




Remdesivir use in atrial fibrillation

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Introduction: Antiviral drug remdesivir used in treatment of COVID-19 has been observed to have cardiovascular side effects, most commonly sinus bradycardia¹. Previously published research suggests bradycardia caused by remdesivir might be a positive effect². Our research aims to investigate impacts of remdesivir use in patients with atrial fibrillation (AF).

Patients and Methods: Our study included 5959 consecutively hospitalized severe and critical COVID-19 patients among which 876 received remdesivir with 876 matched controls. We compared the primary outcome, in-hospital death, in remdesivir treated AF patients compared to AF patients without treatment.

Results: 188 (10.4%) of analyzed 1752 patients had AF, with prevalence comparable between groups (10% in remdesivir group vs 11.4% in control group). Overall, while patients with atrial fibrillation experienced significantly worse mortality compared to those without (50.5% vs 29.2%, $p < 0.001$), when treated with remdesivir, the increased mortality was significantly smaller (43.2 vs 27.7%, OR 1.98, $P < 0.001$) compared to the AF patients in the untreated group (57 vs 30.8%, OR 2.97, $p < 0.001$), however these benefits were not evident in those requiring high flow oxygen therapy or mechanical ventilation at beginning of treatment.

Conclusion: Atrial fibrillation is associated with increased mortality in severe and critical COVID-19, however early application of remdesivir might improve survival in this patient subgroup. Additional research is required to improve treatment.

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LITERATURE

1. Touafchia A, Bagheri H, Carrié D, Durrieu G, Sommet A, Chouchana L, et al. Serious bradycardia and remdesivir for coronavirus 2019 (COVID-19): a new safety concerns. *Clin Microbiol Infect.* 2021 Feb 27;27(5):791.e5-8. <https://doi.org/10.1016/j.cmi.2021.02.013>
2. Bistrovic P, Manola S, Lucijanic M. Bradycardia during remdesivir treatment might be associated with improved survival in patients with COVID-19: a retrospective cohort study on 473 patients from a tertiary centre. *Postgrad Med J.* 2022 Jul;98(1161):501-502. <https://doi.org/10.1136/postgradmedj-2021-141079>