Tocilizumab for the Treatment of Severe COVID-19

Rand Alattar, Tawheeda B. H. Ibrahim et al.

Journal of Medical Virology 2020
https://doi.org/10.1002/jmv.25964

ABSTRACT

Introduction: Tocilizumab, an nterleukin-6 inhibitor, may ameliorate the inflammatory manifestations associated with severe COVID-19 and thus improve clinical outcomes.

Methods: Retrospective review of patients with laboratory-confirmed severe COVID-19 who received tocilizumab and completed 14 days of follow up.

Results: Twenty-five patients were included, median age was 58 years (IQR 50–63) and the majority were males (92%). Co-morbidities included diabetes mellitus (48%), chronic kidney disease (16%) and cardiovascular disease (12%). Fever (92%), cough (84%) and dyspnoea (72%) were the commonest presenting symptoms. All patients received at least two concomitant investigational antiviral agents.

Median oral temperature was on Day 1, Day 3 and Day 7 was 38.0oC, 37.3oC (P 0.043) and 37.0oC (P 0.064), respectively. Corresponding median CRP was 193 mg/L, 7.9 mg/L (P <0.0001) and <6 mg/L (P 0.0001). Radiological improvement was noted in 44% of patients by Day 7 and 68% by Day 14. Nine patients (36%) were discharged alive from ICU and three (12%) died. The proportion of patients on invasive ventilation declined from (84%) at the time of tocilizumab initiation to 60% on Day 7 (P 0.031) and 28% on Day 14 (P 0.001). The majority (92%) of patients experienced at least one adverse event. However, it is not possible to ascertain which adverse events were directly related to tocilizumab therapy.

Conclusion: In patients with severe COVID-19, tocilizumab was associated with dramatic decline in inflammatory markers, radiological improvement and reduced ventilatory support requirements. Given the study's limitations, the results require assessment in adequately powered randomized controlled trials.