



DILEMMAS OF A PHYSICIAN IN TIMES OF COVID-19

A viral pandemic was long been expected, fate, or chance, but it finally occurred. It arrived and disrupted most of the human activities, the practice of medicine one of them. Indeed, apart from trying to understand the fundamental aspects of its pathophysiology and epidemiology, it imposes to clinicians the duty of diagnosing and taking care of the affected patients in an unprecedented way, affecting survival, sweeping many of the established ways of knowledge, and having to implement treatments without a very solid foundation.

The genetic structure of the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is recognized and its high rate of transmission well documented. We are aware of the potential severity of the disease characterized by inflammation, respiratory distress, hypercoagulability, and multiple organ failure.

Diagnosis can be achieved with the use of molecular biology techniques, such as PCR, but questions linger as to the right time for its application, waiting for symptoms or signs to appear? Testing contacts of a positive case? If negative, when to repeat the test? As time goes by, I am confident that we will solve these questions. We shall also learn about the use and indications of serologic tests. But once diagnosed, what treatment protocol is the best? So far, three scenarios are considered in most countries, the asymptomatic case that should be isolated at home or alternative place, the symptomatic one in need of hospitalization in the ward, and the patients requiring intensive care unit attention.

Treatment options include antiviral drugs, some of them approved, and some others under investigation, such as remdesivir, lopinavir/ritonavir, chloroquine, nafamostat, ribavirin, oseltamivir, penciclovir/acyclovir, ganciclovir, favipinavir, and nitazoxanide, each one with a proposed anti-infective mechanism.

Other proposed treatments are centered on the pathogenesis of the cytokine storm, an excessive immune response elicited by coronavirus disease (COVID-19), and include among others, interferon-alpha, corticosteroids, interleukine-1 antagonists (e.g., anakinra), interleukin six antagonists (e.g., tocilizumab and siltuximab), tumor necrosis factor blockers, chloroquine, ulinastatin, oxidized phospholipids, sphingosine-1-phosphate receptor-1 agonist, stem cell therapies, or plasma exchange and plasma transfusion. As clotting dysfunction, including platelet activation and artery dysfunction, is recognized mainly in severe cases of COVID-19, the use of antithrombotic therapy with low molecular weight heparin has been protocolized in several institutions.

We are also witnessing the use of “off-label” prescribing of drugs supported by decades of safety data and targeted toward the underlying pathophysiology of COVID-19, such as colchicine, pirfenidone, ivermectin, cimetidine or famotidine, dipyridamole, fenofibrate or bezafibrate, or sildenafil citrate.

As physicians, we are facing a storm of treatments for COVID-19. We need to impose close monitoring of their effects to ascertain their effectiveness and better learn how to deal with the disease. For this

purpose, well-controlled research protocols are fundamental. We need to go beyond the basics to develop a SARS-Cov-2 vaccine and specific treatments. These issues necessarily require a challenging global

partnership environment, where science and innovation applied to health care are essential. There is a golden opportunity for progress for patients and physicians.

DAVID KERSHENOBICH

General Director, Instituto Nacional de Ciencias Médicas y Nutrición Salvador Zubirán, Mexico City, Mexico

***Corresponding author:**

David Kershenobich

E-mail: david.kershenobichs@incmnsz.mx

Received for publication: 14-05-2020

Approved for publication: 14-05-2020

DOI: 10.24875/RIC.20000218