Abstract

Cholera is a diarrhea disease caused by the bacteria, *Vibrio Cholera*. For centuries, cholera has terrorized the world. There have been seven pandemics since 1817 and many lives have been lost. Even to this day, cholera runs rampant in many areas of the world. The impact cholera has had on the world is enormous. Cholera has caused immense amount of human suffering and economic/social loss since its beginning. But, as time goes on, discoveries are made and ideas are created on treatments that save many lives and some places are now cholera free. In those regions, Cholera is a thing of the past; while in other parts of the world, it is very much still a threatening disease of the present and future.

Cholera, the massive watery diarrhea disease, has struck the earth with its angry fists since the beginnings of civilization. From the start, *Vibrio cholerae* has infested the world and Cholera has especially terrorized the world in a series of pandemics. Without a doubt, Cholera has traveled throughout the whole world, stopping to pillage multitudes of cities of many of its inhabitants. It knows no boundaries. The only place it hasn’t ruthlessly invaded is the barren ice desert of Antarctica. Even to this day, cholera still robs places of lives.

The first Cholera pandemic broke out in 1817. Cholera outbreaks continued to spread across Europe, Central Asia, Southeast Asia, the Middle East, and parts of Africa until 1823 (Barua Pg.8). Where the pandemic began is controversial, but cholera was definitely present in multiple places prior to and during 1817. India was an area that was affected by cholera in 1822. The fatality rates among the native and English troops in India were 21 for every 100 for the natives and 10 per 100 for the English (Barua Pg.8).
Six years after the first Cholera pandemic, another pandemic sprang up. The second pandemic flew through Asia, Europe, the Middle East, some parts of Africa and the United States from 1829 to 1851. There were many “violent epidemics” sprinkled throughout the pandemic. One particularly violent epidemic took place on a pilgrimage to Mecca, where many died, including the Mecca and Jeddah governors and the Pasha (Barua Pg.9). Another outbreak that took place near Mecca was in 1846 where 15,000 people died (Barua Pg.10).

However, as more cases of cholera appeared more new ideas for treatments did too. Around 1830, a German chemist in Moscow named R. Hermann came up with the idea of injecting fluids into cholera patient’s veins to treat them. Hermann’s medical colleague named Jaehnichen injected six ounces of fluid into the veins of a cholera patient whose pulse returned but later died. In Great Britain, a young Irish physician, William Brooke O’Shaughnessy, studied the pathology of cholera and concluded that to treat it, one should restore the saline matter and specific blood gravity. In 1832, Thomas Latta of Scotland used O’Shaughnessy’s idea to treat 15 cholera victims, five of them survived after the treatment. There was finally a successful intravenous fluid in the late nineteenth century. A man named Rogers created a hypertonic saline and successfully demonstrated the effectiveness of intravenous fluid. Rogers’ treatment changed the fatality rate of cholera victims from 60-70% to 30% and his treatment saved many lives (Baura Pg.9).

Just a mere year after Pandemic two ended, the third pandemic emerged. The third pandemic ran through many places including North America and Northern Europe from 1853 to 1854. Africa, Asia and the Middle East were also invaded by cholera. A brilliant discovery also happened in the midst of the third pandemic. Filippo Pacini, in Tuscany, Italy, discovered a plethora of curved bacteria while examining intestinal contents of cholera victim cadavers. He
named the bacteria \textit{V.cholera}, however, due to the fact that there was a lack of convincing evidence and being that the findings were publish in a small, little known journal, the findings remained unheard of. Another interesting event was the discovery by John Snow, an amateur epidemiologist, of the role water played in the transmission of cholera. His discoveries and actions saved many lives in London (Barua Pg.12).

As more and more cholera outbreaks occurred, fear and panic broke out. Due to people’s fear of cholera, international cooperation in health began. In 1851 the first international meeting on cholera and sanitation was held by the World Health Organization (WHO) in Paris, France. From, 1851-1938, there were fourteen more conferences about sanitation. Multiple regulations dealing with cholera were created during these years (Barua Pg.11). In 1973, the regulations on cholera were revised according to new knowledge on the subject (Barua Pg.12).

Pandemic Four burst into action only four years after the previous pandemic. During this pandemic period of 1863 to 1879 many people lost their lives. During a Mecca pilgrimage in 1865, there were 30,000 deaths. From the survivors of the pilgrimage, cholera spread throughout the Middle East and Europe. In Russia, 90,000 people were said to have died from cholera in 1866. Hungary and Belgium both lost 30,000 people and in the Netherlands 20,000 perished (Barua Pg.12). Also in 1866, the United States recognized cholera as a social problem that required an improved environment (Barua Pg. 13). In 1867, Italy lost 113,000 lives (Barua Pg.12). Africa, South America, some areas of North America and Asia were also affected by the cholera pandemic (Barua Pg.13).

In 1881, the fifth pandemic began. During this period of 1881 to 1896, cholera was widespread throughout Europe. In Egypt there were also widespread cholera outbreaks and cholera claimed more that 58,000 lives. Other places that were affected by the pandemic were
France, Spain, Italy, United States, some South American countries, parts of Africa, and the Far East. Great Britain resisted outbreaks because of better sanitation and living standards. United States also had improved sanitation and living standards that helped in keeping the number of cases to a low level. Robert Koch made a great discovery during the pandemic. Koch discovered and demonstrated that cholera “was caused by a comma-shaped organism, which he called Kommabazillen” (Barua Pg.14).

Three years after the fifth pandemic, the sixth pandemic started around 1899. For two-four years from 1899 to 1923, the pandemic raged on. During this pandemic, the El Tor Vibrio was discovered in the intestines of people who had died in an El Tor quarantine camp in 1905. Even with the quarantines, cholera still passed through to Asyut and parts of Egypt and took 34,000 lives. Western Europe, Russia, the Far East, Middle East and South America were all also affected by cholera (Barua Pg.16).

After the sixth cholera pandemic, the world stayed strong for thirty-eight years before falling into another pandemic. In 1961, the seventh pandemic started its course. When the seventh pandemic ended is to this day a controversial topic. Some sources claim that the seventh pandemic ended in 1991 with the appearance of the strain of cholera called V.cholera 0139, also called Bengal. Other sources, like Dhiman Barua and WHO, say that to this day, the seventh pandemic still lives on. What is definite about the seventh pandemic is that it infested almost every continent.

According to Barua, the seventh pandemic had dramatic increases in two major phases. The first increase was a gradual increase from 1961-1966, followed by an upsurge in 1970-1971. While many of the countries infected with cholera during the seventh pandemic were countries that continually had outbreaks, there were also some countries that had not had cholera outbreaks.
before or hadn’t had any in a long time. Hong Kong, Macao, and Korea were areas that had remained free of cholera since 1965, only to receive the disease again. Laos was among the countries that reported cholera for the first time. The number of cases of cholera victims rose and there was not much people could do. Vaccinations were tried, but had little effect on the pandemic and antibiotic resistant cholera began appearing. One thing that helped lower fatality rates in the world was treatment procedures (Barua Pg.16-21).

However with modern times came modern medicine and ideas. Ways to treat cholera and to help those with cholera sprouted out as times changed and people became more informed. In many urban cities and countries, cholera has been virtually eradicated. With better sanitation and medicine, it is easier to prevent and treat cholera. Cholera has been practically eradicated from most of the developed countries like the United States and many other places are slowly eradicating the disease with better sanitation and more information (WHO). One place that there are still many cholera outbreaks is Africa. The most recent outbreak in Africa was in Kisumu Town where there were four cases of cholera. However there were no deaths reported (Africa Service News[ANS] July 19, 2007). One place in Africa that had many cases of cholera was Angola. Between February and June 2006, there were more than 43,000 cases and roughly 1,600 deaths (Herro Sept.-Oct. 2006). While there are still many outbreaks of cholera in Africa, there are also quite a few African countries that are eradicating cholera. In April 2007, Kitgum was declared cholera free (ANS April 30, 2007).

Throughout all the years that Cholera has reigned the earth and many years after, the world has lost many lives. Either through cholera itself or due to iatrogenic problems or dehydration (due to a lack of knowledge and resources), multitudes have died. In modern times, though there are fewer deaths, there is still a large amount of human suffering that comes with
cholera. However, while human suffering and death impact the world, there is also an economic and social impact on the world. Cholera outbreaks induce panic and tighter food trade regulations. Having a cholera outbreak means less income through tourism. In places where tourism is the main income provider, a cholera outbreak could be devastating. Also, while cholera outbreaks mean less income, it also means more money loss in exports and imports. As an example, “The cholera outbreak in Peru in 1991 cost the country US$ 770 million due to food trade embargoes and adverse effects on tourism.” (WHO: Global epidemics and impact of cholera)

Cholera is an extraordinary disease in that it both helped the world and attacked the world. Because of cholera, international cooperation in health came together. However, cholera has also caused the world much suffering and lost many people and money. In seven pandemics it has taken thousands, possibly even millions of lives. Even to this day it still kills. But, maybe in the close future, the world may eradicate cholera once and for all.
Bibliography


