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# Early prevention of Hypoxemia can avert the Cytokine storm in COVID-19

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In COVID-19, an inflated pro-inflammatory response, known as cytokine storm (CS). The anti-inflammatory system's CS – intermediated response is an ineffective immunological control, leading to towel damage, multiorgan failure, acute respiratory torture pattern (ARDS), and death. Cytokine- intermediated lung endothelial and epithelial cell injury may damage the integrity of the blood – air hedge, promoting vascular permeability, alveolar edema, infiltration, and the presence of seditious cells, starving the blood of oxygen, causing hypoxemia. Hypoxemia triggers factors like HIF-1α, which regulates essential cellular processes, including cell proliferation, metabolism, and angiogenesis. HIF-1α is actuated during the vulnerable response and plays an necessary part at the inflammation point by converting pro-inflammatory cytokine product, eventually performing in CS. COVID-19 presents mildly in utmost cases. Short and slight ages of hypoxemia start indeed during the first incarnation of patient cough and/ or briefness of breath. Hence, the medical-scientific community desperately tries to find treatments to forestall CS. Hypoxemia is a decisive triggering factor for CS in COVID-19. CS generates fresh hypoxia in apkins and organs, leading to a chain response between hypoxemia and CS. Thus, a more straightforward treatment strategy is to give oxygen force as early as possible, when the first respiratory symptoms begin, to help ages of hypoxemia outside the ICU. We've suggested using CPAP. Other styles similar as Low or High- inflow nasal oxygen HFNO remedy would give the necessary oxygen at the lung alveoli to help gas exchange impairment, avoid hypoxemia, and thus, forestall CS.

**Recent publications**

1. Machado-Curbelo C, Gonzalez-Quevedo A. Hypoxemia and Cytokine Storm in COVID-19: Clinical Implications. MEDICC Review July 2021, Vol 23, No 3;https://doi.org/10.37757/MR2021.V23.N3.10.

2. Machado C, Brock JB, Machado Y, Chinchilla M. An early prevention of hypoxemia in COVID-19 patients complaining obstructive sleep apnea. Sleep Medicine 2021; 85(2);doi:10.1016/j.sleep.2021.05.045.

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