Use of remdesivir in severe Sars-CoV-2 pneumonia in critically and non-critically ill patients

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1. Background and Importance

Severe Sars-CoV-2 pneumonia (Covid-19) is causing an increasing number of deaths worldwide because no effective treatment is available. Remdesivir has shown *in vitro* activity against coronaviruses and is being used as an antiviral treatment for Covid-19.

2. Aim and objectives

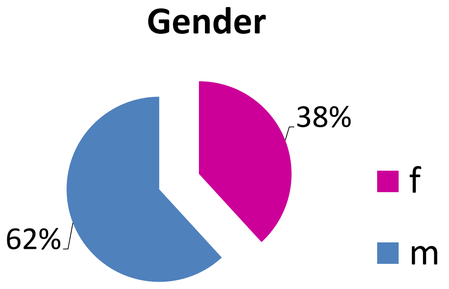
Evaluate the use and results of remdesivir treatment in hospital setting

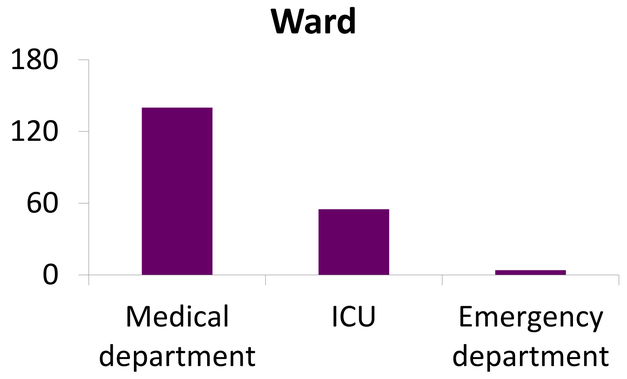
3. Materials and Methods

A retrospective study was conducted at 800-bed hospital between March 2020 and June 2021 involving patients with Covid-19, age over 18 and undergoing treatment with remdesivir. Information was extracted from hospital files (Soarian and Hosix VB). Data was analyzed using Microsoft Excel, descriptive and inferential statistics.

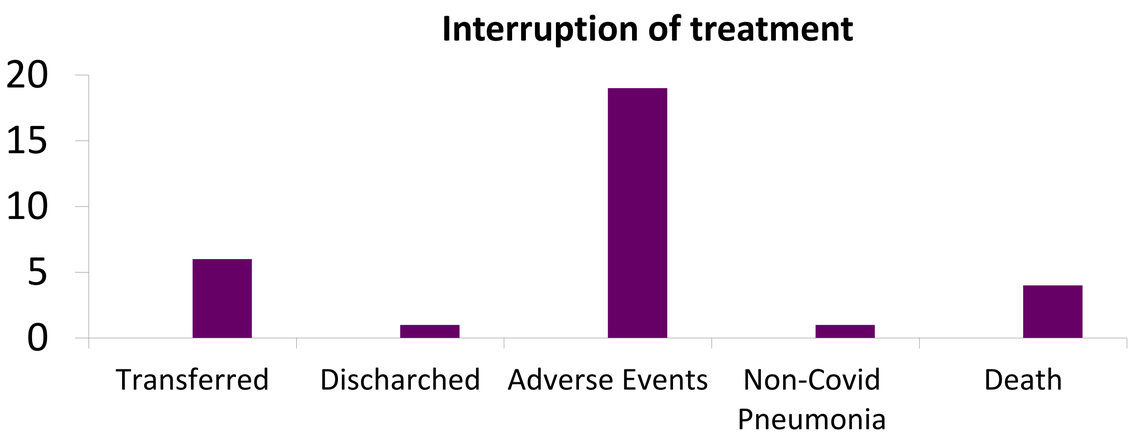
4. Results

- 199 patients were enrolled in the study, with an average age of 64,2 years, mainly men and staying in Medical wards:

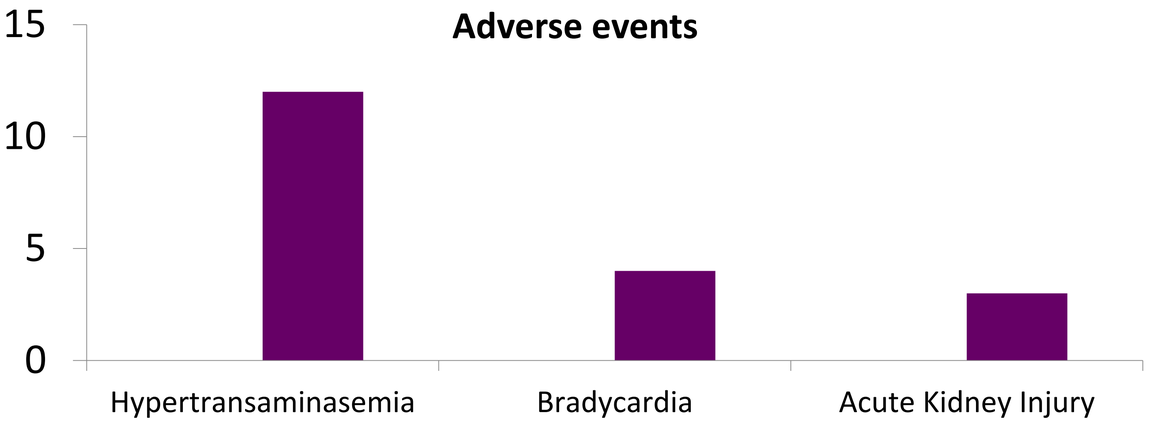




- 168 (84%) patients completed treatment with remdesivir
- 31 (16%) patients interrupted treatment, 19 due to adverse events, and 4 patients died



- The main adverse events were hypertransaminasemia, bradycardia and acute kidney injury



- All patents with hypertransaminasemia improved. 2 of the 3 patients with acute kidney injury improved. Half of the patients (n=2) that stopped treatment with remdesivir due to bradycardia died
- Overall, 154 (77%) patients were discharged, 40 (20%) died
- 25 (77%) deaths occurred in ICU patients and 6 (21%) of which had adverse events with remdesivir
- Age above 75 was associated with ICU stay ($p=0,027$, $p<0,05$)

5. Conclusions and Relevance

- Clinical improvement was observed in the majority of patients treated with remdesivir
- Adverse events were frequent, mainly hypertransaminasemia, bradycardia and acute kidney injury
- Most deaths occurred in ICU patients
- Data suggests that remdesivir can benefit patients with Covid-19
- Ongoing randomized controlled trials will clarify remdesivir efficacy and safety

6. References and Acknowledgements

Spinello Antinori et al. Compassionate remdesivir treatment of severe Sars-Cov-2 pneumonia in intensive care unit (ICU) and Non-ICU patients: Clinical outcome and differences in post-treatment hospitalisation on status. In Pharmacological Research, 158 (2020) 104899

Keywords: covid-19, remdesivir, treatment outcome

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