

Pandemics: COVID-19

Las pandemias: el COVID-19

Pablo Kuri-Morales*

Private Practice, Mexico City, Mexico

Just mentioning the word “pandemic” generates a sense of gravity and even fear. The World Health Organization (WHO) defines a pandemic as “the worldwide spread of a new disease”¹. Throughout history, we have faced a considerable number of pandemics. Suffice it to recall some that have occurred across the centuries and that have not only had a sanitary impact but have also changed politics, the economy, and, by becoming great threats to health, they have driven the development of public health actions that seem normal today, but that were true milestones at the time. Let us imagine 14th century Europe, think about sanitary conditions, waste management, and the lack of knowledge about causal agents of disease; it is in this context where that which we currently understand as quarantine was developed.

Ledermann narrates: “Quarantine was born in 1374, with Reggio’s edict in the city of Modena, Italy. Actually, it was a cordon *sanitaire*, since the term quarantine was derived from a maritime term, which was applied to a period of isolation of ships that arrived from ports with bad medical reputation. This period had the idea of incubation period implicit. The first port where a quarantine was decreed (which lasted only 30 days; later, it would be expanded) was Ragusa (current Dubrovnik, Bosnia-Herzegovina, on the Adriatic sea) in 1377. Six years later, Marseille increased the period to 40 days”².

What were our ancestors so afraid of that forced them to stop, at least temporarily, the flow of goods and people? Of the reemergence of the so-called

“black plague” that ravaged the known world between 1347 and 1351, a disease caused by *Yersinia pestis* and transmitted by fleas that dwelled on rats. Estimates indicate that it killed 30% of the European population. Yes! One third part!

But that was not the first pandemic in history: there are records from 430 B.C. of the so-called “plague of Athens;” in the year 166 of our Era, the “Antonine plague” in Rome; in 525, the “plague of Justinian” caused by *Y. pestis*; in Japan, smallpox in 735, which was not strictly a pandemic, but had great impact on the Japanese population; in 1458, the “English sweat” epidemic, which is suggested to have been caused by the influenza virus; and others more, culminating in the so-called “Spanish flu” of 1918-1919, which actually seem to have originated in the United States and not in Spain, caused by the influenza virus and estimated to have killed between 40 and 100 million people, and with those of 1957-1958 and 1968-1969, also caused by the influenza virus. Already in this millennium, the first pandemic was in 2009, caused by the AH1N1 influenza virus, for which the world and Mexico³ were preparing waiting for the arrival of AH5N1, much more lethal than the variation that finally appeared that year.

Although not officially declared pandemics, we should not forget the Ebola, Zika, and Chikungunya viruses, or many other diseases that kill millions of human beings every year, such as tuberculosis and malaria, and that affect the poorest and most vulnerable populations. Other neglected diseases, such as

Correspondence:

*Pablo Kuri Morales

Heriberto Frías, 915, int. 310

Col. Del Valle, Del. Benito Juárez

C.P. 03100, Ciudad de México, México

E-mail: kuripablo@yahoo.com

Date of reception: 30-03-2020

Date of acceptance: 13-03-2020

DOI: 10.24875/CIRUE.M20000128

Cir Cir (Eng). 2020;88(3):245-247

Contents available at PubMed

www.cirugiaycirujanos.com

2444-0507/© 2020 Academia Mexicana de Cirugía. Published by Permanyer. This is an open access article under the terms of the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

snakebite and scorpion sting, also cause thousands of deaths and even disability, but since they occur with a higher incidence in regions such as Africa or Asia, they do not acquire the attention they would surely have should they occur in Western countries.

Today, in the second decade of the millennium, we are facing a new pandemic that caused by the disease called COVID-19, the causative agent of which is a virus from the *Orthocoronavirinae* family, commonly known as coronaviruses. Coronaviruses are not new and cause disease in mammals and birds, among other species. In humans, they can cause conditions that range from common cold to serious illnesses such as SARS, MERS, and now COVID-19.

When you read these lines, many more things than I will comment on will have happened, because this pandemic, thus declared by the WHO on March 11, 2020, is rapidly advancing, and because, being a new disease among humans, every day something new is being learned about her. It is materially unviable referring what you will read, because the number of consulted sources is enormous.

Everything indicates that COVID-19 comes from bats, that it had an intermediate step in another mammal, the only one that has scales instead of skin, which is called pangolin and that in China is highly appreciated, and that due to its trade, it is even an endangered species, and from there, it passed to the human being. The story begins toward the end of 2019 in Wuhan, China, where an outbreak of a serious respiratory disease was described, and that was found out to be caused by a coronavirus other than SARS and MERS. A few weeks later, the disease was called COVID-19 (CO for corona, VI for virus, and D for disease, and 19 were added because that was the year of its appearance) and the virus that causes it was also assigned a name: SARS-CoV-2.

Over the course of days and weeks, and as the disease spread, several facts were confirmed: it is a disease that is transmitted from human to human by contact with the saliva of infected persons, either by air, by fomites or by contact with surfaces contaminated with viral particles. Due to its weight, the virus is also known to fall once exhaled at a distance of approximately 1 m or 1½ m and, depending on the surface it is found, it can survive from a few hours to several days.

Incubation period appears to be between 1 and 14 days, with an average of 4-6 days for the first symptoms to appear; among these, the most common are fever, dry cough, fatigue, and muscle or joint pain, but

there may be rhinorrhea, diarrhea, or some other symptoms, such as a smell disorder. Breathing problems are the alarm symptom, which when appears forces the patient to seek medical help. Today we know that, of the total number of those infected (and I should warn that this is an average that has varied from country to country), 18% are asymptomatic, 62% have mild symptoms, 15% require hospital care, and 5% require critical care. Patients experience more serious symptoms and deaths as age is more advanced, and if they have preexisting conditions, such as heart disease, hypertension, or diabetes, among others, they are more likely to experience serious disease.

Among infected persons, nearly 5% die, although it is quite possible for this percentage to be highly overestimated, since the denominator used for its calculation does not include all those who have become infected and are asymptomatic or those who never attended the health services because they had mild symptoms.

At the time these lines are written, there is no vaccine and neither is there a specific treatment. There are results of some studies that are beginning to be published and that sound encouraging, but they are not yet definitive with regard to medications. Thus, there is no other defense against COVID-19 than basic hygiene measures, such as frequent hand washing with soap and water, coughing or sneezing into the angle of the arm and forearm, and social distancing, which implies physical distancing between people.

Several debates prevail, such as the performance of tests, tests and tests, or only applying tests to suspects, contacts of confirmed cases or serious cases, or generalized use of face masks or only in those who have symptoms (everything seems to indicate that asymptomatic people do spread the virus and that those who are symptomatic also do it a few days before the onset of symptoms).

We do not have enough information yet for being able to claim which response model is the most effective, if the Korean, the Chinese, the German model, or that of the Nordic countries, that is, the most restrictive or the least restrictive. Whichever ends up being more effective, the aim is to "manage" the epidemic, that is, to prevent the number of serious cases from reaching the health services at the same time, because as it has occurred in Italy, in Spain, and in some places of our northern neighbor, the health system becomes overflowed.

There are still more questions than answers, and we should think about how are we confronting this

pandemic in the communications era (how would we be doing it if there were no WhatsApp, Twitter, Facebook, or YouTube?), individually and socially (would we be experiencing it the same way?). There is no doubt that COVID-19 has changed life, the daily living of millions of people. Surely, it will not put an end to humanity, but it should drive us to reflect on whether economic and health models, and human actions, which are impacting our environment, should be reviewed. COVID-19 will pass, but new diseases will come and we should learn the lessons it leaves to us to better prepare ourselves and lessen the impacts on health and other spheres, such as the economy.

Making decisions in a setting of so much uncertainty is not easy; criticizing from the outside the decisions that are made is much easier. Today, we should base decisions on the best available evidence and understand that only with everyone's participation can

challenges such as COVID-19 be confronted, and understand that fear spreads faster than disease.

Funding

The author declares that he has not received any funding to write this editorial.

Conflicts of interest

The author declares that he has no conflicts of interest related to the content of this editorial.

References

1. Alerta y respuestas mundiales (GAR). World Health Organization;2020 [Citado 28 de marzo 2020]. Disponible en: https://www.who.int/csr/disease/swineflu/frequently_asked_questions/pandemic/es/
2. Ledderman W. El hombre y sus epidemias a través de la historia. *Rev Chil Infect Edición Aniversario*. 2003;13-7.
3. Kuri-Morales P, Betancourt M, Velazquez O, et al. Pandemia de influenza: la respuesta en México. *Salud Pub Mex*. 2006;48:72-9.