

LUNG ABSCESS IN COVID-19 INFECTION

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Introduction

Severe acute respiratory syndrome, produced by SARS-CoV-2, exerts a significant global impact, causing severe challenges in society and healthcare. Empirical data on how patients with various respiratory pathologies interact with this virus are limited.

Keywords

lung abscess, immune response, SARS-CoV-2, COVID 19

Purpose

To evaluate the impact of SARS-CoV-2 infection on the immune system, as well as the susceptibility of SARS-CoV-2 infection in patients with active or antecedents of lung abscess (LA), in order to interpret its clinical significance.

Material and methods

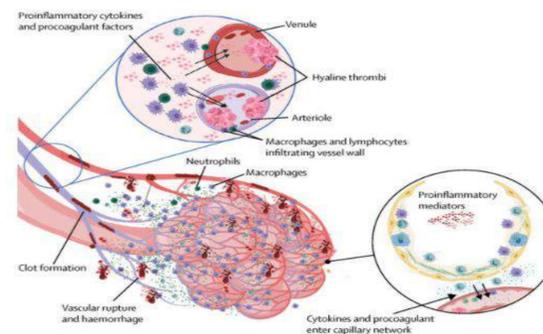
Using Google Scholar search engine and the PubMed, Research for Life and Medline databases, advanced literature search was conducted. Article selection criteria included the immune system’s response in COVID-19 infection in patients with respiratory pathology, including lung abscess. 24 articles published up to 25 May 2020 were selected.

Results

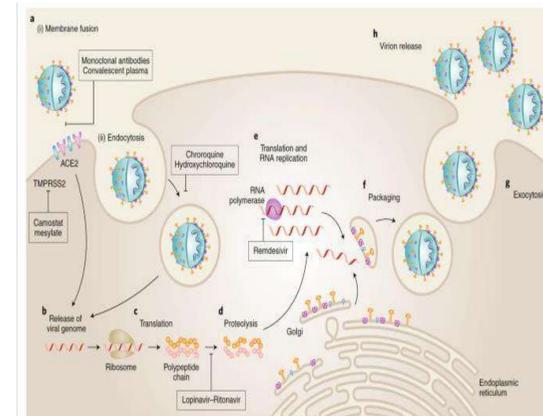
Various mechanisms of SARS-CoV-2 infection and COVID-19 immunopathogenesis have been unraveled in the context of lung abscess patients. The control of the inflammatory response may be as important as controlling viremia.

Treatment of viral inhibition and the regulation of hyper- or hypoergic immune responses may act synergistically to stop the progression of the disease in several pathogenetic links. Further studies are needed on the host immune response to SARS-CoV-2, in the context of chronic or acute suppurative lung disease, including a detailed investigation on determining factors in this regard.

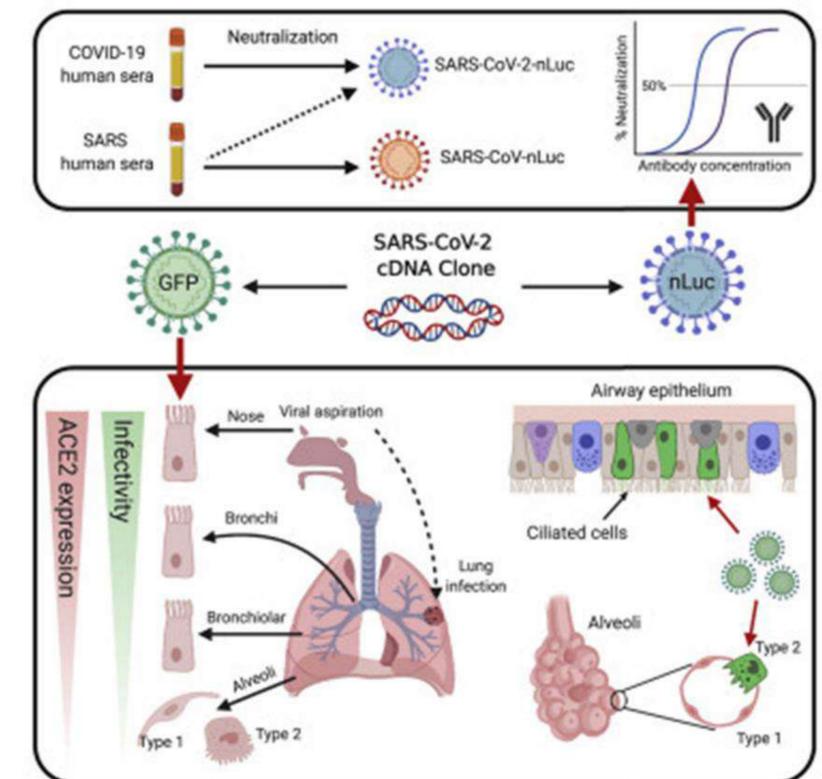
Immune mechanisms of pulmonary intravascular coagulopathy in COVID-19 pneumonia [Dennis McGonagle et. al. 2020]



Immune-mediated approaches against COVID-19 [Helena F. Florindo, 2020]



SARS-CoV-2 Reverse Genetics Reveals a Variable Infection Gradient in the Respiratory Tract [Yixuan J.Houet. et. al. 2020]



Conclusions

Patients with a history of LA present a higher susceptibility to SARS-CoV-2 infection due to impairment in nonspecific and specific immune elements, the deterioration of vascular architectonics and poor oxygenation in the post-abscess scar region, and lifestyle