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Dr. Snow and the Blue Death

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Known as the “Blue Death,” the “Asian Disease” and the “price of Empire,” cholera decimated thousands of nineteenth century Londoners. The effects of cholera were nearly instantaneous; vomiting, diarrhea and death by dehydration. Because the severe dehydration caused the body to take on a desiccated blue-gray tone it was called the “Blue Death.” Mortality would usually occur within twenty-four hours of the disease’s violent onset. Cholera was originally referred to as the “Asian Disease” in 1817 as it spread from the Ganges Delta in India to the rest of the world. When the British Empire expanded, cholera spread along its trade routes. Major waterways and railways enhanced the spread. The press asked “Is this the price of Empire?”

In Great Britain the Industrial Revolution drove more and more people into London, which was splitting at the seams. Families were crowded into homes (sometimes twenty in one room). Sanitation was virtually nonexistent. Over 200,000 cesspools existed in London. These were holes for human waste in the back yard or under houses. There was no such thing as trash collection. Public animal markets and open slaughterhouses exacerbated the problem. Often animal waste (from horses primarily) was simply left to rot in the streets. This was a recipe for disaster.

The medical community was baffled. Two schools of thought debated the issue: Contagionists believed cholera was spread from person to person by direct contact; Miasmatists believed cholera “hung in the ether in unsavory places.” The Board of Health issued a statement to the effect that the poor and “those addicted to spirituous liquors” were responsible for the spread of the disease. The populace was advised to wear a bag filled with myrrh and camphor so as to be “surrounded by an aromatic atmosphere.”

London’s Sanitation Commissioner, Sir Edwin Chadwick believed cholera to be the result of “atmospheric impurities” resulting from waste rotting in the streets. He decreed the city’s cesspools should be closed. Unfortunately, the few sewers that existed were overwhelmed. Thus, what had been contained in 200,000 cesspools was directed into the Thames River; the same river that was London’s main water supply.

In direct opposition to Chadwick, Dr. John Snow (1813-1858) discounted both the Contagionists and the Miasmatists. His observations and interviews with people in the neighborhoods most affected by cholera led to a completely different conclusion. Dr. Snow identified the Broad Street water pump as the primary source of London’s cholera. Using a dot matrix system he was able to identify a cluster of victims around the pump. He was convinced of a connection between the water source and cholera.

Dr. Snow’s studies were enough to convince the local council to remove the handle of the Broad Street pump. The cholera began to diminish. According to his reports:

I found nearly all the (cholera) deaths had taken place within a short distance from the pump...there were instances in which the deceased persons used to drink water from the pump...In consequence of what I said the handle of the pump was removed the following day.

Later it was discovered that the pump had been dug only three feet from an old cesspool that leaked fecal bacteria. The cloth diaper of an infant who had died from cholera had been washed into this cesspool. This particular cesspool had been dug under a house that had burned down and when the city widened Broad Street the location of the cesspool was forgotten. Because the cholera epidemic died down, the city replaced the handle of the Broad Street pump. To accept Dr. Snow’s theory meant the city was accepting responsibility for disease transmission. However, in 1866 when another cholera epidemic occurred, one of Dr. Snow’s chief opponents, Dr. William Farr, realized that Snow had been correct. He persuaded the city to issue orders that only boiled water should be consumed.

Dr. John Snow was a man ahead of his time. Now considered the Father of Epidemiology, he was an early proponent of anesthesia in childbirth and served as Queen Victoria’s anesthetist. In London a plaque honors Dr. Snow on Broadwich Street, and is decorated with the image of a pump with its handle removed. In York, a memorial pump sans handle was erected in 2017. The John Snow Society meets each September in London at the John Snow pub, where a member delivers the annual Pump Handle lecture. A recent lecture title was “What Pump Handles Need to Be Removed to Save the Most Lives in This Century?”

For further reading:

Spence Galbraith, Dr. John Snow, His Early Years, (London: The Royal Institute of Public Health and Hygiene, 2002).


Katherine Tansley, The Doctor of Broad Street (United Kingdom: Matador, 2016).

thejohnsnowsociety.org