

# USE AND EFFICACY OF TOCILIZUMAB IN PATIENTS WITH SEVERE COVID-19 PNEUMONIA

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## Background and importance

Tocilizumab is an anti-human IL-6 receptor monoclonal antibody used in treatment of Cytokine-Release Syndrome in patients with pneumonia associated with Coronavirus-disease. Despite the data from COVACTA-study, tocilizumab continues to be gold standard for patients in our center.

## Aim and objectives

- 1.-Describe use of tocilizumab in first peak versus second peak of the SARS-CoV-2 pandemic.
- 2.-Describe results of use of tocilizumab in both situations.

## Material and methods

All patients treated with tocilizumab were included for the study periods: 1st peak (March-June 2020) and 2nd peak (August-present 2020). Demographic and clinical variables have been collected. Data obtained from electronic medical record and prescription application.

## Conclusion and relevance

In 1st peak, tocilizumab was prescribed to more serious patients: admitted to ICU, higher FINE score and aggressive support therapy. In addition, it was prescribed with a higher D-Dimer. Doses and number of administrations were higher in first peak too. New scientific evidence led to the use of different concomitant treatments in 2nd peak: corticosteroids (2nd peak dexamethasone versus 1st peak methylprednisolone) and antiviral therapy (only remdesivir in 2nd peak). In 2nd peak, hospital and ICU stays were shorter, probably because tocilizumab was used in less serious patients. Despite this, no differences in mortality were observed. Study limitation: sample size.

## Results

65 patients included. 1st peak: 36 patients (55,38%) vs 2nd peak: 29 patients (44,62%)

1st-peak	2nd-peak	
Median Age (years)	64,8	63
Sex		
Female	5(13.9%)	4(13.8%)
Male	31(86,1%)	25(86,2%)
Respiratory support at prescription time	36(100%)	29(100%)
Mechanic-ventilation(MV)	19(52.7%)	2(6.7%)
VMASK(30-60%)	8(22,2%)	9(31%)
Nasal-cannula	3(8.3%)	7(24.13%)
VMASK reservory	8(22.2%)	10(34.48%)
High-flow-oxygen	0	1(3.44%)
PaO2/FiO2	125,8(N=26)	158,3(N=22)
Median days-hospitalization	37	12
Median days-ICU	14	9
Deceased-Day-28	11(30.5%)	9(31.%)
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VM-Day-28	2(5.5%)	1(3.4%)
Oxygen-support-Day-28	6(16,6%)	1(3,4%)
No oxygen-day-28	2(5.5%)	2(6.7%)
Not hospitalized-day-28	15(41.7%)	16(55.2%)
Doses administered(mean)	1,5	1,1
Mean D-Dimer prior to administration(ng/ml )	6401	2436
Mean Ferritin prior to administration(ng/ml )	1642	1904
Median PCR prior to administration(mg/L)	346	132

