Published online: December 30, 2020

IMR Press

Reviews in Cardiovascular Medicine

News and Views

Pandemic lockdown, healthcare policies and human rights: integrating opposed views on COVID-19 public health mitigation measures

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DOI:10.31083/j.rcm.2020.04.274

The issue of the COVID-19 pandemic occupies the agenda of the whole world. The pivot of this pandemic is a crucial element that has become almost as important as the virus itself, namely the lockdown. Although, the rationale for lockdown is well-sustained by strong epidemiological arguments, exploring the '*other*' unwanted consequences of the contemporary COVID-19 pandemic is mandatory for coagulating a robust agreed position against the numerous problems generated by the SARS-CoV-2 virus. Starting from the rationale of the lockdown, in this paper we explored and exposed the other consequences of the COVID-19 pandemic measures such as the use or abuse of human rights and freedom restrictions, economic issues, marginalized groups and eclipse of all other diseases. Our scientific attempt is to coagulate a stable position and integrate current opposing views by advancing the idea that rather than applying the uniform lockdown policy, one could recommend instead an improved model targeting more strict and more prolonged lockdowns to vulnerable risk/age groups while enabling less stringent measures for the lower-risk groups, minimizing both economic losses and deaths. Rigorous (and also governed by freedom) debating may be able to synchronize the opposed perspectives between those advocating an extreme lockdown (e.g., most of the epidemiologists and health experts), and those criticizing all restrictive measures (e.g., economists and human rights experts). Confronting the multiple facets of the public health mitigation measures is the only way to avoid contributing to history with yet another failure, as seen in other past epidemics.

Keywords

COVID-19; lockdown; pandemic; human rights; economic crisis

1. Introduction

The issue of the COVID-19 pandemic occupies the agenda of the whole world. Whether '*front-line*' physicians are involved, whether other healthcare professionals are collaterally concerned, whether politicians or economists are implicated, or the criticisms of '*denialists*' are heard, the SARS-CoV-2 virus has in one form, or another encompassed everyone's speech and concerns.

The turntable, the pivot of this pandemic, is a crucial element that has become almost as important as the virus itself, namely the lockdown. Generations of people born and lived in the 20^{th} and 21^{st} centuries in which individual freedoms have reached a high degree of crystallization and maturity are now facing a significant and new challenge for them, yet old in the human history.

Although the argumentation for a '*40 days isolation period*' was unknown and seemed more related to a religious symbolism than a scientifically proven isolation time, the separation of people with contagious diseases became common for healthcare facilities throughout medieval Europe. When medicine failed to treat the ill, this was the only method proven to be efficient in disease control and was adopted in most countries (Tognotti, 2013). Later, in 1918, the "*mother of all pandemic*" (Taubenberger and Morens, 2006) known as the 'Spanish-flu' pandemic occurred in three different waves, the second one being the deadlier. The closure of schools, the gathering bans, and the social distancing measures retrospectively studied appear to be the most effective methods that curbed the death curve during this pandemic. While these measures of a different magnitude from city to city in the U.S. proved to be efficient and life-saving, even at that time, they had large opposing currents (Tomes, 2010) and a tendency to politicize and engage in political debates over restrictions and relaxations.

Whether there is an epidemiologic crisis or a confrontation with a wild or atypical infectious disease, the social-wise measures of contention and isolation, for the "*the greater good*", may be seen as highly restrictive on the individual level and can open a perilous path for abuses in the name of public health. Even among those who do not deny the gravity of this pandemic, it seems that there are two categories of people that are increasingly opposed: epidemiologists and health experts (advocating an extreme lockdown, while focusing on the pandemic data), and the '*others*' (among whom one counts economists and human rights experts), who claim that slips and fatal errors will have more severe consequences than the world expects.

Starting from the rationale of the lockdown, in this paper we intend to explore and expose the 'other' consequences of the contemporary COVID-19 pandemic (as human rights, economic issues, and marginalized groups), in a scientific attempt to coagulate an argumentative and stable position of the whole humanity against the complex problems generated by the virus.

2. "*Why lockdown? Is it a good thing?*" A reasoning attempt for lockdown

Throughout history, many diseases were subject to the need for quarantine (authority- or self-imposed). Cholera, diphtheria, tuberculosis plague, smallpox, yellow fever, viral hemorrhagic fevers, and severe acute respiratory syndromes are listed by the Center for Disease Control and Prevention (CDC) through Presidential executive order (Presidential Documents., 2003) being subject to strict rules of detection, diagnosis, and reporting as well as measures to contain the spread.

Although many influenza outbreaks were extinguished by '*herd immunity*' (either by vaccination or by achieving a sufficient number of infected and immunized individuals) concerning SARS-CoV-2 infection, it is estimated that more than 200 million people would have to recover from COVID-19 in U.S. only, in order to stop the transmission (Clinic, 2020). However, being a highly contagious disease, if many people become sick simultaneous, the pressure on the healthcare system would lead to more problems than the outbreak itself: scarce of personnel due to healthcare workers contracting the disease (Ng et al., 2020), economic pressure on hospitals and government officials (American Hospital Association., 2020), and exiguous medical resources confirmed throughout the world (Emanuel et al., 2020).

Facing an '*unparalleled in human history*' gigantic scale containment measure with more than a half of the world having been experienced a lockdown (OECD., 2020), the scientific community and public authorities are increasingly receiving major questions doubled by doubt: "*why ambitious lockdown interventions to crush the curve represent the only realistic way for individual countries to contain their national-level epidemics*?" (Killeen and Kiware, 2020). Meanwhile, history confronts us with an uneasy comparison, the vast human tragedy of the Black Death of 1346-53 that deserves to be at least *'scholarly revisited*', as it can provide lessons paid at the highest price ever: the lives of almost 60% of Europe's population (Benedictow, 2019).

Given the well-known transmission routes, a common-sense question arises: would things have been better if a lockdown had been instituted? Would lives have been saved by instituting a "*trentino*" or a nowadays quarantine (Mayer, 2018)?

Unfortunately, turning the whole world into an indefinite amount of *lazaretto* (see Dubrovnik or Philadelphia well-known historical lockdowns) for a tremendous number of very highly contagious people was not an option in the armamentarium of the healthcare professionals from the Middle Ages. Since the healthcare systems across the rich countries have visibly crumbled under the caseloads with COVID-19 (with an elevated mortality in high-risk populations (Clark et al., 2020)), the answer to the question "*why lockdown?*" lies in the fundamentals of epidemiology and not in the clinical medicine (Lamba, 2020), lacking any evidence-based medical solution and leaving the epidemiological measures as the only viable hindering action.

The major objective of quarantine is to reduce contagion or spread of disease. Thus a major therapeutic opportunity that must be operationalized is early ambulatory treatment of COVID-19 to reduce the spread of disease (McCullough et al., 2020), lessen the intensity and severity of symptoms, and avoid hospitalization and death (McCullough et al., 2020). Reliable studies have demonstrated that lockdown had a significant impact on the spread of SARS-CoV-2 in districts or cities over long distances (Lau et al., 2020; Pandey and Adhikari, 2020) being just one part from an "*all-out containment triad*" (Wilder-Smith et al., 2020), key aspects that together achieve what anyone cannot by itself: a) movement restrictions, b) active case finding and reporting, c) lockdown (if done correctly (Sjödin et al., 2020)).

Nevertheless, more mathematical models proved that although lockdown may delay deaths, it eventually does not avert a significant number of fatalities (Raju, 2020), and even the slightest relaxation of lockdown or importation controls can cause containment failure (Killeen and Kiware, 2020).

While solid arguments back-up the question, "*Why did the lockdown strategy work well in China?*" (Lin et al., 2020), there are countries where accurate, efficient lockdown measures are, in reality, painful, and improbable to implement. Weighing the negative economic impact (with more than 30% of jobs being potentially at risk) (OECD., 2020) and pressed by an estimated world output fall by 23% at the peak of the crisis (when many countries are under a lockdown) (Mandel and Veetil, 2020), many governments did and does not have the strength to sustain China's severe measures.

Epidemiological studies and expert opinions will prove if rather than applying the uniform lockdown policy, one could recommend instead an improved model targeting more strict and more prolonged lockdowns to vulnerable risk/age groups while enabling less stringent measures for the lower-risk groups. As shown in a multi-risk SIR (Susceptible Infected Recovered) model (Acemoglu et al., 2020a,b), a strategy like this could outperform optimal uniform measures. Another neglected aspect in current policies is the need for a rational emergence from lockdown for those who have recovered from COVID-19 and are clinically immune and for those who are COVID-19 naïve and undergo vaccination in the future. Targeted policies might be easier to implement, while combined with reduced interactions between groups could minimize both economic losses and deaths (Acemoglu et al., 2020b).

Were the stringent, large-scale containment measures vital in the COVID-19 pandemic? One may assume that these universal precautions could have saved many lives during the Black Death of the mortal plague. Unfortunately, history did not apply the above measures when they were necessary. Our invitation is to dig deeper into this concept of lockdown and think twice before contributing to the history with another failure.

3. Lockdown during COVID-19 pandemic: worldwide restrictions of human rights and freedoms?

This pandemic has opened up the door for the marginalization of rather at-risk social categories further explained below. Considering the fast dynamic of the disease, all the states' energy was concentrated towards those directly affected by the virus and on lockdown measures. Naturally, as also in the case of war, rights and freedoms have to be temporarily restrained, and some social categories neglected.

According to international standards (Roberts, 2017), governments can suspend rights and freedoms during war or emergency state. However, rights can be limited as an exceptional measure, for a '*greater good*,' to establish public order or in the case of a pandemic with the compliance of the following:

1. Restrictions have to be provided by law;
2. Not to discriminate both in application and language;
3. To serve the purposes of the political body as such;
4. To strictly be applied within the announced framework of time and constitutional space (Office of the United Nations High Commissioner for Human Rights, 1976).

The democratic regimes should keep a delicate balance between the protection of public health, reduction of the negative social and economic impact, and the fulfillment of human rights in general. It distinguishes the rule of law as a democratic tool of governance from the rule by law used in authoritarian and totalitarian regimes ('*nobody can be punished unless the deed of which he stands is already provided by law*' (Dicey et al., 2013)).

According to the rule of law democratic theory, when a state operates restrictions on social life, it has to perform it *inside the rule of law area* even in the times of pandemic. Following the guidance of the World Health Organization (WHO) (World Health Organization, 2020a), all democratic governments have reacted on '*fast forward*' and in order to keep the public health systems working and to diminish the effects of the pandemic making politicians, technocrats and physicians as well reacted through a total lockdown and severe restrictions.

On the one hand, pandemic needs by default all the energy and attention of the state, while, on the other hand, it could also be an '*opportunity'* to suspend the application of some rights and freedoms by requesting a derogation from European Convention of Human Rights European Court of Human Rights (2019). In countries with less democratic tradition and efficient public administration (Laura, 2014), most of the restrictions were not already provided by law as it is stated in the international standards, but by *ad-hoc* initiatives of health experts, who naturally do have in mind as a priority the excellent health of the people, and not necessary rights and freedom of the citizens.

If this lockdown is only a matter of temporary restrictions or a slippage towards totalitarianism, it remains to be seen in the coming years.

4. Does the pandemic open the door to totalitarianism? Use or abuse of human rights restrictions

The supremacy of the Constitution and the international legislation on human rights keeps politicians inside the framework of the rule of law (Schmitt et al., 2008). Nevertheless, once the state of emergency or alert is enforced, most government officials from rather young democracies (such as Eastern and Central European countries) enforce the restrictions easily.

Presumably, this penchant toward restrictions happens because the Government's duties are to preserve public health and prevent epidemiological disasters along with preventing an economic crisis within affected countries (Stile, 2020). There is, however, a '*dark side*' of implementing restrictions and government pandemic restrictions policies that could alter the free exercise of rights and freedoms, following the law, and this action might open a window for a tendency to rule by law.

A controversial restriction implemented by public authorities worldwide was the limitation of free exercise of religion or beliefs. Due to specific rituals, there was not enough time and (in some cases) openness to quickly adapt to the new epidemiological measures. An example of adaptation is found in the United Kingdom, where restricted religious activities were enforced only after faith leaders and government officials came up with a joint plan to enable the phased and safe reopening.

The anxiety generated by the pandemic and the emotional distress increased the risk of infection (Coughlin, 2012), so the religious participation particularly during these times is an important aspect. The access to religion has to be granted but in a modified form within a consensus elaborated by the medical community, government officials, and religious leaders (Coughlin, 2012). Healthcare professionals have to assume the role of counseling patients even in terms of religious practice and to proactively advise and teach the population on preventing measures in order not to restrict their access to religious manifestation but to make this process safer (Merry et al., 2020).

The constitutional control over the executive decision in the time of pandemic in countries that did comply at large with international standards of human rights, such as Germany (April 30), France (May 18) or the USA (May 29), have yet reminded the authorities that the limitation of freedom of religion or belief has to be non-discriminatory and proportionate with the greater good to be achieved, that is public health (Buchanan, 2020).

Nevertheless, decisions of the Constitutional Courts forced the governments to rethink cultural restrictions (including religious, entertainment, and scientific gatherings), but their trunked and rigid statement exposed the population to both social frustration and risk of infection. This phenomenon is described as the judicialization of politics (Rosanvallon and Goldhammer, 2008) or juristocracy (Closa, 2006): politicians, that are the very people that have the mandate to safeguard rights and freedom, tend to rely on judicial means when addressing public policy issues increasingly. Moreover, executive political decisions are more and more adjusted not by Parliaments, but by constitutional and/or administrative courts.

During the pandemic, all states regulated the associative dimension of the rights and freedoms or *forum externum*. According to the latest report of the Organization for Security and Co-operation in Europe (OSCE) on human rights during the COVID-19 pandemic (Organization for Security and Co-operation in Europe, 2020) most of the states have broken the rule of law, which is the foundation of international standards and legislation compatible with democracy, governing according to the rule by law.

5. Looking to the human lives through the global economic lens: two victims in a duel?

During the pandemic, the policymakers have faced a difficult decision: to choose between '*saving the people before saving the economy*,' or '*saving the economy before saving the people*' (Ozili and Arun, 2020). Various voices expressed that preventing deaths is far more important than losing some Gross Domestic Product (GDP) percent for some time (Wren-Lewis, 2020). Thunström et al. has concluded after analyzing this conundrum that the "*economic benefits of lives saved outweigh the value of the projected losses of GDP by about $5.2 trillion using a 3% discount rate and a 30-year planning horizon*" (Thunström et al., 2020). Thus, social distancing policies seem not to represent over-reactions at all.

With an argumentative optimism, the Directorate-General for Economic and Financial Affairs of the European Commission released in 2006 a model-based evaluation of the macroeconomic effects of a pandemic in Europe, concluding that '*although a pandemic would take a huge toll in human suffering, it would most likely not be a severe threat to the European macroeconomy*' (Jonung and Roeger, 2006).

There were some forecasts on the economic impact of COVID-19 pandemic, the best- and worst-case scenarios ranging from 0.75% to 6,7% GDP loss (Baldwin and Tomiura, 2020). The calculus depends on the length of the shutdown ranges from 4,5% (1,5 months closure) to 10,7% (4,5 months closure) (Fernandes, 2020). However, '*shutting down the economy, writes Cochrane, is not like shutting down a light bulb. It is more like shutting down a nuclear reactor. You need to do it slowly and carefully, or it melts down (…) A modestly long economic shutdown left alone could be a financial catastrophe*' (Cochrane, 2020). A 'V-shaped' scenario would fit if the epidemic remained a Chinese problem, but since it has become a pandemic, the crisis is likely to be 'U-shaped' (Baldwin and Tomiura, 2020).

In the face of this unexpected global threat, the European predictions of 2006 could be outdated and more optimistic than the reality. More voices underline that the world is living a different type of crisis than all the previous pandemics. Different benchmarks have been proposed to predict the effects of this pandemic both health and economic wise like large natural disasters, air disasters, acts of terrorism (Bonaccorsi et al., 2020; Goodell, 2020), but the reliability of these models is not satisfactory (Fernandes, 2020) since there are specific characteristics that make the situation unique. Interestingly, experts sustain that the historical comparisons with the Spanish Flu, the 2008 financial crisis, or with SARS pandemic are not valid. First, there is no correlation between health risk/mortality with the economic downturn (Fernandes, 2020). Then there is the level of integration due to globalization, and last, the unprecedented central position of China.

'*In the last two decades, China became the factory of the world*', according to G. Rishi (Baldwin and Tomiura, 2020). The Chinese global economic output was about 4% when we had the SARS epidemic broke out, while today 16-17% of the world's economy belongs to China (Voth, 2020), 11% of world trade, 9% of global tourism and over 40% of global demand for a series of commodities (Baldwin and Tomiura, 2020). To give an example, about 60% of the world's API (active pharmaceutical ingredients) were exported from China (Ozili and Arun, 2020).

The world is highly integrated, and since G7 economies, severely hit by COVID-19 pandemic, account for 60% of world supply and demand, 65% of world manufacturing imports and 41% of world manufacturing exports (Baldwin and Tomiura, 2020), the ripple effect is considerable. Then there is the global aspect of it, the fact that the most developed economies are affected, the global economic integration level is at a historical high, and there is also a simultaneous shock in both demand and supply (Fernandes, 2020).

In parallel with the spread of the pandemic, one can speak of an expansion of the economic crisis. The mechanisms of this *economic contagion* are based on the cross-border flows of financial capital, goods and services, expertise and work power, thus entangled webs would be a more appropriate model of representation, rather than concentric circles (Baldwin and Tomiura, 2020). The three main channels of the global impact are supply - significant chain disruptions; demand - in times of crisis, the consumption drops; and confidence - newspaper-based economic uncertainty (Baker et al., 2020; Baldwin and Tomiura, 2020).

6. Neglected special categories: the unsolved issues of homeless people and imprisoned individuals

While focusing on a large scale communication of hygiene methods and social distancing, with an increasing concern on elderly care facilities (Burlacu et al., 2020), there are particular groups of high-risk individuals that participate in the outbreak with few solutions to make the quarantine methods efficient for them. Although the community-centered CDC approach (Centers for Disease Control and Prevention, 2020) engages a coalition of

different local authorities ('*whole community approach*' including law enforcers, local government officials, and volunteers), homeless people seem to participate in an '*under the radar*' transmission (Maxmen, 2020) generating new spreading sources that are, at the very least, challenging to identify and contain.

Many of the homeless people experience simultaneous physical comorbidities and non-adherence to chronic treatment-conditions that make them candidates for severe forms of COVID-19, besides living in a conducive environment for the disease transmission (substance addiction and sharing needles, lack of hygiene, high smoking prevalence, and reduced lung health) (Wood et al., 2020). The most challenging aspect is the identification of their location - this, per se, being a controversial fact in the U.S. since legal regulations are stating that people cannot be punished for sleeping or living on public premises if no designated local facilities available (Tsai and Wilson, 2020).

So, there is a need to apply quarantine measures for homeless people, presuming that their identification and habitat premises are met. Obeying the general public measures of quarantine, shelters, and facilities has already diminished their capacity to meet the social distancing rule since recent data sustain the presence of asymptomatically ill patients in homeless shelters and infected personnel (Conway et al., 2020).

Public health measures need to address these issues with a maximum celerity since the outbreaks in homeless shelters are extremely hard to contain and proved to emerge from high positive rates of testing even though the patients were pre- or asymptomatic at the time. Seeing high rates such as 36 to 86% (Baggett et al., 2020; Tobolowsky et al., 2020) of positive patients in homeless shelters, invites the authorities to take '*punish-like*' methods. Even in these tough times, the methods restrict fundamental human rights in the absence of more community focused measures such as long-term paradigm shift of homeless people accommodation, healthcare access, and probably the most important of all-identification (Kirby, 2020).

While homeless people management during the COVID-19 outbreak faces challenges of identification and efficient quarantine premises, at the other end are imprisoned people for which physical distancing and close-contact avoidance is near to impossible, mainly due to the overcrowded facilities (posing a higher health risk even without the pandemic) (García-Guerrero and Marco, 2012).

Influenza outbreaks have been documented to spread within correction facilities (Chao et al., 2017) rapidly. Due to the obvious overwhelming of the prisons' medical facilities, the prevention and contention before a seeding-plot emerges into an outbreak are mandatory issues (Maruschak et al., 2009) to be regulated by local or national law.

With almost 30 million inmates throughout the world, prisons impose direct attention from the authorities as they can rapidly become sources for the community spread. Further restrictions on inmates will most likely reinforce the fact that the most disproportional effect of the COVID-19 pandemic impacts the most disadvantaged people (Kinner et al., 2020).

7. Total eclipse of ... (all) other diseases: reshaping epidemiology and management of other significant diseases under the influence of COVID-19 pandemic

During the Ebola outbreak in West Africa, healthcare resources were increasingly allocated to the Ebola response, causing a serious decrease of hospital admissions and a marked rise of deaths from many other diseases, adding $18.8 billion to the outbreak's estimated cost (Bedford et al., 2019). Concordantly, a recent preliminary report shows the indirect effect of this pandemic on deaths from other conditions. The number of excess all-cause deaths when compared with previous years is 28% higher than the official tally of COVID-19-reported deaths in United States, implying a significant increase in deaths from other serious conditions during COVID-19 pandemic (Weinberger et al., 2020).

Two main disruptions to health services were generated by the COVID-19 pandemic: a) a suffocation of the health system through cases overburdening, and, b) regular appointments severely restricted. Moreover, lockdown measures place significant limitations on prevention, diagnosis, treatment and disease monitoring, which is expected to increase the annual number of other infectious diseases as well as deaths caused by both communicable and non-communicable disorders over the next years.

According to the WHO, more than half of the countries have partially or completely discontinued routine checks for hypertension treatment; 49% for treatment for diabetes and diabetes-related complications; 42% for cancer treatment, and 31% for cardiovascular emergencies (World Health Origanization, 2020b). The assistance for other communicable diseases was also being neglected. Measles vaccination campaigns are currently delayed, while services for other infectious diseases are especially disrupted in low-income countries where the pressure on system's overburdening can quickly reach a breaking point (Deutsche Welle, 2020).

Data from low income settings evidence that deaths due to HIV, tuberculosis, and malaria over 5 years could increase by up to 10%, 20%, and 36%, respectively, compared with no COVID-19 pandemic (Hogan et al., 2020). These disruptions could lead to a loss of life-years over 5 years that is of the same order of magnitude as the direct impact from COVID-19 in places with a high burden of malaria and large HIV and tuberculosis epidemics. A model assessing the impact of the pandemic and related measures on the tuberculosis response in 20 high-burden countries (accounting for 54% of the global TB burden) estimated that a 3-month lockdown and a lengthy 10-month reestablishment of services could lead to 6.3 million additional cases of tuberculosis and 1.4 million additional tuberculosis deaths over the next five years. This result could erase 5 years of progress towards tuberculosis eradication (Ong and Goletti, 2020).

Another important issue that can contribute to the negative impact on other major diseases is the unavailability of goods and medicines, especially in low-income countries, due to restrictions on air traffic and border closures. Tuberculosis and HIV testing laboratories have now been allocated for COVID-19 testing to a large extent, generating a serious shortage in testing for other major infectious diseases (Deutsche Welle, 2020).

8. Conclusions

One of the main issues raised by the theoretical and the practical exaggeration of epidemiological measures (e.g., quarantine measures and physical distancing) must be the overall efficiency. In the late 1980s, while confronting with the HIV epidemics, Cuban authorities decided mass testing of all adult population and quarantined seropositive persons along with their close relatives in colonies with some civil rights restricted. Even though these harsh methods supposable prevented 4000 new infections, they did not influence the long term the prevalence of AIDS, the economic burden on the country's budget increased with almost 5%, and a significant number of individuals were wrongfully quarantined due to false-positive results (Pérez-Stable, 1991).

During the pandemic and the following period, the preservation of human rights must prevail in epidemiological methods. However, people need to be sheltered from discrimination, from the absence of basic needs (such as food and non-COVID-19 healthcare assistance), and also from the economic barrier of testing for SARS-COV-2 infection or procuring medicine, so that the pandemic crisis does not materialize in a human rights crisis (Sultan, 2020). The latest WHO Strategies of infectious disease outbreak contention became community-centered with an emphasis on active community engagement, which implies efficient communication by all possible channels, empathically combating the deniers and proactively promoting hygiene. As efficient as promised, the quarantine methods are a sudden burst of authorities' 'superpowers' and may degenerate in restricting the freedom of people. The thin line between having the misfortune of getting sick and proactively dismissing the existence of the disease or engaging in a conscious act of infecting others is a shallow premise to punish all individuals.

Author contributions

AB and RCD designed this work. All authors drafted the paper. AB and RCD critically revised this work. All authors gave final approval.

Acknowledgements

There are no acknowledgments to disclose.

Funding

No external funding was used for this manuscript.

Conflict of interest

The authors declare no conflict of interest.

Submitted: December 05, 2020

Revised: December 09, 2020

Accepted: December 21, 2020

Published: December 30, 2020

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