

Cellular and Molecular Approaches to COVID-19: “Road to Perdition” or “The Shawshank Redemption”

COVID-19 challenge was one of the greatest ones in the last decades. It challenged not only the health care system but also many socio-economic aspects of human life. From the beginning of the story, there were several major concerns; including etiology, virology, pathology, and pathophysiology, the method of transmission, prevention, vaccination, detection, treatment, rehabilitation, etc (1).

There was a general ambiguity in nearly every field; this was a great and inexperienced global dilemma. Everybody tried to do something; from Hydroxychloroquine and Azithromycin to claims to accept or reject the need for face masks. However, there was something vivid: though there were many similarities with its ancestors including the Spanish flu, *COVID-19 was born in the era of cellular and molecular medicine*. From the early days, the new cellular and molecular medicine paradigm glimpsed as a potential solution for nearly every aspect of the disaster, including the Real-time Polymerase Chain Reaction (RT-PCR) tests for the detection of viral infection (1,2).

Many different pharmaceuticals were applied as repurposed drugs in the hope to overcome the disease, with their potential cellular and molecular explanations; though nearly all of them had considerable “Pro & Con”s. Meanwhile, from the first days of the virus outbreak, it was nearly clear that the most important bottleneck in controlling mortality would be the critical care of the patients. Again, this step was associated with different therapeutic approaches considering different outcome goals; from compassionate therapies to regenerative medicine approaches. Different ventilation support

methods (invasive versus noninvasive), anti-inflammatory approaches, antivirals, etc. are just examples of a large list of medical efforts to overcome the disease; though many have failed to gain success (3,4).

The Journal of Cellular and Molecular Anesthesia started its commitment from the first days of the pandemic; trying to publish original researches as well as review articles, case reports, anecdotes, and letters, to do its commitment. Starting from the early weeks after the pandemic, the first articles of the Journal were published in the first week of April; a process now followed in the last issue of 2020.

COVID-19 pandemic was a great challenge, however, it could open new windows for us, including but not limited to the breakthrough to produce mRNA vaccines. We might be encountered with other viral pandemics; however, lessons from the current pandemic was possibly a “*Redemption*” than “*Perdition*”.

References

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