



**Short Communication** 

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# COVID 19 or SARS COV-2. From Fiction to Reality, Chronicle of The Coronavirus

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For a long time, the "Red Death" had devastated the region. Never had any plague, been so fatal, so horrible [1]....

"Thus begins the story THE MASK OF THE RED DEATH, written by EDGAR ALLAN POE. Terrifying, isn't it? And they say that reality outweighs fiction [2].

The COVID-19 or SARS COV-2 pandemic (declared a pandemic by the WHO on March 11) wrought havoc on our planet throughout the year 2020. And without a doubt, it will be the protagonist of 2021 [3]. By the end of December, more than 80 million cases and over a million and a half deaths in 191 countries had been reported. We know quite a bit about this virus by now, its biochemistry, its genetics, and how it is transmitted: mainly via the air, through droplets and aerosols. The latter are very, very small droplets of saliva, which are expelled when speaking, singing, screaming or coughing and can remain in the air for a longer period of time. Thicker droplets fall to the ground or remain on counters and other types of surfaces. Researcher José Luis Jiménez from the University of Colorado and a specialist in aerosols, says that for each droplet there are a thousand aerosols and he makes an emphasis on the ventilation of closed places and the correct use of a quality mask, along with social distancing and proper hand washing [4].

The coronavirus has affected a wide range of patients, ranging from those who are asymptomatic to very serious patients who finally end up dying. This is a very aggressive virus, (not just a flu as a Brazilian authority once called it). It is a virus that is on par with a modern yet complex world. Not even the American writer Edgar Allan Poe could have imagined such a status quo today.

Its expansion around the world has been rapid and progressive. By the end of April last year, 2.5 million cases of infection had been reported around the world. Let the reader calculate its arithmetic progression. By the time I finish writing these lines today, the number of infected will be dangerously close to one hundred million.

Currently, the new, controversial and complicated edge is the one related to the mutation of the virus. Some speak outright of a new

strain, while others are more cautious and talk about changes in the genetic sequence that follow the natural course of mutations in viruses. Be that as it may, the "variant" is claimed to be more infectious. The variant in question was identified as B.1.1.7 and has spread extensively in England as well as Denmark, Spain, Australia and several other countries, as a part of the second wave (third in the case of Asian countries) that erupted in the late summer of the northern hemisphere [5]. Also worth mentioning is the South African variant, which has been less talked about until now. In the case of England, the B.1.1.7 variant has indeed shown to be more infectious and its lethality is currently still being evaluated. In retrospect, the BBC news told us months ago that by September of last year, meetings of more than 6 people had been prohibited in Great Britain, measures that were hardened until they culminated in very strict guarantines by the end of the year. In spite of this, there were still very high numbers of daily infections [6].

As we can see, in addition to the geometric expansion and variations in the structure of the virus (with more infectious subtypes under study), a third element is complicating the panorama: the sequelae in patients who have recovered from the disease. A triad to be feared.

Sequelae such as changes in brain morphology and function, confusion, memory loss, and behavioral disturbances. In the beginning, it was thought that COVID 19 was a respiratory disease, but as of April last year we already knew that it not only generates lung damage (which is already very serious per se due to the cascade of inflammatory events that are generated when the virus invades alveolar macrophages) but it also involves other organs and today encompasses a multiplicity of aspects, not to mention the enhanced effect that occurs in patients with pre-existing chronic diseases such as hypertension and diabetes. A fearsome catalyst. What is more, it even accelerates subsequent mental disorders [7]. Following this neurological line, we found a study of recovered patients from a Chicago hospital (October 2020) where the presence and permanence of: headache, vertigo and anosmia was confirmed.

There were even isolated psychotic cases [8]. The virus invades

neurons and breaks down the myelin layer. The term Neuroin-vasión has been coined from the neurological consequences of Covid 19 [9]. One of the studies published in January 2021 in The Lancet followed patients already discharged from June to September 2020 [10, 11]. The presence of sequelae such as fatigue and muscle weakness, followed by insomnia and depression was seen in a large percentage. Much remains to be studied in relation to these and other developing syndromes and mental illnesses. The Lancet Psychiatry, in a publication by the Reuters agency, stated in November that 20% of those infected by COVID 19 will develop psychiatric disorders in the following 90 days [12].

When I started writing articles about the pandemic, first a brief historical review of the black plague and the Spanish flu, followed by a reflection in the midst of the tunnel (a tunnel that has become longer), I imagined writing a third editorial about the end of the pandemic. Alas, no. We are not near the end [13].

#### But... At last.... The vaccine has arrived!

Several large pharmaceutical companies embarked on its preparation, among which Moderna and Pfizer stood out in mid-2020, and culminated in a victory for Pfizer [3]. In December, the FDA authorized its emergency use for the prevention of Covid-19 in people over 16 years of age [14]. By January 2021, we already had several approved vaccines from other laboratories, not only Pfizer, but also Moderna, Oxford-Astrazeneca and the so-called Sputnik V or vaccine from the Russian Federation. These last two have a modified viral sequence whereas Pfizer and Moderna use RNA. The competition to pass the respective phases has not been without setbacks, controversies or doubts, such as the one that says whether or not the mutations of the virus will allow the approved vaccines to continue being effective. Until now, at least, authorities have stated that yes, vaccines will continue to be developed, and will continue to be effective (unless a new strain emerges, with all its letters, that will be a kind of nemesis of the current virus sequence).

Special mention should be made of the appearance of anti-system and anti-vaccine groups, which have attacked with fake news and conspiracy theories. Despite them, we know that our hope to contain the advance of this virus is called a vaccine. There is no doubt that vaccines have saved millions of lives and are part of the collective history of humanity's progress and as John Hopkins researchers Gigi Kwik Grovall and Rachel West say so well: "historically, herd immunity has been achieved only through the use of vaccines". A new truth that detractors seem to ignore.

In the tale of the great American writer, there was certainly no vaccine, just as there was no solidarity. The Prince and his friends

isolated themselves behind the abbey walls with plenty of food and drink, without caring about the fate of their countrymen. However, this did not impede the red death from sneaking in between its walls and unleashing the unfortunate events at the end of the story. 2020 was a generous year in terms of conceiving scientific literature, translated into books and research, as well as testimonies and stories of various kinds related to the pandemic. Perhaps Allan Poe based his account of the Red Death on the cholera epidemic that emerged in Baltimore in 1842.

Without a doubt, reality surpasses fiction, and I believe that we will overcome this reality, this grueling ordeal, balancing the difficult triad that I mentioned above. Some are more optimistic and talk of defeating the pandemic in record time. The truth is that limiting the times is risky. For the time being, the pandemic, as I said, is and will be the protagonist in 2021, and I, like other colleagues in the health area, welcome vaccination.

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