

META-ANALYSIS MORTALITY RISK OF COVID-19 PATIENTS WITH CHRONIC HEARTH DISEASE COMORBIDITY

Meike Arianty

Masters Program in Public Health, Universitas Sebelas Maret

ABSTRACT

Background: COVID-19 outbreak has been pandemic and become a major global public health emergency. Respiratory symptoms were the main manifestation of COVID-19, but mounting evidence substantiates the presence of cardiac injury in patients. Several retrospective studies have shown increasing serum levels of High-sensitivity troponin I, creatine kinase, creatine kinase-mb in confirmed patients. This study was carried out to investigate mortality risk of COVID-19 patients with chronic hearth disease comorbidity.

Subjects and Method: A systematic review and meta analysis was conducted by collecting articles from PubMed, ScienceDirect, and Google Scholar databases. The determination of selected articles based on eligible criteria using PICO: (1) Population= COVID-19 disease, (2) Intervention= chronic heart disease, (3) Comparison= without chronic heart disease, and (4) Outcome= death. Keywords used “Chronic Heart Disease OR Chronic Cardiac Disease” AND COVID-19 OR SARS-CoV-2 AND Mortality OR Death. The inclusion articles were full text, cohort study, reported adjusted odds ratio, and published from year 2020 to 2021. The articles were collected by PRISMA flow diagram. Selected articles were assessed using Review Manager 5.3

Results: A meta-analysis involved 8 cohort studies from United Kingdom, China, Ireland, Spain, Sweden, and Russia showed that chronic heart disease increases the risk of death in COVID-19 patients (aOR= 3.59; 95% CI= 2.89 to 4.47; $p < 0.001$).

Conclusion: Chronic heart disease increases the risk of death in COVID-19 patients.

Correspondence:

Meike Arianty. Masters Program in Public Health, Universitas Sebelas Maret. Jl Ir. Sutami 36A, Surakarta 57126, Central Java. Email: akuike30@gmail.com. Mobile: 082284818070.