Remdesivir has been recognized as an antiviral in treating hospitalized patients with COVID-19; however, it is associated with sinus node dysfunction — a finding that is not completely understood. This case highlights a patient with reversible sinus node dysfunction, emphasizing the importance of appropriate monitoring before committing them to a permanent pacemaker.

To highlight possible side effects of remdesivir and its association with cardiac conduction abnormalities in a patient with LGMD.

A 79-year-old woman with limb-girdle muscular dystrophy (LGMD) presented to the ED with worsening dyspnea and heart palpitations with no recent syncopal events. She was COVID-19 positive despite being fully vaccinated months prior.

Admission ECG (Panel A) demonstrated atrial flutter with 2:1 conduction and a LBBB. Symptomatic hypotension → cardioverted to sinus rhythm then followed with sinus bradycardia

Started on dexamethasone and remdesivir for COVID Over night, course was complicated by a transiently profound nocturnal sinus bradycardia leading to asystolic arrest for up to 15 seconds (Panel B).

Patient continued to have similar pauses during second night despite the use of non-invasive positive pressure ventilation and Isuprel drip

Profound bradycardia was thought to be precipitated by hypersomnolence in the presence of underlying sinus node dysfunction, unmasked by the combination of steroids and remdesivir

Remdesivir was discontinued → complete resolution of her profound bradycardic events

Isuprel was subsequently discontinued with no recurrence of her symptomatic bradycardia

The patient was monitored successfully for three days with no electrical cardiac disturbances

Although LGMD is associated with conduction abnormalities, it can be profoundly unmasked with remdesivir.

Sinus node dysfunction may improve with discontinuation of remdesivir.

Therefore, it is important to allow for monitoring of patients on remdesivir experiencing symptomatic profound bradycardia before the commitment to a permanent pacemaker.

REFERENCES