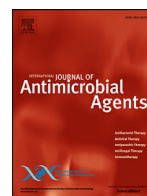




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Letter to the Editor

Tocilizumab in COVID-19: Beware the risk of intestinal perforation

Dear Editor,

Zhang et al. [1] discussed the use of tocilizumab, a monoclonal anti-IL-6 receptor antibody, in the treatment of cytokine release syndrome associated with severe COVID-19. Although tocilizumab may be beneficial in selected COVID-19 patients with a counter-productive hyperinflammatory phenotype, the efficacy and safety of such treatment is unknown. Tocilizumab is primarily used for rheumatological conditions, including rheumatoid arthritis and giant cell arteritis. Rheumatologists have extensive experience using tocilizumab; however, this may not be the case for intensivists, infectious disease specialists, and other physicians treating critically ill COVID-19 patients. Therefore, we would like to highlight a rare but feared complication of tocilizumab: intestinal perforation [2]. The mechanism for intestinal perforation in patients receiving tocilizumab is not fully understood, but prior diverticulitis has been noted as a risk factor [2].

The human host receptor of SARS-CoV-2 is angiotensin-converting enzyme 2 (ACE2), which is highly expressed in the intestines [3]. Intestinal viral replication is likely considering the ACE2 expression, gastrointestinal symptoms and presence of SARS-CoV-2 RNA in fecal samples [4,5]. Some gastrointestinal symptoms, such as abdominal pain, are associated with increased disease severity [5].

Furthermore, critically ill COVID-19 patients may have altered hemodynamics, potentially leading to intestinal hypoperfusion that can compromise intestinal mucosal integrity. More studies are required to evaluate whether these variables influence the risk of intestinal perforation with tocilizumab in critical COVID-19 cases; however, clinicians should be aware of the potential for this adverse event. Lastly, as tocilizumab attenuates the acute phase response, intestinal perforation may not necessarily cause significant C-reactive protein (CRP) elevation and may initially go unnoticed in sedated and ventilated patients.

Declarations

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