

Sinus Bradycardia as an initial manifestation of COVID-19

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Background

While arrhythmias, in general, are now a well-recognized complication of COVID-19, there are only a few publications on bradycardia in COVID-19, generally secondary to drugs or some complications, and none on primary bradycardia preceding clinical manifestations including respiratory symptoms or fever. We sought to describe a case series of sinus bradycardia as an initial manifestation of COVID-19.

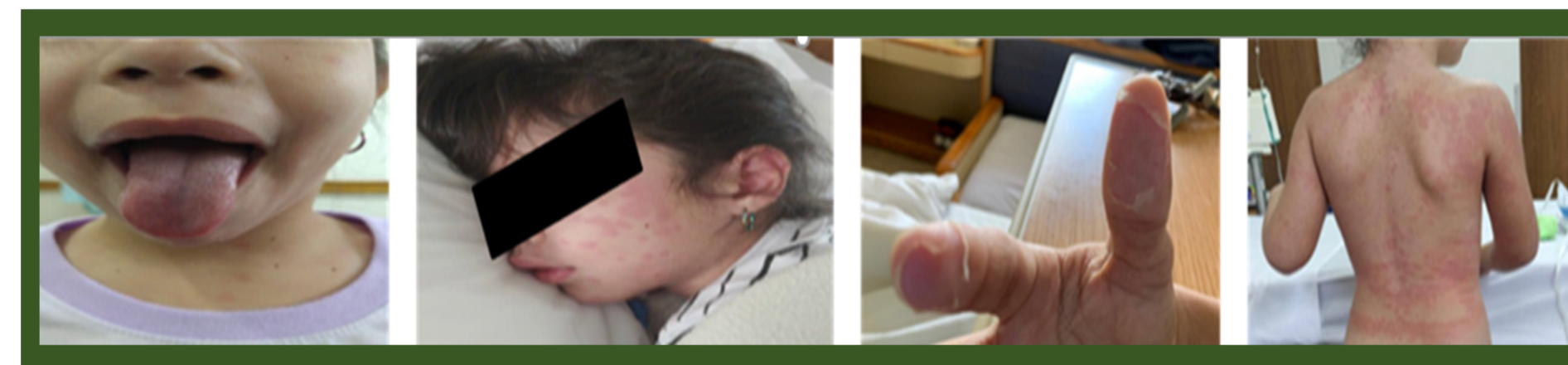
Methods

We included a series of 39 consecutive patients with confirmed COVID-19, who developed sinus bradycardia with a heart rate lower than 60 beats per minute in adults or a heart rate measured in the awake state that was below the normal range for age for children, as an initial manifestation of the disease, in a prospective observational study. Patients underwent clinical, laboratory, Holter, telemetry, Echocardiogram, Chest X-Ray, chest CT scan, and cardiac MRI testing.

Results

Thirty-nine (39) patients were included, 29 (69%) were male 30 adults and 9 children (21%) with a median age of 57 (IQR18-66), admitted for symptomatic bradycardia, the majority (35) transient and nonsevere. Four (4) cases developed presyncope that merited intravenous administration of atropine 0,5 mg. Two of them with a paradoxical response; cardiac arrest that did not respond to cardiopulmonary resuscitation maneuvers and died. Thirty-seven (37) patients developed pulmonary manifestations that included 13 pneumonia cases, these patients survived and recovered without requiring mechanical ventilation.

Figure 1



7-year-old girl with pediatric multisystem inflammatory syndrome.
Courtesy of Tropical Cardiology, Venezuela

Figure 2



ECG findings consistent with Bradycardia for this age group
(heart rate of 55)
Courtesy of Tropical Cardiology, Venezuela

Conclusion

Sinus bradycardia may be the initial manifestation of COVID-19, usually transient and mild, but in some cases could be severe and fatal (5%).

Awareness is key

References

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