

A Comparative Analysis of Epidemics Management in Korea: From the Unification of Shilla to Modern COVID-19

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ABSTRACT

Epidemics have been a major threat to human health throughout history. The development of modern medicine has led to a decline in deaths from infectious diseases, but they remain a major public health concern. The COVID-19 pandemic has highlighted the importance of effective infectious disease management. This study examines the management of infectious diseases in Korea. The study finds many similarities between how infectious diseases were managed in the past and how they are managed today. However, the study also finds some critical differences between how contagious diseases were managed in the past and how they are managed today. The study concludes by arguing that studying the history of infectious diseases can help us better understand and manage infectious diseases in the future.

Introduction

Humanity has experienced diseases throughout its long history, and among these diseases, infectious diseases have had a direct negative impact on human health and life. These infectious diseases are still occurring in various countries around the world today, but the most representative one that we are currently experiencing is COVID-19. The emergence of new infectious diseases such as COVID-19 has emerged as an important issue that threatens the health and lives of people around the world, and as a result, many people around the world have experienced a new fear that they have never experienced before.

Infectious diseases have existed throughout the East and West, but the damage caused by these infectious diseases has become increasingly large as they enter modern society, and the damage caused by them is exponentially increasing. The methods for solving the damage caused by infectious diseases vary depending on the era and society, but the changes caused by infectious diseases and the human efforts to manage them are common phenomena.

Infectious diseases were called "plagues" in the past. A plague is a disease that occurs more frequently than expected in a population. It is also called "epidemic" because it occurs in a group of people through transmission. It is also called "cruel disease" because it causes severe pain to sick people. In addition, since the cause of the disease was not known in detail, it was referred to as a plague because it occurred many times and on a large scale. The word "plague" is related to ghosts, and it is also recognized as "dye" because it is an abbreviation of "transmission" which means "to move and dye". It is also recognized as "action" because it means the epidemic phenomenon of an infectious disease. For example, in the Joseon Dynasty, the number of deaths caused by the plague during the reign of King Jungjong and King Hyojong is an enormous number of about 2 to 40 times the number of Korean COVID-19 patients as of March 8, 2023.

Currently, the Korean Centers for Disease Control and Prevention (KCDC) is responsible for infectious disease management in Korea. Here, we establish and implement a separate implementation plan based on the prevention and management of statutory infectious diseases for the prevention of infectious diseases and the preparation for new infectious diseases and epidemiological risk analysis. For example, infectious disease specialized hospitals are

established to secure medical publicness and provide patient-centered medical services. In addition, in the case of COVID-19, we have set up a plan to manage and manage by providing national-level support for vaccination to all citizens, including elementary, middle and high school students. The World Health Organization (WHO) used the term "the emergence of new infectious diseases and the re-emergence of traditional infectious diseases" in the early 1990s to raise awareness of infectious diseases among the world's people.

The COVID-19 pandemic has caused a high death toll worldwide, especially among the elderly and people with underlying health conditions. The continued emergence of new variants of COVID-19 has increased public interest in its management. People are also aware of the importance of management at the individual, social, and national levels, as they are concerned about how to prevent the emergence of new infectious diseases that may follow COVID-19 in the future.

Infectious diseases are a threat to social change and must be overcome for human survival. In other words, a healthy lifestyle is a basic element for human happiness, and the importance of infectious disease management is important not only now, but also in the future. Therefore, by examining the management of infectious diseases in Korea in the past, we can expand our knowledge and approach future situations by integrating the past and the present. The purpose of this study is to compare and analyze the traditional Korean management of infectious diseases and the management of COVID-19, to provide evidence for the management of infectious diseases and to lay the scientific foundation for efficient management of infectious diseases in the future.

Methods

Design

This study is a literature review study that examines and analyzes the literature on infectious diseases.

Research Procedure

The researcher followed the guidelines for literature reviews to search, select, analyze, and interpret the materials presented in the literature. The researcher carefully reviewed and analyzed the contents of the literature while following these procedures.

Search for Materials According to the Research Topic

As the first step, the researcher searched for Korean people's management and coping methods for the past plague (plague) that were consistent with the research topic and purpose, but also meaningful and appropriate.

Selection of Appropriate Materials for the Research Topic

Materials were selected from July 7 to July 18, 2022. The key words used in the four academic search engines were "plague", "plague", "infectious disease", and "infectious disease". All research papers found were obtained and reviewed. Initially, 14 studies were selected, and because of searching and selecting 5 more through 14 search papers, a total of 19 documents were selected. The materials for this study were selected using the keywords "plague", "plague", "infectious disease", and "infectious disease" without any restrictions on the publication period, from the paper published in October 1975 to the paper published in June 2022.

Data Analysis and Meaning Interpretation

The traditional Korean management methods for the plague were classified by topic and summarized and compared and analyzed with the modern COVID-19 management.

Results

Characteristics of the Materials Included in the Comparative Analysis

The materials used in this study were a total of 19, including 18 research papers and 1 report. In terms of time, they dealt with the management of infectious diseases, including prevention and treatment methods from the unification of Silla to the present day. Although there were differences in methods due to the development of medical technology, changes in people's perceptions, and so on, the methods for treating and preventing infectious diseases were generally divided into medical and folk methods. Medical methods emphasized isolation, the use of drugs, the compilation and distribution of medical books, and cleanliness. Folk coping methods managed infectious diseases through folk remedies, prayer, rituals, superstition, and other witchcraft.

Traditional Korean Management Methods for Infectious Diseases

Medical Coping Methods

Isolation

Historically, isolation was not used as a method for treating and preventing infectious diseases during the Unified Silla and Goryeo periods. However, in the Joseon Dynasty, the prevention and treatment of infectious diseases through isolation began. Because the medical level and treatment measures of the time were fundamentally powerless against infectious diseases, the Joseon people thought that the best way to avoid infectious diseases was to "run-away", so they found people who were sick and took them out of the city. The isolation method of Joseon can be divided into the early and late Joseon periods. First, in the early Joseon Dynasty, when an infectious disease patient occurred, the <Hwainse>, which was a private disease treatment department, reported to the government and the government provided construction materials to build a <byeongmalg> (a temporary building to accommodate infectious disease patients) or <pigmalg> (a public facility to accommodate and treat infectious disease patients) through lower-level agencies. If necessary, patients were also isolated in temples or deep mountains. According to the records of 1849, to prevent the spread of infection, national-level events were postponed, banquets were prohibited, and people who had committed minor crimes were released. At this time, there was no sure cure for infectious diseases, so they focused on isolation and accommodation to prevent the spread.

Use of Drugs

As a medical coping method, in the Joseon Dynasty, drugs were supplied, folk remedies were used, and patients were encouraged to visit doctors. In addition, medical books were introduced, and relevant books were published and distributed, and efforts were made to block germs, and the method of cleanliness was used. In <Hwainse> and <Hyeminsa>, which treat civilians, drugs were provided to treat patients, and even the <Jeonuigam>, who was in charge of the medical care of the royal family, was mobilized to treat infectious diseases. In addition, if the plague occurred in the provinces, doctors from the central government were appointed to take drugs and treat them. In the late Joseon Dynasty, many doctors from the Royal Medical Office (present-day doctors) were dispatched to treat diseases and to take measures against infectious diseases. If a doctor who was afraid of infection avoided treatment, administrative

procedures were followed to resolve these issues and the officials who did not take the infected person to the hospital were punished. In other words, we can see that they actively dealt with infectious diseases.

Compilation and Distribution of Medical Books

Silla was very active in the introduction of Chinese medical books after unification. However, it was difficult to directly apply the book's extensive content, complex prescriptions, climate, customs, and herbs that were different from Korea, so a medical book transformed in the Silla style was needed. The representative medical book of Silla that has been handed down to this day is <Silla Beop-sa-bang>. <Silla Beop-sa-bang> analyzed the remaining prescriptions, and various ingredients such as incense oil, garlic, ginger, and mugwort that can be easily obtained in the private sector were presented, so that anyone could overcome infectious diseases without economic burden. In the Goryeo Dynasty, a book called <Jejung-ib-hyo-bang> was compiled. This is a medical book of the Goryeo Dynasty, and it is believed to be a book that summarized the prescriptions presented in various Tang Dynasty books that were adopted after the Goryeo-Silla unification war, together with the unique Silla ones. After that, the types of medical books that were written are diverse. In the past, Chinese medical books were imported and used, but because the environment and situation are different from China, not only Chinese herbs are useful, so a policy of promoting herbal medicine was also implemented to use the abundant and cheap herbs that can be easily obtained in Korea. In the Joseon Dynasty, we can find the circumstances that it was possible to prevent and find a cure by publishing and distributing <Byeong-eok-ui-seo>. Medical books such as <Dong-ui-bo-gam> were published and distributed to the public, and the contents of <Dong-ui-bo-gam> were further concretized to study ways to prevent and eradicate infectious diseases, and finally, they were compiled and distributed to the whole country. The publication of <Ganjip-Byeong-on-bang> was to promote a unified medical response to the plague at the national level, and to allow people to read and deal with the medical book themselves, even if they could not receive direct medical treatment from a doctor in a remote village. Through this, we can see the efforts to deliver correct knowledge to the people at the national level.

Cleanliness, hygiene, and immune enhancement

If there is a sick person in the house, it is said that there is no need to worry about the disease spreading if the clothes are washed clean and steamed in the pot where the rice is cooked. This can be seen as an emphasis on cleanliness, as the plague can be transmitted through the patient's clothing and household items. In addition, the contents of <Sinchan-Byeong-on-bang> include a message to take enough rest during the winter season to manage your health and build up your body's strength. Through this, we can learn about the way to know and block the infection route, and the efforts to maximize the individual's physical coping ability.

Folk Coping Methods

Folk Remedies

In addition to medical books, there are also various other ways to solve infectious diseases. For example, it was known that it was prevented by using Soheokhyangwon. When entering a house where an infectious disease has occurred, first open the door and put two pounds of water in a large pot in the middle of the house and boil 20 pills. It was believed that the fragrance would remove the energy of the infectious disease. After all the patients had each drunk a cup of the boiled water, the doctor entered and examined them, believing that they would not infect each other. In cases where direct contact is unavoidable, such as doctors and family members of patients, it was prevented by using sesame oil. It is said that sesame oil blocks the entry of pathogens into the nasal mucosa through the external defense wall against the energy of infectious diseases. In the <Gyeongsan Ilok> written in the late Joseon Dynasty, the content of infections recorded by Jeong Won-yong is recorded. In relation to smallpox that Jeong Won-yong had when he was 6 years old, two doctors appeared. A Jae-woon prescribed ginseng, while Lee Hang-nul diagnosed and told him to mix two spoonfuls of Hwang in milk and eat it. He also prepared various liquid soups (such as Yangui-tang, Yukhwa-

tang, Ijin-tang, and Igongsan) made by the private sector for himself while suffering from malaria, and he also had his granddaughter take Anhwaliceong-tang made by himself. He also used Gami-wiryong-tang, Soheokwon, Sa-gi-yeong-dan, and Gami-sambeak-tang to save his wife who was seriously ill with cholera. These folk remedies were thought to remove the energy of the plague by sweating in the early stages of the plague. In other words, we can see that they used ventilation, aromatherapy, and liquid solutions using food to prevent the spread of infectious diseases.

Superstitious Methods

In the past, when infectious diseases could not be prevented with medicine, it was possible to see several ways to rely on superstitious methods. Various diseases were believed to have gods, and infectious diseases were also considered to be the work of ghosts, and it was thought that it was necessary to appease the ghosts. In addition, they also utilized indigenous beliefs or shamanistic beliefs to solve it. In the Unified Silla period, traditionally, monks read the Buddha's Sutra, one of the Buddhist scriptures, when they wanted to cure diseases. This was closely related to the fact that the Buddha of Medicine was popular in this period and the practice of the medical association, and the ritual was popular in the temples in the 8th and 9th centuries. In the early Joseon Dynasty, sacrifices were offered as a means of appeasing the people who were frightened by the plague. In each region, they kept different taboos, performed ashes, and offered sacrifices and prayers. These magical acts were used as one of the ways to solve infectious diseases by praying to ancestors or appease ghosts. In the mid-Joseon Dynasty, there were also similar magical coping measures. However, the types have become more diverse. It was thought that if one pill was wrapped in a wax paper to the size of a bullet and put in a red silk bag and hung around the heart, all evil ghosts would not dare to approach. It was said that "When visiting a house with a plague, write the letter '次' with the middle finger of the right hand and squeeze it tightly." Red was used because it was thought to be a color that ghosts hate, and it was thought that it would prevent ghosts from approaching by writing a letter that blocks ghosts. In the late Joseon Dynasty, the Yoje was implemented. This sacrifice, which was regularly performed on the 15th of July, the 1st of October, and the 1st of October, was intended to prevent the plague. In the case of an infectious disease occurring in the provinces, the provincial governor sent property and a letter of worship to the king to offer sacrifices to expel the infectious disease. As a result, the government sent officials to the relevant provinces to offer sacrifices in places where the plague was severe, and they also asked the village head to pray. In this way, in the case of a widespread infectious disease, national sacrifices were also held, which were implemented to show the government's efforts and to appease the people. In the private sector, sacrifices were popular, and monks performed rituals in temples. In the Jeongjo era, measles broke out and many people suffered. To solve this, Jeongjo offered sacrifices for measles. This was the first time that sacrifices had been offered for measles. It was a bold move to break with tradition for the benefit of the people, and it was also a symbolic act of the government's concern and affection for its people who were suffering from infectious diseases. When people got smallpox, they called shamans and held rituals. To prevent infectious diseases, they also offered sacrifices to the ghosts of the musafir (ghosts of people who died and left no one to offer sacrifices for them) and the gods of the disease on a fixed date. These superstitious preventive measures were meant to correct the frightened public and to prevent and control infectious diseases on an individual level. In general, when a disease broke out, the easiest thing for people to do was to pray to God, get rid of the fear of infectious diseases, seek mental stability, and hope for a cure. This is because they wanted to be healed by prayer.

Comparison of traditional Korean management methods and modern COVID-19 management

The following is a comparison and analysis of the traditional Korean management methods for infectious diseases and the current management methods for COVID-19. In the past, isolation methods were used for infectious disease patients, which is the same as the current method for those infected with COVID-19. In addition, a "golden thread" was hung outside the gate to prevent people with infectious diseases from entering the house indiscriminately. This is a very similar method to emphasizing the practice of "social distancing" today, which prevents people from gathering to recognize the harm of infection and prevent transmission. In addition, the detailed presentation of the duration,

situation, and prescription of the plague is in line with the COVID-19 situation, which is divided into early, middle, severe, and recovery stages, and each stage is observed at home or hospitalized treatment. At one time, there were no vaccinations like today, so folk remedies were used to prevent them. However, the use of non-drug treatments such as moxa, diet, incense, air aeration, and foot bathing are in line with the flow of modern drug treatment as an alternative to drug treatment.

In the Joseon Dynasty, the publication and distribution of the book "Ganjip-Byeong-on-bang" helped ordinary people to read, prevent, and properly respond by themselves by using medical books. This is in line with the current distribution and promotion of the correct management methods for COVID-19 using mass media such as broadcasting and various communication tools. Among the methods used to prevent infectious diseases, magical methods do not apply to modern COVID-19 management methods, but they can also be seen as like praying according to the religious beliefs of everyone.

From the traditional management methods of infectious diseases in Korea, it was found that isolation, the use of drugs and emphasis on personal hygiene, the appointment of a dedicated infectious disease manager, the establishment of infectious disease prevention rules, and relief policies are very similar to modern COVID-19 management methods. In the contents of <Sinchan Byeonobang>, it is said that King Gwanghaegun offered sacrifices, dispatched officials to send medicine and doctors, visited the dead, and provided relief to their families when the plague spread to the eight provinces in the spring of the Geulchuk year in the Imja year. This is like the dispatch of public health center employees as infectious disease management personnel in the modern COVID-19 situation, and the fact that the body's strength was cultivated to take enough rest during the agricultural off-season is very similar to the method of enhancing immunity in the modern era.

When infectious diseases were rampant in the past, the government also made a lot of efforts to manage them. It is believed that the efforts made to minimize the damage to the national disaster caused by the plague were accepted as a problem of the social and national level, not a problem of the individual, and that they tried to overcome the difficulties together by strengthening the community culture.

According to the analysis of the literature in this study, it was found that the traditional management methods of infectious diseases in Korea are not much different from the present, except for those caused by bacteria or microorganisms. This study shows that there are temporal differences in the methods to solve the damage caused by infectious diseases, but that human efforts to manage and adapt to them continue. Therefore, the need for and importance of prevention and management should be further emphasized by understanding infectious diseases correctly and gaining a new perspective through the past management of infectious diseases according to the flow of time.

Conclusion

This study provides a historical overview of infectious diseases in Korea. It begins by discussing the prevalence of infectious diseases in the past when they were a major cause of death and disability. The study then discusses the impact of infectious diseases on Korean society in the present day, when they are still a major public health concern. Finally, the study discusses the challenges and opportunities of infectious diseases in the future, as the world becomes increasingly interconnected.

The study finds that there are many similarities between the way infectious diseases were managed in the past and the way they are managed today. For example, both past and present approaches to infectious diseases have emphasized prevention, treatment, and quarantine. However, the study also finds that there are some important differences between the way infectious diseases were managed in the past and the way they are managed today. For example, modern medicine has developed new and effective treatments for infectious diseases, and modern public health systems are better equipped to prevent the spread of infectious diseases.

The study concludes by arguing that the study of the history of infectious diseases can help us to better understand and manage infectious diseases in the future. The study finds that by understanding the past, we can learn from the mistakes of the past and make better decisions about how to manage infectious diseases in the future.

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