

Review of: "Tocilizumab Plus Corticosteroid in Elderly Patients Hospitalized With COVID-19 Pneumonia: A Retrospective Cohort Study"

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Potential competing interests: No potential competing interests to declare.

Thank you for the invitation for review of the above Study.

At the outset I would like to congratulate the authors to have looked into the outcomes with Tocilizumab plus Steroids in elderly patients (Mean age 78 years).

We published a similar study however, we looked at all age groups.

Alex R, Gulam SM, Kumar K. Real-Life Use of Tocilizumab in the Treatment of Severe COVID-19 Pneumonia. *Adv Virol.* 2022 Jun 9;2022:7060466. doi: 10.1155/2022/7060466. PMID: 35721667; PMCID: PMC9203205.

In our analysis, patients who were mechanically ventilated at the time of administration of TCZ had a significantly higher risk of death by day 28. In both survived and improved groups, younger patients had better outcomes than older patients. Patients who received TCZ earlier during therapy from the onset of symptoms had better survival outcomes.

There is enough evidence which has accumulated and presently Tocilizumab plus Corticosteroids has become the standard treatment for moderate to severe COVID-19 infections. Most data shows favourable results in younger patients as compared to older population.

I want to highlight three important point which are very relevant and may have impacted the results.

1. Timing of Tocilizumab: It is quite evident that Timing of Tocilizumab play is great role in deciding the outcomes. Giving Tocilizumab early in the course before the cytokine storm has established gives better results. In the analysis, Authors have not provided information on the median day when Tocilizumab as administered. Delaying of administration of Tocilizumab could have let to poorer outcomes in the Treatment Group as they probably had severe disease and got selected for Tocilizumab Inj.
2. Tocilizumab Dose and Repeat dose: The dose used in the current study is lower than what is usually recommended. Therefore, one cannot exclude beneficial effects when the proper recommended dose was not used.
3. Risk of Secondary Infection: In our study the incidence of secondary bacterial infection was very low. The outcomes with respect to Secondary Infection over all depends on Patients age and comorbidities as well as infection control practices in ICU. Most places with good infection control practices help prevent secondary infection and can improve

outcomes.

Overall the results of no benefit in older patients with severe COVID—19 (Hypoxemia and High CRP) with TCZ plus Corticosteroids vs Corticosteroids alone is an observation in many previously published studies. Other than the above caveats, the study has highlighted and added evidence to a valid point.

Regards,

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