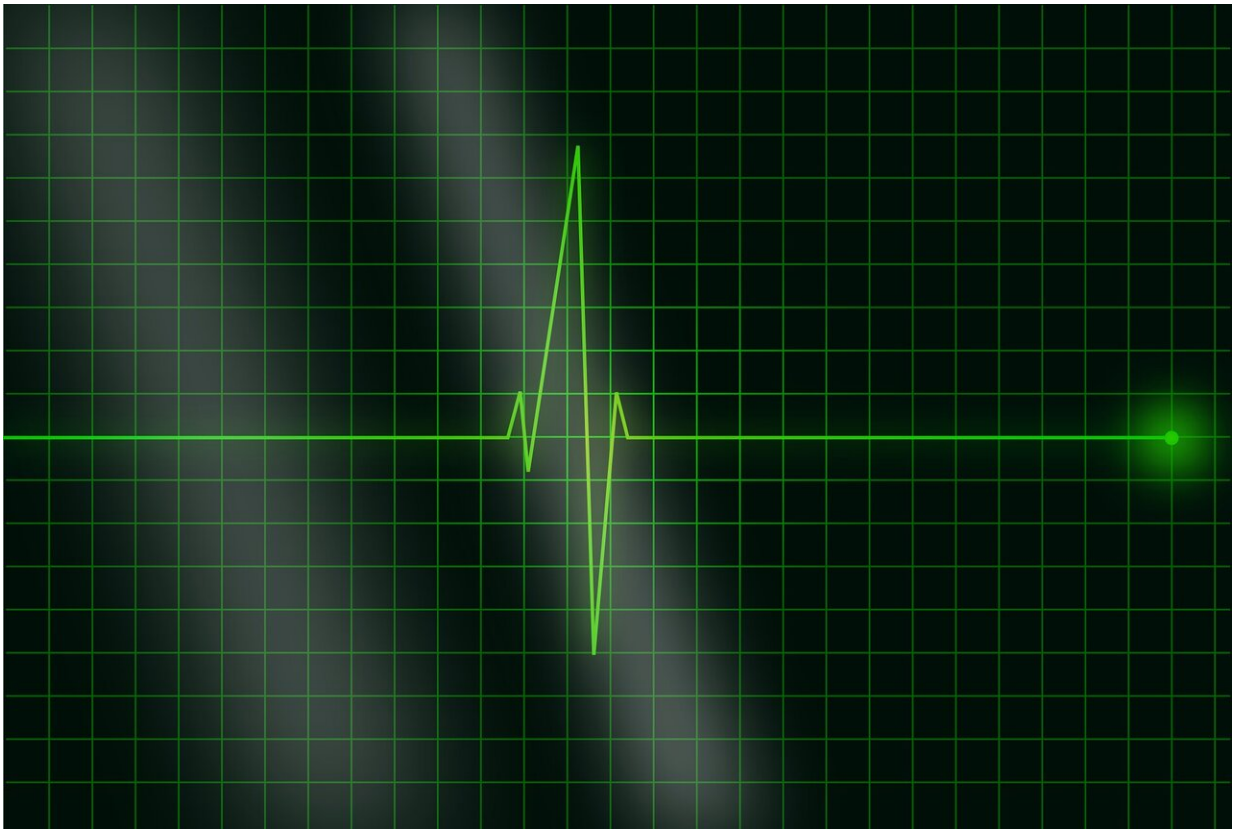


Case report: Remdesivir induced dangerously low heart rate in a COVID-19 patient

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After beginning treatment with remdesivir for COVID-19, a patient experienced significant bradycardia, or low heart rate. Her physicians used a dopamine infusion to stabilize her through the five-day course of

remdesivir treatment, and her cardiac condition resolved itself at the end of the treatment. The case is discussed in *Heart Rhythm Case Reports*.

"Remdesivir has become the standard of care for COVID-19 pneumonia and there is a paucity of data on its cardiac effects," explained lead author Jomel Patrick Jacinto, DO, HCA Healthcare/USF Morsani College of Medicine GME Programs at Regional Medical Center Bayonet Point, Hudson, FL, USA. "While it is known to be well tolerated and effective, it's critical to note its potential adverse effects on the cardiovascular system. To our knowledge, this is the first reported case of remdesivir-induced hemodynamically unstable sinus bradycardia."

The patient arrived at the hospital in [respiratory distress](#) with abnormally rapid breathing, and she tested positive for COVID-19. She was admitted to the [intensive care unit](#) and was started on standard COVID-19 treatment protocol, including antiviral therapy with remdesivir. Twenty hours after administration of the first dose, her vitals revealed very low blood pressure and a [heart](#) rate as low as 38 beats per minute. An electrocardiogram found marked sinus bradycardia. She lacked any prior cardiac history and had normal telemetry monitor and ECG findings prior to receiving remdesivir. She was started on a dopamine drip and maintained normal sinus rhythm with a heart rate of 60-65 beats per minute. Eighteen hours after her last dose of remdesivir, the dopamine was titrated off, and the patient was stable, with normal ECG findings.

Dr. Jacinto observed that remdesivir has an important role in the fight against severe COVID-19 because it has been shown to improve mortality rates and shorten the total time to recovery. In this case, completion of the five-day course of remdesivir was imperative to the patient's treatment despite the adverse effects as concurrent medical treatment with pressors such as dopamine was adequate support.

"Most hospitals have the ability to support the patient through the five-day treatment course to completion, using medications such as [dopamine](#) to nullify severe bradycardia," Dr. Jacinto said. "Having a heightened awareness of its cardiac safety profile is essential to make effective clinical decisions in treatment of patients with remdesivir." He added that [remdesivir](#) should be used cautiously in patients with known cardiovascular disease.

More information: Jomel Patrick Jacinto et al, Remdesivir-induced symptomatic bradycardia in the treatment of COVID-19 disease, *HeartRhythm Case Reports* (2021). [DOI: 10.1016/j.hrcr.2021.05.004](https://doi.org/10.1016/j.hrcr.2021.05.004)

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