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Transmembrane serine protease 2 and angiotensin-converting enzyme 2 anti-inflammatory receptors for COVID-19/inflammatory bowel diseases treatment

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Abstract

Inflammatory bowel diseases (IBD) refer to a subgroup of chronic, progressive, long-term, and relapsing inflammatory disorders. IBD may spontaneously grow in the colon, and in severe cases may result in tumor lesions such as invasive carcinoma in inflamed regions of the intestine. Recent epidemiological reports indicate that old age and underlying diseases such as IBD contribute to severity and mortality in patients with coronavirus disease 2019 (COVID-19). Currently, the ongoing COVID-19 pandemic caused serious morbidity and mortality worldwide. It has also been shown that the transmembrane serine protease 2 is an essential factor for viral activation and viral engulfment. Generally, viral entry causes a 'cytokine storm' that induces excessive generation of proinflammatory cytokines/chemokines including interleukin (IL)-6, IL-2, IL-7, tumor necrosis factor-α, and interferon-γ. Future research could concentrate on developing inflammatory immunological responses that are efficient to encounter COVID-19. Current analysis elucidates the role of inflammation and immune responses during IBD infection with COVID-19 and provides a list of possible targets for IBD-regulated therapies in particular. Data from clinical, *in vitro*, and *in vivo* studies were collected in English from PubMed, Google Scholar, Scopus, and the Cochrane library until May 2021.

Keywords: COVID-19; Immunological responses; Inflammation; Inflammatory bowel diseases; Pro-inflammatory; Transmembrane serine protease 2.

Figures

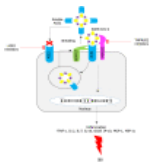

Figure 1 Coronavirus disease 2019 induced inflammatory...

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