

Coronavirus disease 2019: Facts and controversies

Dear Editor

The coronavirus pandemic is the most serious and dramatic public health emergency that the world has faced in the last decades. Despite the numerous recent articles published in the literature, many controversies still persist both among healthcare professionals and common people.

Briefly, the novel coronavirus disease-19 (COVID-19) is caused by a RNA virus, called severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), which originated in December 2019 in Wuhan, a city in the Hubei, province of China, and has spread to infect 81 174 people in China with 3248 deaths.¹⁻³ In few weeks Japan, South Korea, Iran, and Italy were severely affected by COVID-19. At the time of writing, the COVID-19 is affecting 177 countries and territories around the world and caused hundreds of thousands of deaths.²

Recent studies dispel myth concerning the origin of the outbreak of COVID-19, according to which the virus was synthetically created in a laboratory unleashed to cause a global crisis. Indeed, although its origin is not completely understood, it was demonstrated that the bat coronavirus shared 96% of its genome with SARS-CoV-2, thus suggesting a bat origin and a transmission to human through an intermediate host.⁴

The main route of transmission for COVID-19 occurs via large droplets released from the nose or mouth of an infected person, which, even if asymptomatic or mildly symptomatic, can spread the virus. Moreover, it has been demonstrated that the persistence of virus on inanimate surfaces play an important role in transmission of SARS-CoV-2.⁵

So, in effort to reduce the rate of transmission, several countries worldwide took drastic measures (ie, schools, restaurants and shops closures, quarantining potentially affected persons) and individual precautions (social distancing, wearing gloves and face masks, hands hygiene, covering the mouth, and nose with a tissue when coughing or sneezing).


In spite of that, the British government recently announced to allow the COVID-19 to spread to build a “herd immunity” (a form of indirect protection from the infection that happens to individuals when a significant part of population has been vaccinated or previously exposed to the infection). This controversial strategy stands in contrast with World Health Organization recommendations, which advice social distancing. In fact, the hypothesis that SARS-CoV-2 can infect a significant proportion of the local population, inducing herd effect needs to be confirmed.⁶

People of all ages can be infected by SARS-CoV-2, although older individuals and patients with chronic illness are at greater risk.⁶ Indeed, many reports dispelled the myth that children cannot catch the COVID-19.⁷ Usually, the pediatric patients with COVID-19 have mild symptoms and will recover within 1 to 2 weeks, likely due to a more active innate immune response and healthier respiratory tracts.⁷

At present, there is no vaccine or specific antiviral treatment for COVID-19.⁸ All of the therapeutic options come from experience treating previous influenza and respiratory viruses. The therapy is symptomatic, with oxygen supply or mechanical ventilation in case of severe respiratory symptoms.⁸

There is no evidence that home remedies such as consuming garlic, plenty of water, high doses of vitamin C can cure and protect against COVID-19. Chinese herbal treatments, typically used for viral respiratory infection, might contain compounds with anti-SARS-CoV-2 action.⁸

Finally, another controversy is whether hot temperature and humidity may end the COVID-19 pandemic. Indeed, it is well known that most recognized respiratory pathogens of humans recur in winter and plummet in summer, most likely due to the fact that warm and humid weather make it harder for respiratory droplets to spread viruses, as well as there is seasonal variation in the susceptibility of host.⁹ However, further investigation will be required for conclusive evidence about COVID-19.

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