Posted on 31 Jan 2024 — The copyright holder is the author/funder. All rights reserved. No reuse without permission. — https://doi.org/10.22541/au.170670155.50136132/v1 — This is a preprint and has not been peer-reviewed. Data may be preliminary.

Comparing the severity of Outcomes of SARS-CoV-2 between RT-PCR-positive and RT-PCR-negative Individuals in Iran

Comparing the severity of Outcomes of SARS-CoV-2 between RT-PCR-positive and RT-PCR-negative Individuals in Iran

Khosravi Shadmani F[1], Shahram Arsang-Jang[2], Hamid Rashidzadeh[2], Kamyar Mansori[2], Siamak Heidarzadeh[2], Farid Najafi[1], Ebrahim Shakiba[1], Karami M[3], Sartipi M[4], Ghobad Moradi[5], Ebrahim Ghaderi[5], Abdollah Mohammadian-Hafshejani[6], Ali Ahmadi[7], Elham Nouri[5], Shojaeian M[8], Alireza Zali[9], Ayad Bahadorimonfared[9], and Seyed Saeed Hashemi Nazari[10]

[1]Kermanshah University of Medical Sciences
[2]Zanjan University of Medical Sciences
[3]Shahid Beheshti University of Medical Sciences Department of Epidemiology
[4]Zahedan University of Medical Sciences
[5]Kurdistan University of Medical Sciences
[6]Shahroud University of Medical Sciences
[7]Shahrekord University of Medical Science
[8]Hamadan University of Medical Sciences School of Public Health
[9]Shahid Beheshti University of Medical Sciences School of Medicine
[10]Shahid Beheshti University of Medical Sciences School of Public Health and Safety

April 16, 2024

Abstract

The aim of this study was to compare the outcomes of SARS-CoV-2 RT-PCR-positive and RT-PCR negative Patients in Iran. This cohort study performed on 81393 patients with COVID-19 in six provinces of Iran during 2020. The studied variables include demographic and clinical. To examine the associations between RT-PCR test and death or ICU admission as dependent variable the multiple Bayesian logistic regression model was used by R software. 81393 individual (44.9 % female) with a mean age of 52.98 ± 20.8 years were included to the analysis. At all, 25434 tests (31.2 %) were positive RT-PCR, including 10772 men (44.9%) and 14662 women (55.1%). The multiple Bayesian logistic regression model showed a significant positive association between RT-PCR test results and COVID-19 mortality rate (OR: 1.46; 95% Crl: 1.29- 1.64). Also, males, older age, individual with chronic disease have higher risk of COVID-19 death, however, negative association observed between history of contact and COVID-19 death. We observed a significant inverse association between RT-PCR test results and ICU admission, while, the risk of ICU admission increased significantly by 1.2 times (95% Crl for odds ratio: 1.09, 1.34) among patients with negative RT-PCR test compared to positive RT-PCR test. People with positive RT-PCR test, male gender, older age, having a history of underlying disease have a higher risk of death and hospitalization in the ICU. Therefore, paying attention to these factors will be effective in reducing the risk of death and hospitalization in ICU.

Hosted file

final revised article_f.kh_27-8-1400.docx available at https://authorea.com/users/739724/articles/713139-comparing-the-severity-of-outcomes-of-sars-cov-2-between-rt-pcr-positive-and-rt-pcr-negative-individuals-in-iran-comparing-the-severity-of-outcomes-of-sars-cov-2-between-rt-pcr-positive-and-rt-pcr-negative-individuals-in-iran

Posted on 31 Jan 2024 — The copyright holder is the author/funder. All rights reserved. No reuse without permission. — https://doi.org/10.22541/au.170670155.50136132/v1 — This is a preprint and has not been peer-reviewed. Data may be preliminary.