

## Tocilizumab as a treatment for 'cytokine storm syndrome in covid-19: A case report

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### Abstrak

Coronavirus disease 19 (COVID-19) which is caused by Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2), has been a problem worldwide, particularly due to the high rate of transmission and wide range of clinical manifestations. Acute respiratory distress syndrome (ARDS) and multiorgan failure are the most common events observed in severe cases and can be fatal. Cytokine storm syndrome emerges as one of the possibilities for the development of ARDS and multiorgan failure in severe cases of COVID-19. This case report describes a case of a 53-year-old male patient who has been diagnosed with COVID-19. Further evaluation in this patient showed that there was a marked increase in IL-6 level in blood accompanied with hyperferritinemia, which was in accordance with the characteristic of cytokine storm syndrome. Patient was treated with tocilizumab, a monoclonal antibody and is an antagonist to IL-6 receptor. The binding between tocilizumab and IL-6 receptors effectively inhibit and manage cytokine storm syndrome. Although this case report reported the efficacy of tocilizumab in managing cytokine storm syndrome, tocilizumab has several adverse effects requiring close monitoring. Further clinical randomized control trial is required to evaluate the efficacy and safety of tocilizumab administration in participants with various clinical characteristics and greater number of subjects.