Category :**Sepsis: biomarkers**

A216 - ***Cytokine storm in covid-19: experience at an icu in northern mexico***

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Introduction:

Mexico has been one of the hardest hit countries in the world by the ongoing COVID-19 pandemic. Death toll estimates by the John Hopkins University put the country-wide death rate at 9.4%. Multiple factors have an influence on the outcome in COVID-19, with one of such being the "Cytokine Storm". Several tools have been created to detect this condition, incluiding Hscore and serum levels of biomarkers, but more data is needed to assess their role and significance in the critically ill patient.

Methods:

We performed a single center retrospective descriptive transversal study at an ICU in a dedicated COVID-19 hospital. We recruited all severe COVID-19 confirmed adult patients with serum Interleucin-6 levels on admittance,with invasive mechanical ventilation requirements, starting March 2020 and until September 2020. Afterwards full laboratory and demographic data was collected, Hscore was calculated and put through statistical analysis with comparison between survivors at end of the follow up versus not survivors.

Results:

A total of 820 patients with PCR-confirmed COVID-19 were identified, of which 130 required invasive mechanical ventilation during their stay. Of that group 123 patients had interleukin-6 levels screened on admittance. Both survivor and not survivor groups had similar demographic and laboratory parameters, with a non-significant difference in Hscore, ferritin and IL-6 between the groups. A positive significant association was found with Interleukin-6 levels and length of stay in the hospital (p=0.001).

Conclusion:

Cytokine storm as such diagnosed by Hscore seems to have no significant association with survival on a invasive mechanical ventilation population with COVID-19. Interleukin-6 is strongly associated with a lengthened hospital stay.

References:

Longo et al, N Engl J Med; 383:2255-2273, 2020
https://coronavirus.jhu.edu/data/mortality, 2021