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

4. Results

- 199 patients were enrolled in the study, with an average age of 64.2 years, mainly men and staying in Medical wards:

  ![Gender](chart)

  - Gender: 62% male, 38% female
  - Ward distribution: Medical department 120 (60%), ICU 60 (30%), Emergency department 10 (5%)

- 168 (84%) patients completed treatment with remdesivir

- 31 (16%) patients interrupted treatment, 19 due to adverse events, and 4 patients died

  ![Interruption of treatment](chart)

  - Interventions: 10 due to transferred patients, 3 due to discharged patients, 15 due to adverse events, 2 due to non-Covid pneumonia
  - Deaths: 1

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

  ![Adverse events](chart)

  - Hypertransaminasemia: 15, Bradycardia: 5, Acute Kidney Injury: 4

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.

5. Conclusions and Relevance

- All patients 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)

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

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