islamic World, a bad period was experienced in European countries due to the coercive and oppressive attitude of the Church and Priests against the people. According to them, diseases occur as a result of the disruption of the balance of four fluids in the body, which are blood, saliva, yellow bile, and black bile. In the 1850s, miasma (bad air) was considered the culprit of the cause of diseases in Europe. In Europe, street cats have been likened to the devil, and all street cats have been ordered by the Church to be killed. After the implementation of this request, there had almost no cats left on the streets of Europe. As a result, the rats overpopulated, and the plague became an inevitable disease in Europe^{21,22}.

Biological Weapons

Terrorist organizations or some states try to spread epidemics by using microorganisms as biological weapons. Because even the use of these agents in

very small amounts affects large masses both physically and psychologically. The main purpose is mass panic, which is desired to be created in society rather than the extermination of the masses. Biological agents are the lowest-cost weapons of mass destruction that can be used to create a perception of panic in a possible biologic attack. For this reason, biological weapons are called "atomic bombs of poor countries". Incubation periods in biological weapons cause agitators to flee undetected. In today's conditions, agents that can be used as biological weapons can be easily produced in a laboratory for approximately 10 thousand dollars. Therefore, biological weapons can be produced at very low cost and in large quantities. Biological weapons are very difficult to detect by general security systems, and transportation of these weapons is also very easy. Biological weapons cause disease or death only in alive. Compared to other weapons of mass destruction, they do not have a destructive effect. Due to this feature, the detection of agents carrying biological weapons is very difficult. For this reason, states or terrorists prefer biological weapons^{23,24}.

Agents Used as Biological Weapons

The bacteria used as biological agents include *Vibrio cholerae* (Cholera), *Bacillus anthracis* (Anthrax), *Francisella tularensis* (Tularemia), *Coxiella burnetii* (Q Fever), and *Yersinia pestis* (Plague), and viruses as biological agents include Variola (Flower), Monkey Flower, Encephalitis (Western equine encephalitis virus, Eastern equine encephalitis virus, Venezuelan equine encephalitis virus), and Viral Hemorrhagic Fevers (Arenaviridae, Bunyaviridae, Filoviridae, Flaviviridae) microorganism toxins and herbal toxins as biological agents include Ricin, Staphylococcal enterotoxin B (SEB), Botulinum toxins, and Mycotoxins (Trichotoxenes)²⁴.

One of the two biological weapons known to be effective in the world today is the Smallpox virus. There is no cure for the highly contagious virus. The mortality rate of this virus is 30% for the genus *Variola major* and 1% for the genus *Variola minor*. Another effective biological weapon is Anthrax. Although anthrax is originally a zoonosis, there is no human-to-human transmission. When it causes disease in humans, it causes different clinical pictures, such as lung and intestinal anthrax. Diseases do not last long, but death occurs in a short time²⁵.

Although biological weapons have almost invisible army-level power, they have a longer-lasting and more destructive effect compared to weapons of mass destruction or conventional weapons. While

the effects of chemical weapons are observed in the short term, the effects of biological weapons vary according to their incubation period. Parallel to the increase in the world population, the emergence of many different diseases is inevitable. There is a danger that every new disease or epidemic that emerges will turn into a biological weapon. The scope of biological weapons development programs is to create microorganisms that are fast-acting, have a short epidemic generation time, and cause a high rate of death^{23,26}.

Is COVID-19 Biological Weapons?

The first cases caused by the COVID-19 virus occurred on 17 November 2019 in Wuhan. The first death from Coronavirus occurred on 11 January 2020. The Coronavirus was isolated by WHO, and its genome sequence was shared on 12 January 2020. WHO declared a global emergency on 30 January 2020. WHO declared on 11 March 2020 that "COVID-19 is a pandemic"²⁷. The COVID-19 virus is 88% similar in genome sequencing to the two types of Coronaviruses originating from bats. It is 79% similar to the SARS virus and 50% to the MERS virus. However, it is interesting that an anteater named Pangolin has 99% genome similarity to Coronaviruses in anteaters. Pangolins, an animal that is not well known in our country, is a species of scaly anteater. Most of the pangolins poaching in the world are sold to China. The possibility of an intermediate host between pangolins and humans is quite high²⁸⁻³⁰.

Conclusion

It is thought that this virus may have been accidentally dispersed and transmitted from the Virology Laboratory in Wuhan. Because this laboratory was visited by a team from the USA in 2018 and was warned that no precautions were taken against risky studies and there was a security weakness. COVID-19 is a natural virus unless proven otherwise. When the DNA and genome structure of the virus are examined, the amino acid sequence of the S-protein (S1/S2) structure, which allows the virus to attach to the ACE-2 receptors in the lungs, seems completely natural. In the case of a laboratory intervention, this intervention can be clearly understood. The mortality rate for the SARS virus has been reported as 15% in those aged 45-64 and 50% in those aged 65 and over. The mortality rate for the MERS virus is 30% on average. The mortality rate of COVID-19 is 5.4% on average worldwide. SARS and MERS viruses have low infectivity but higher mortality. Therefore, its use as a biological weapon is very difficult. Viral diseases that will cause pandemics, including COVID-19, are

seen as the nuclear bomb of poor countries. The smallpox virus is recognized as the strongest candidate to be used as a biological weapon in the future²⁸⁻³⁰. COVID-19 is a natural pandemic. But it is also a rehearsal for a future war that moves not tanks and submarines but the frontiers of scientific research.

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Conflict of Interest

The authors declare no conflicts of interest.

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