

CORRECTION

Open Access



Correction: Relative bradycardia in patients with COVID-19

Lae-Young Jung^{1,2}, Jae-Min Kim¹, Sukhyun Ryu³ and Chang-Seop Lee^{1,2*} 

Correction: International Journal of Arrhythmia (2022) 23:22

<https://doi.org/10.1186/s42444-022-00073-z>

The abstract was missing from the original publication; the abstract is provided in this correction article. The original article has been updated.

Abstract

Introduction Relative bradycardia (RB) is a relatively low heart rate response to rise in body temperature that occurs in several infectious diseases and can be an important clinical sign. In previous case reports, RB was presented in some patients with Coronavirus disease 2019 (COVID-19).

Objective and methods To investigate the correlation between temperature and heart rate, we retrospectively reviewed 249 febrile patients with documented COVID-19 patients. RB was defined as a rise in the heart rate from a basal heart rate of less than 10 beats/minute/°C rise in temperature.

Results In this study, the prevalence of RB in patients with COVID-19 was 60.6%. When the HR at peak temperatures for patients with COVID-19 was compared

with reference value (general temperature–heart rate response in infectious disease), our findings demonstrate a relatively lower heart rate at all peak temperatures recorded. Despite differences in heart rate response, there were not significant differences in clinical outcomes (pulmonary manifestation, intensive care unit admission, death).

Conclusion Most patients with COVID-19 are associated with relative bradycardia, not related to clinical outcomes. RB in COVID-19 can be considered as the clinical features for differential diagnosis from other febrile conditions.

Author details

¹Department of Internal Medicine, Jeonbuk National University Medical School, 567 Baekje-daero, Deokjin-gu, Jeonju-si, Jeollabuk-do 54907, Republic of Korea. ²Biomedical Research Institute of Jeonbuk National University Hospital, Jeonju, Republic of Korea. ³Department of Preventive Medicine, Konyang University College of Medicine, Daejeon, Republic of Korea.

Published online: 09 January 2023

Publisher's Note

Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

The original article can be found online at <https://doi.org/10.1186/s42444-022-00073-z>.

*Correspondence: lcsmid153@gmail.com

¹ Department of Internal Medicine, Jeonbuk National University Medical School, 567 Baekje-daero, Deokjin-gu, Jeonju-si, Jeollabuk-do 54907, Republic of Korea
Full list of author information is available at the end of the article



© The Author(s) 2022. **Open Access** This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.