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Sars-cov-2 pneumonia: receptor binding and lung immunopatholog**Jose Otavio Costa Auler Junior, Gustavo Rosa Gameiro***University of Sao Paulo Medical School, São Paulo, São Paulo, Brazil*

In December 2019, a new type of human coronavirus was identified and named severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2), due to its similarity to severe acute respiratory syndrome coronavirus (SARS-CoV). So far, it is still spreading all over the globe and patients have been treated many times by non-specialists. The current pandemic of COVID-19 caused millions of deaths and healthcare professionals struggle to properly manage infected patients. It is urgent to determine the main vias through which SARS-CoV-2 induces acute respiratory distress syndrome (ARDS). In this context, we performed a review of articles that approach physiopathological features of SARS-CoV-2 pneumonia. Search strategy and selection criteria: references for this review were identified through searches of PubMed for articles published any date before July, 2020, by use of the terms "SARS-CoV-2", "pneumonia", "ARDS", "ACE2", "immunology" and "pathology". Articles resulting from these searches and relevant references cited in those articles were reviewed. Articles published in English were included. The present review summarizes information about SARS-CoV-2 receptor binding dynamics and intricacies, lung autopsy findings, immune response patterns, evidence-based explanations for the immune response, and COVID 19-associated hypercoagulability. Focusing on these specific topics should help physicians to understand rationale of future vaccine, why corticosteroids are efficient in severe forms and why early anticoagulant therapy is recommended.

Biography

Prof. Dr. Jose Otavio Costa Auler Jr is the full professor of Anesthesiology and Critical Care of the University of Sao Paulo Medical School. He was Chair of the World Health Summit in 2014 and the Former Dean of University of São Paulo Medical School. He is currently the chief of the ICUs of all the Hospital das Clinicas of University of Sao Paulo complex, the largest hospital in Latin America.

Gustavo Rosa Gameiro is an MD graduated from University of Sao Paulo Medical School. He works as a researcher fellow of the Anesthesiology and Critical Care Department of the University of Sao Paulo Medical School.