

Coronavirus: Chronicle of an announced zoonosis

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For some years now, the editorial space of the Journal MVZ Córdoba has been oriented towards addressing human and animal public health issues under the "One Health" concept. We have valued and analyzed scientific articles, issued opinions, sparked debates, proposed lines of research and we have also predicted and warned of the arrival of new diseases both in the country and on the continent.

Without intending to relate all these events chronologically, in 2005 the first cases of equines positive for West Nile virus (WNV) were reported and these serological data were considered indirect evidence of WNV activity in Colombia and South America. In this context, we alert the Colombian human and animal health authorities to improve surveillance of human diseases attributable to WNV (1).

In 2008, the amazement and certain powerlessness of public health researchers to face new viral strains such as Asian coronaviruses, Chikungunya virus, as well as H1N1 and H5N1 viruses were perceived. In this same context, comments were made on the efficient "viral genetic rearrangement" and the possible interspecies jump from animal hosts to *Homo sapiens* (2).

Zoonotic diseases represent 78% of the diseases considered emerging and reemerging. Viruses participate in these zoonoses in a high proportion and new viruses frequently appear producing high morbidity and mortality; with the aggravating circumstance that there is no treatment. For example, the first human infections with the new avian influenza A (H7N9) virus appeared in China in 2013. The virus was detected in poultry and 77% of infected people had contact with poultry (3). At the time, we expressed our concern about what could happen in Latin America, because migratory birds can reach our territories and spread the virus to domestic and native birds, warning of the weaknesses of Colombia and the countries of the neotropics to face this zoonotic disease (3).

In 2014 we alerted to the imminent arrival in Colombia of the Chikungunya virus (CHIKV), furthermore, stating that this virus had greater challenges than dengue, based on the impact it had in other countries, especially due to the prolonged absenteeism due to work-related disabilities related to arthritis and arthralgias that could last weeks, months or even years (4). Indeed, CHIKV arrived approximately seven months after having published our editorial in the town of San Joaquín, municipality of Mahates, Bolívar, Colombia.

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For the year 2015 it was the turn of the Zika virus (ZIKV) and based on the events in Polynesia, where dengue, Chikungunya and ZIKV were simultaneously circulating, it was most likely that the arrival of ZIKV in Colombia would be experienced very soon, just as it finally happened (5).

By the end of 2018 we published the editorial "Zoonotic emergence of coronavirus: a potential public risk for Latin America" (6), where we mention the first coronaviruses detected in humans (HCoV-229E and HCoV-OC43) and which are disease-causing mild respiratory. Reference was also made to the two most recent coronaviruses, SARS-Coronavirus (SARS-CoV) and MERS-Coronavirus (MERS-CoV), but unlike the former, they do frequently cause severe disease. SARS-CoV appeared in Guangdong, southern China in 2002 and was responsible for the first pandemic of the 21st century; bats were identified as the reservoir and the probable source of the outbreak. In 2012, the MERS-CoV demonstrated in the Middle East and camels were implicated as potential perpetrators.

Based on the scientific evidence consulted, we also warned that the *Coronaviridae* family had a high zoonotic potential, since in addition to infecting birds, bats and camels, it had also affected pigs, turkeys, dogs, horses, cats, among others, and therefore, we suggested increasing the search for reservoirs in wild animals, especially since bat coronaviruses were shown to be the source of many human coronaviruses, including SARS-CoV, MERS-CoV, HCoV-229E, and NL63.

A year later, our fear came true when the COVID-19 outbreak appeared in China. We really thought it was going to be circumscribed in East Asia as SARS. This emerging SARS-CoV2 virus has a high transmissibility potential that has overwhelmed health protocols causing a rapid global spread of the disease.

In Colombia, the first imported case was reported on March 6, 2020 and in the department of Córdoba, Caribbean coast, the first diagnosis was reported on March 29. In Colombia it has expanded to more than 30 territories (departments), including Bogotá, and has infected 18,330 people, of whom 4,431 have recovered and 652 of them have died (May 21/2020).

Given the health emergency and because of fate, today, the only diagnostic laboratory authorized by the National Institute of Health (INS) to carry out a diagnosis of COVID-19 in the department of Córdoba, is that of the Institute for Biological Research in the Tropics (IIBT), belonging to the University of Córdoba. This endorsement is a recognition of the IIBT that has been investigating emerging and reemerging vector-borne infectious diseases (VTEs) for more than two decades and has contributed to knowledge about febrile syndromes related to VTEs in humans. The group of researchers has studied important vectors in public health such as: rodents, ticks, mosquitoes and bats. The main investigations and their academic indicators of the last decade are available at https://scholar.google.com/citations?hl=es&user=A8Z0Lq8AAAAJ&view_op=list_works

With the disinterested but determined participation of professors and postgraduate students, the department of Córdoba has been able to count to date with more than 800 timely diagnoses due to the speed in the delivery of results for its population. This determined dedication of the human team is worthy of being recognized as an example of solidarity and professionalism with our fellow human beings.

From this lectern we will continue to be very vigilant in our task of regional, national and global epidemiological surveillance. We hope that in the remainder of this year the medical solution to this terrible pandemic that has caused so much damage to the world population and their economies can be found. Let's be optimistic that science will surely find a quick solution.

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