



EDITORIAL

How to live and survive the coronavirus pandemic? WJOMI awards the 2019 Certificate of Outstanding Contribution to Medicine to Jerzy Owskiak.

Piotr Kochan

SARS-CoV-2 pandemic and COVID-19

The worst case scenario forecast by various medical bodies, scientists and organizations in the recent years is just happening! Humankind has heard different predictions by various researchers that a pandemic is imminent. These specialists have usually mentioned an animal flu virus that will become hypervirulent to humans via antigenic shift. These people were only slightly wrong. Probably also a zoonotic virus, the so called severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has become infectious to humans. The reservoir is unclear, maybe pangolins or some other species. All surrounded by many conspiracy theories. Since the last 15 years that I have been teaching medical students microbiology, I have always stressed to them that zoonotic agents are not only shown on bioterrorist pathogen lists but are also some of the most deadly pathogens to humans, if an epidemic was to take place. And as I'm writing this text today on 22 March, according to WHO, there are 292 142 people confirmed to be infected around the world and 12 784 have died due to novel coronavirus disease – COVID-19 [1]. The figures in Poland are not that striking as in Italy, Germany, Holland or Spain, but the number of people who were tested is not high

either. As of today there are 634 infected and 7 have died due to SARS-CoV-2 infection in Poland [2].

The spread of the infection is very fast as not only symptomatic persons but according to CDC and Chinese counterparts, people with no symptoms may be responsible, too. Cardinal symptoms include fever, cough and shortness of breath. There may be many more accompanying symptoms which resemble flu-like symptoms and there is mention of possible gastrointestinal tract symptoms. Incubation period is from 2-14 days, so there is a need for long quarantine and many persons have problems while staying isolated. Chinese agency and CDC were some of the first agencies to publish diagnostic test instructions and the tests are becoming more widespread.

The bad news is that the pandemic is not a Netflix series or the Hollywood film "I am legend" anymore, but it's here and it's real. Overwhelmed by the shortages in the healthcare systems, Poland is no exception and we need ventilators, masks, gloves and other protective garments and barrier precautions systems in the fight against the virus.



City streets have become desolate, most trade ceased to exist. Companies are on the verge of economic disaster with people needing to stay at home or to work remotely. Schools and universities are on a lock down. For me, there should be another hashtag motto more popular than #stayhome one. It should be #avoidpeople. You cannot get the virus from hiking in the mountains or walking on a vast meadow. But you can get it by riding public transport. So in my opinion going for walks and spending time on fresh air with no people around seems like a better idea. Furthermore we are at the peak of the flu season, so probably many cases of severe influenza that go untested in Poland are mistaken for COVID-19 symptoms.

Mortality. So what should we do to survive the pandemic? As data on the mortality of the disease emerge, as stated by WHO Director-General Dr Tedros Adhanom Ghebreyesus on March 3, there were 3.4% of people who died from COVID-19 [3]. Seasonal flu, on average, kills fewer than 1% of those infected [3]. Mortality rate reported officially for China as of February 20 was 3.8%, but as high as 5.8% in Wuhan [4]. I recently received photos from a microbiology colleague of mine from China showing their everyday work in full protective gear (Figure 1). A recent publication in The Lancet Infectious Diseases, though, mentions 5.6% for China and 15.2% outside of China, with global mortality rates over time levelling off to a rate of 5.7% [5]. So the disease is not as deadly as the recent Ebola epidemic in Congo (3444 cases, 2264 deaths) but is spread more easily [6].

Transmission. The disease spreads easily among humans due to the airborne route. Persons may also get infected by touching their mucosa with hands contaminated by respiratory secretions containing the virus. The highest mortality rate may be observed in the elderly, especially >80 years of age. COVID-19 causes severe disease especially in persons suffering from accompanying conditions like heart and lung disease, hypertension, diabetes and other serious debilitating illnesses. Chinese pathologists report that the changes in lungs resemble those of early ARDS [7]. Persons may also die from pneumonia and sepsis, as a complication.

Treatment. So far there is no specific drug against SARS-CoV-2. People suspected of the virus should be isolated and quarantined for 14 days. Symptomatic treatment is recommended. For serious cases, ICU admission is necessary and ventilator support is required. Antiretroviral drugs ritonavir and lopinavir were used but not so successfully. A recent manuscript, in press & pre-proof, by Didier Raoult's team [8], may bring hope to those infected. After performing a small open label non-randomized clinical trial they show that "hydroxychloroquine treatment is significantly associated with viral load reduction / disappearance in COVID-19 patients and its effect is reinforced by azithromycin". Older drugs are today often found to be effective in other applications. It's probable that any COVID-19 specific drug may become available only after the peak of the pandemic passes.



Figure 1. Chinese microbiologists at work during the 2020 SARS-CoV-2 pandemic.



Proxiphylactic measures.

- Avoid people.
- Do not contact the elderly or persons with coexisting disorders.
- Use barrier precautions in everyday medical duties.
- Wash hands, also with antiviral fluids.
- Disinfect public objects frequently.
- Apply 14-day quarantine to suspected cases.
- Make use of diagnostic tests.
- Isolate positive cases.
- Accelerate vaccine clinical trials and approval.
- Inform the public about pandemic.
- Avoid panic.

WJOMI 2019 Outstanding Contribution to Medicine Award

The choice of the laureate of the yearly World Journal of Medical Images, Videos and Cases Outstanding Contribution to Medicine Award is always tough. These are individuals who through their actions have a significant impact on the medical field. This year, though, the choice was unanimous, the awarded persons is well know not only to physicians but to the general public. He is one of the founders and the main personality behind The Great Orchestra of Christmas Charity (*pol. Wielka Orkiestra Świątecznej Pomocy*), a NGO that collects money for hospitals and medicine in Poland each year. His contribution is significant since the Orchestra collects funds for healthcare since 1993 and up to date collected more than a hundred million dollars. Ladies and Gentlemen, let me introduce the 2019 awardee – **Jerzy Owsia**k.

We are scheduled to meet on April 10, 2020, but looking at the current situation, we do not know whether that will be possible. I promise to publish a full report from the meeting as soon as it does happen, in case it is postponed!



Figure 2. 2019 Outstanding Contribution to Medicine Award Diploma that will be presented to Jerzy Owsiak.

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