

Netosis -A double-edged sword in the Pathogenesis of LONG COVID

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Abstract

The emergence of COVID-19 as a global pandemic has had far-reaching effects on the health of individuals worldwide. Although there has been a decrease in the severity of the disease, there is a growing concern about the long-term impact of COVID-19 on the health of individuals, particularly cardiovascular complications, known as Long-COVID, which can significantly increase morbidity and mortality rates in people recovering from COVID-19 in the recent past. The severity of COVID-19 has been linked to various factors, including the role of neutrophils and neutrophil extracellular traps (NET). These extracellular webs, composed of chromatin, microbicidal proteins, and oxidant enzymes, are released by neutrophils to fight infections. However, if not properly regulated, NETs can lead to thrombo-inflammatory states and microangiopathy in the body, resulting in complications such as sepsis, thrombosis, and respiratory failure. Understanding the detailed pathophysiology and association of NETs with the prognosis of COVID-19 infection is crucial for future implications and management. The purpose of this review is to analyze the potential contribution of NETosis in the pathophysiology of COVID-19 and its subsequent complications apart from its beneficial effect. This may provide insight into potential therapeutic interventions for COVID-19 patients.

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