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Background and Importance

Pharmacotherapeutic management of SARS-CoV-2 infection from the beginning of COVID-19 pandemic to now has evolved in accordance with research and clinical experience, improving treatments and thus clinical outcomes.

Aim and Objectives

To analyze the changes in the epidemiology and prevalence of use of the different treatments used against COVID-19 and its clinical outcomes throughout the pandemic.

Materials and Methods

- Retrospective unicenter study in a tertiary hospital from March 2020 to May 2021
- COVID-19 patients admitted to our hospital >48h were identified through the electronic medical records (SAP Medication[®]).
- Demographic data (age and sex), clinical features (number of admissions/month in ICU or regular wards, mean length of stay and deaths including those <48h), were evaluated. Monthly drug consumption of remdesivir, hydroxychloroquine, lopinavir/ritonavir, beta-interferon, tocilizumab, baricitinib, anakinra, corticoids (dexamethasone 6mg/day and >20mg/day, methylprednisolone >40mg/day, prednisone >30mg/day, hydrocortisone >100mg/day) and antibiotics, were recorded.

Results

N = 4406 admitted COVID19 patients

N = 3723 met inclusion criteria



Table 1. Patients' characteristics

Variable	Total
Age (years), mean ± SD	64.0 ± 4.0
Male sex (%)	2191 (59.5)
Length of ICU/semicritical stay (days), mean ± SD	26.2 ± 3.4
Length of regular ward stay (days), mean ± SD	8.7 ± 1.6
Admissions (%)	
- ICU	745 (20.0)
- Semicritical care	198 (5.3)
- Regular ward	2780 (74.7)
In-hospital deaths (%)	496 (11.6)

- >80% of inpatients took lopinavir/ritonavir and hydroxychloroquine at the beginning, but later on the consumption was drastically reduced, according to scientific evidence.
- Remdesivir** stood out as antiviral and **dexamethasone**, **tocilizumab** and **baricitinib** as anti-inflammatory drugs.
- The most used antimicrobials were **ceftriaxone** (45,5%) and **azithromycin** (34,9%).

Conclusion and Relevance

- The use of drugs against COVID-19 during the pandemic has shown a clear evolution over the months towards more standardized treatments, with remdesivir as an antiviral and dexamethasone, tocilizumab and baricitinib as anti-inflammatory drugs standing out in our center.
- Homogenization and standardization of COVID-19 treatments were a reflection of the accumulated scientific evidence.

Monthly evolution of COVID-19 treatment usage

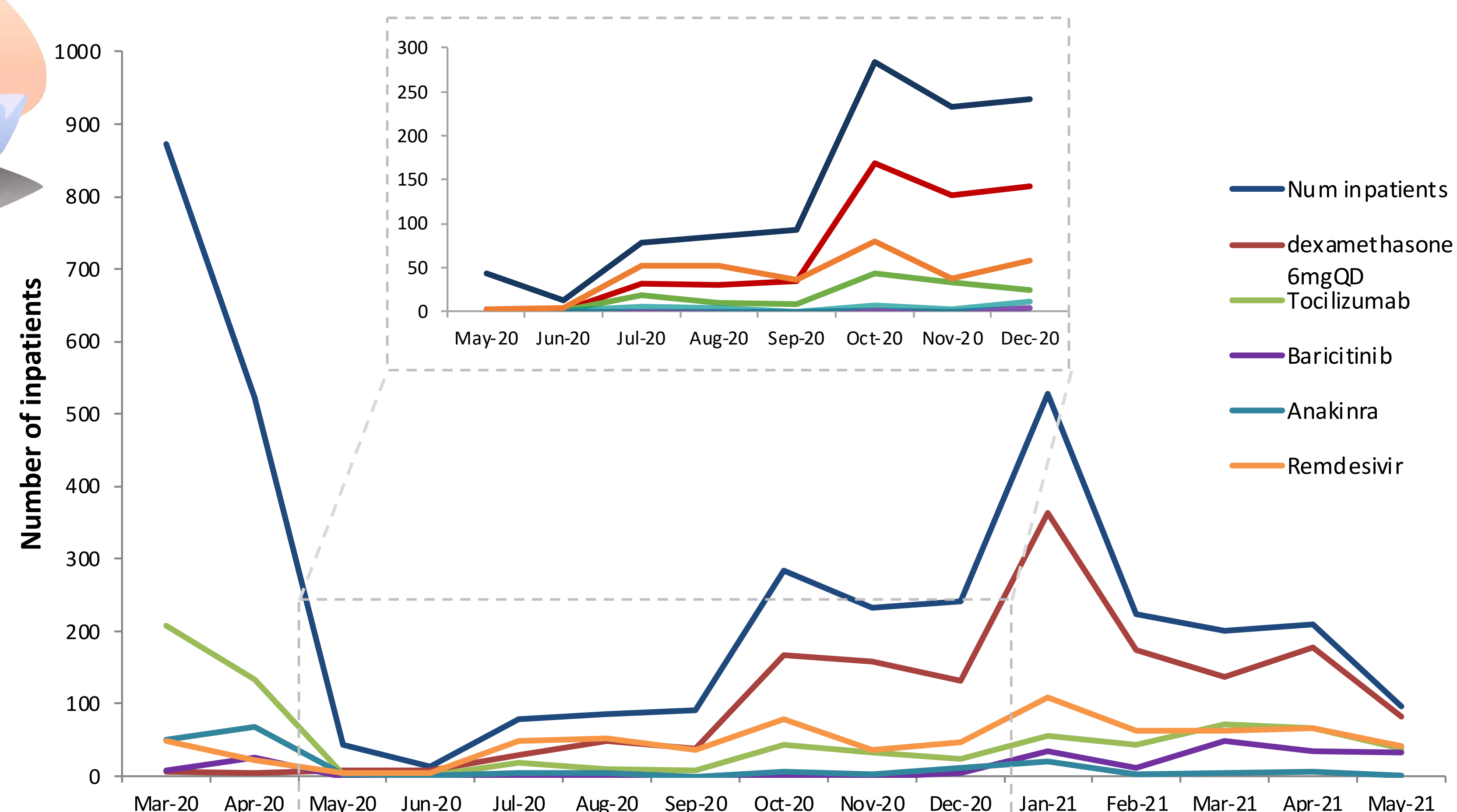


Figure 1. Monthly evolution of COVID-19 treatment usage. Num inpatients (navy blue), dexamethasone 6mg/day (red), tocilizumab (green), baricitinib (purple), anakinra (blue), remdesivir (orange).

Monthly evolution of the use of antibiotics against COVID-19

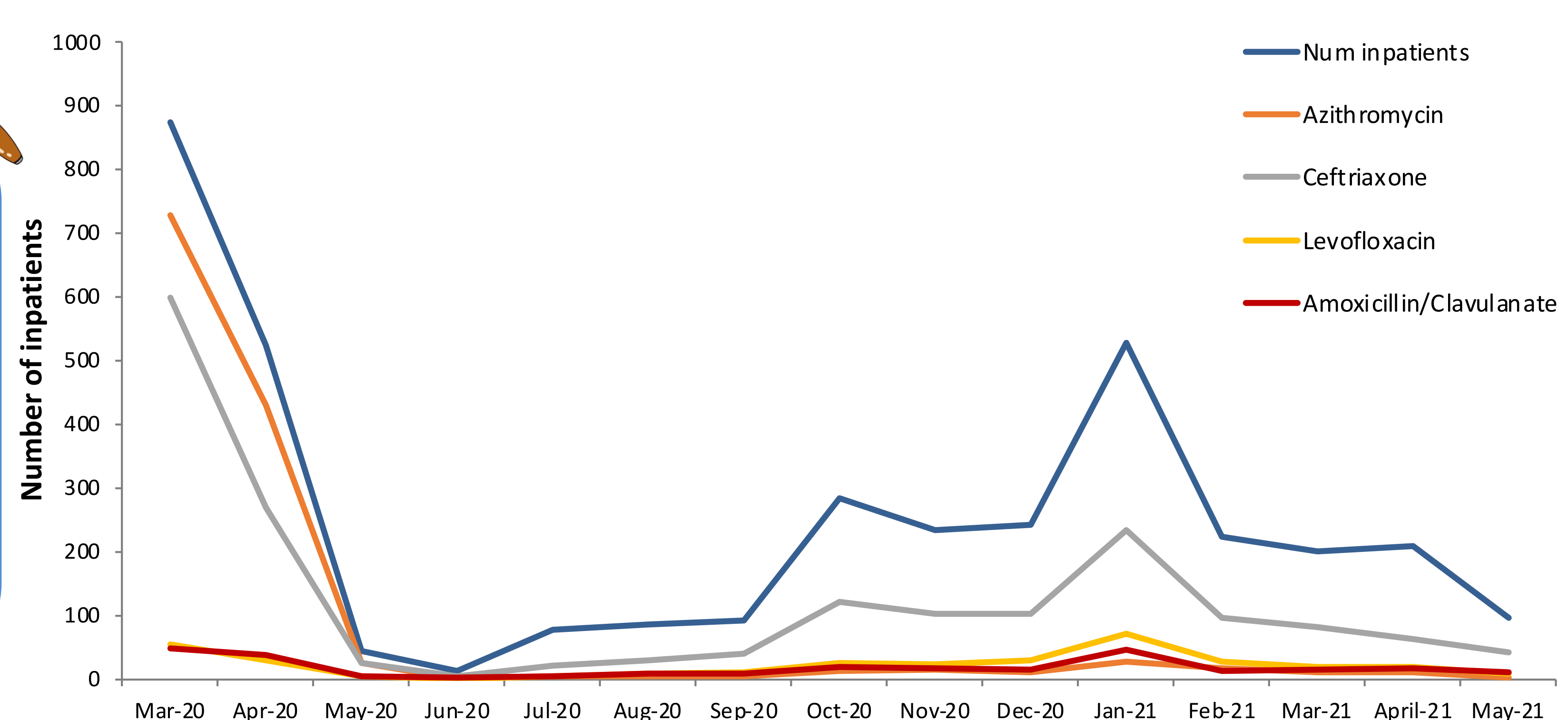


Figure 2. Monthly evolution of the use of antibiotics against COVID-19. Num inpatients (navy blue), azithromycin (orange), ceftriaxone (grey), levofloxacin (yellow), amoxicillin/clavulanate (red).

