

# EVALUATION OF THE EFFECTIVENESS OF EARLY ADMINISTRATION OF TOCILIZUMAB IN PATIENTS WITH COVID-19

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**Tocilizumab** has been positioned since the start of COVID-19 pandemic as an effective drug to treat cytokine release syndrome, which causes acute respiratory distress in patients with SARS-COV2 pneumonia. Throughout these months, clinical protocols have been developed that improve the effectiveness of the drug, introducing it at the onset of symptoms.

## Aim and objective

The objective of this study is to check whether the paradigm shift in treatment with **tocilizumab** between the first and second-COVID19-wave, introducing it at the beginning of symptoms, has led to an improvement in its effectiveness.

## Materials and Methods

**DESIGN:** Retrospective observational study conducted between 03/03/2020-10/15/2020

**POBLATION:** patients with COVID-19 confirmed by PCR, treated with intravenous tocilizumab in a first-level hospital.

### VARIABLES\*:

- days from hospital admission to administration of the drug
  - oxygen therapy requirement
  - ICU stay and survival
- \*these parameters were collected at the first-COVID19-wave (until May 31, 2020) and second-COVID19- wave (31 May-15 October)

### STATISTICAL ANALYSIS:

The differences between quantitative and qualitative variables were analyzed, applying the t-Student and chi-square ( $p \leq 0.005$ )

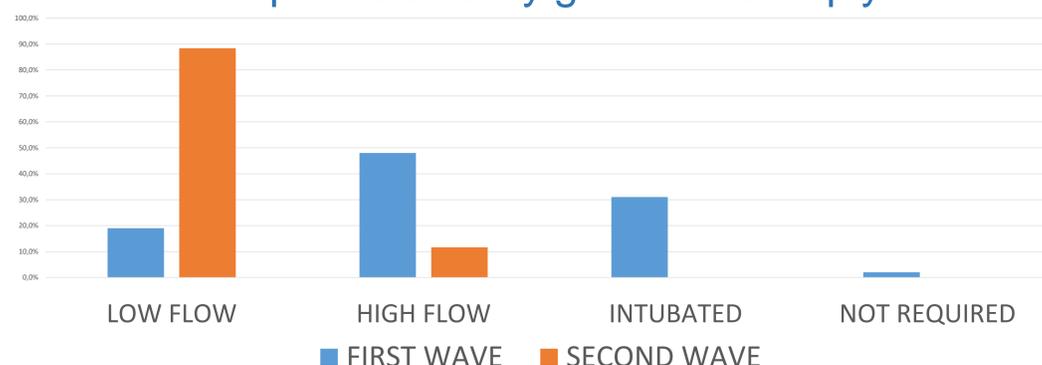
## Results

### Poblacion

**Distribution:** tocilizumab was administered to 167 patients (131 men) **Average age (SD):** 58.9±12.6 years

	nº patients	Days (average) until administration	Days (average) of hospital stay	ICU stay (% patients)	Mortality rate (%)
FIRT WAVE	100	5±4.4	22.9±15.9	39.0	28%
SECOND WAVE	67	2±2.2	13.1±10.4	10.1	11.6%

### Required oxygen therapy



## Conclusions

This study shows that **early administration of tocilizumab improves response to treatment**, with increased survival, decreased ICU income and shorter hospital stay time for patients given the drug in the second-COVID19-wave compared to the first. Inflammatory parameters, such as RCP wasn't included and it might be into account as a limitation factor. Further studies were needed.