Sonali Ortiz-Casillas

Professor Hanson

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The Evolution of Illnesses and Medicine in Latin America

In the U.S. and Western civilization today, when we get sick, our course of action is to go to a medical professional and receive some sort of medication to resolve our health issues. Getting sick is not much of a problem since we have these resources at our fingertips and have been able to develop our own forms of treatment. When you get a fever, you don't worry too much. You can take medicine for a few days, rest, and then continue your normal life. Life has not always been this way, and the history of medicine and treatment goes far back. Medicine and curing illnesses were a significant point of focus for scientific discovery and the growth of civilization and life. This paper will explore the development of medicine and the history of how illnesses were treated in Latin America.

Before the creation of modern medicine, treatments for illnesses were found naturally, many coming from herbs, trees, and other natural resources. As stated in the book *Science in Latin America: A History,* many components for curing illnesses came from ancient Greece, but these would take years to reach Spain (Saldaña, 44). By the time they were received, their potency and effects would decrease. In an attempt to resolve this issue, doctors all over the country assessed these medications and wrote informative literature on the proper preparations, usages, and instructions. Even while doing this, they knew exploring Latin America and its resources would be highly beneficial and necessary.

The understanding of the human body, illnesses, and cures at the time revolved a lot around the philosophical thoughts of Hippocrates. His knowledge of health and the body was based on the "body's four humors: blood, yellow bile, phlegm, and black bile" (Saldaña, 44). This had a significant influence on society at the time all over and how they treated illnesses. If there was a loss or excess of any of these in the human body, the treatment was to implement the reverse. Juan de Cárdenas, a Spanish Jesuit, gave a great example as to how they used this method:

> "First, cacao, without being toasted or prepared in any way, has the property of constricting the bowels, stopping menstrual periods, closing urinary tracts, obstructing the liver and especially the spleen, depriving the face of its vivid, natural color, weakening digestion, causing paroxysms and fainting, and, in women, blushing, female problems, and, above all, it engenders perpetual anxiety, melancholy, and heart murmurs. Now, on the other hand, we can see that if cacao is ground and toasted, even if it is not mixed with anything other than some atole, which is simple Indian food, with only this we can observe that it fattens, provides sustenance, causes urination, is a healthy remedy for obstruction, helps digestion, rouses the appetite, helps and heals female problems, causes happiness and vigor. Reasons for such a notable property. The dominant part of cacao is cold, dry, and thick, earthy and melancholic, and thus is the cause of this damage. The nature of a second part of cacao is airy, oily, warm, and damp in complexion and is the one that forms chocolate, which is bland, lenitive, and amorous. It has a third part, which is very hot, penetrating and belongs to fire, and this is the bitter taste that

> promptly rises to the brain, causing sweat, provoking periods, removing obstructions, and moving the bowel's excrement." (Saldaña, 45)

This shows how one plant could have a multitude of medical uses at the time and how treatment revolved around the body's four humors. It was important in medicinal applications that the resource had some sort of physical effect that could be observed and either brought back the humors lost while sick or would take the excess away during the time of illness.

The plants for the New World that were being discovered by Spanish doctors were experimented with in an effort to find new forms of medicine. They had tried to grow native American plants in parts of Spain, but unfortunately, this was unsuccessful. As a way around this issue, they instead shipped just the materials such as seeds, the dried fruit, leaves, etc., but this came with its own problems.

A man of great significance at this time was Nicolás Monardes. He was a physician and botanist from Seville, Spain, who studied this subject and published many works on its findings. One of his most notable works is *Historia medicinal de las cosas que se traen*, which translates to "Medicinal history of the things brought from our West Indies." In this, he organized information on many New World plants that could be used as treatment (Atlantic Materia Medica, 2009). He would buy these plants from all over the world and grow some on his own in order to experiment with them on his patients and see if they would work. His efforts were extremely useful in the advancement of medicine and were referred to often.

In the sixteenth century, there was an outbreak of syphilis that affected the New and Old World. It was expected to believe that the cure for any illness would be found where it was contracted. Intellectuals of the Old World had been searching for a cure but had no luck and

could not understand why. Their unsuccess led them to believe that syphilis had come from the New World and, in turn, the cure would be found there. The doctors of the New World discovered that they had been using the bark of a chinaberry to treat and cure syphilis. Nicolás Monardes was able to record one instance of this treatment:

> "The chinaberry was discovered after the Indies were discovered. An Indian gave notice to his master of this in the following manner: since a Spaniard was suffering great pains from the pustules he contracted from an Indian woman, the Indian, who was one of the doctors of that land, gave him chinaberry water, with which his pains not only disappeared, but with which he was also cured. Thus, many other infected Spaniards were cured, and this was communicated to us by the recently arrived in Seville, and from here it was divulged throughout Spain and from Spain to the world." (Saldaña, 47)

During the later part of the nineteenth century, public health and hygiene became much more of a concern for the general public. Much of the medical science during that time was trying to find the causes of illnesses, whether they were viruses, bacteria, toxins, etc. It was believed that many diseases were coming from a lack of hygiene, and if you could figure out what was explicitly causing the illness, you could then look at what hygiene practices would aid and do away with it. Global health organizations and conferences began in an attempt to control the prevalence and spread of illnesses and diseases. A quarantine for the sickness of cholera was finally put in place, but not until 1892 after the seventh International Health Convention (Saldaña, 184). This quarantine was also applied to the plague in 1912, but the yellow fever was not included or taken as seriously.

Yellow fever is a viral disease caused by the bite of a mosquito carrying it. The first symptoms to appear are “fever, chills, severe headachhe, back pain, general body aches, nausea, vomiting, fatigue (feeling tired), and weakness. Severe symptoms include high fever, yellow skin or eyes (jaundice), bleeding, shock, and organ failure.” (CDC, 2024). Some of the symptoms like fatigue and weakness of the body can last for several months after getting better. Currently, among people who get the disease severely, 30-60% die. During the 1800s, when it was spreading across the world, it was much more deadly and many were dying from it.

It is not positive, but we now believe that yellow fever had come from the rain forests in Africa and has been around for at least 3,000 years. The shipping industry aided the spread of the virus by bringing it to different ports around the world. It began through slave trade and carrying large amounts of water on these ships (Brink, 2016). The mosquitos would get on the ship, reproduce, and mosquito larva would live in the water. Some slaves were already infected with yellow fever and others would get bitten during trade and become infected.

The first recorded epidemic we have was during 1648 in the Yucatan Peninsula. Later on, more outbreaks were recorded in New York, Boston, and Charleston. Thankfully, the cold weather in the winter time killed the mosquitos in those areas and aided in killing the epidemic. Although, this did not stop it from continuing to arise and spread to Europe. Europe would send resources and goods to Africa, who would then loaad the ships with slaves to send to America, and America would pack the ships with resources and goods to send back to Europe. This is how yellow fever would make it’s way to Europe, technically through the Americas, indirectly from Africa.

It was originally believed that yellow fever would spread by being in contact with another person who had the virus. This is why originally quarantines were put in place to try and prevent

the spread of disease. In 1881, Carlos Finlay, a Cuban physician had a hypothesis that mosquitoes were the the cause of the virus and he decided to test this thought using the scientific method (Brink, 2016). To do this, he had one of his patients be bit by a mosquito carrying yellow fever. The patient then contracted the virus and proved his hypothesis correct. Although he was convinced, many other people in the scientific community were not so sure. The deaths became much more of a concern during the Spanish-American War in the 1900s because many of the soldiers and men who could fight in the war were dying of yellow fever. The scientific method was used again to figure out where yellow fever was stemming from and have a more convincing explanation. The U.S. military formed the Yellow Fever Commision, spearheaded by Major Walter Reed who was working in Cuba at the time. He had a similar method to Carlos Finlay: he allowed 30 men to be bit by an infected mosquito and they all contracted yellow fever. This replication of the original experiment proved to everyone that the root cause of yellow fever was from infected mosquitoes.

After figuring out where this health issue was stemming from, they took action. They improved sanitation, began fumigating with insecticides, and worked on lessening the amount of standing water in public since that is where mosquitos reproduce (Brink, 2016). These efforts drastically reduced the amount of people contracting the virus and lessened the amount of mosquitos carrying yellow fever. This helped economically because yellow fever was affecting international trading in terms of exporting and importing of goods. It had also been affecting the construction of the Panama Canal. A large amount of the canal workers were being affected and dying from mosquitoes carrying diseases and about 85% of them had been hospitalized at the time. This was causing panic for the employees and in turn, making them not want to work and leave the construction site. Their attempts at squashing this issue were successful and from the

summer of 1905 till a year later in September, they dropped the amount of infections in half. By October, the issue had droped to 7 cases, and in November of 1906, the last person with yellow fever on the Panama Canal died and marked the end of the epidemic.

Healthcare and the advancement of treatment, vaccines, and medicine is continuously improving and being researched. Medication for sicknesses come from all over the world, many having roots in Latin America. The scientific method has also played a crucial part in figuring out the cause of illnesses as well as treatment for them. From preventing the spread of diseases to finding natural remidies, Latin American physicians and scientists have had a foundational contribution. The role they have played in the history of medicine is something to be highlighted and appreciated.

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