

RISK FACTORS OF HIPERTENSION AND DIABETES MELLITUS ON COVID-19 MORTALITY

Rosihan Adhani^{1*}, Deby Kania², Juli Harnida Purwaningayu², R. Harry Dharmawan Setyawardhana¹, Lisda Hayatie³, Triawanti Triawanti⁴, Husaini Husaini⁵, Syamsul Arifin⁶

¹*Department of Dental Public Health, Faculty of Dentistry, Lambung Mangkurat University, Banjarmasin, Indonesia;*

²*Department of Biomedicine, Faculty of Dentistry, Lambung Mangkurat University, Banjarmasin, Indonesia;*

³*Department of Parasitology, Faculty of Medicine, Lambung Mangkurat University, Banjarbaru, Indonesia;*

⁴*Department of Biochemistry and Biomolecular, Faculty of Medicine, Lambung Mangkurat University, Banjarmasin, Indonesia;*

⁵*Department of Public Health Science, Faculty of Medicine, Lambung Mangkurat University, Banjarbaru, Indonesia;*

⁶*Department of Healthy Administration and Policy Magister Public Health, Faculty of Medicine, Lambung Mangkurat University, Banjarbaru, Indonesia*

ABSTRACT

BACKGROUND: Case fatality rate (CFR) for global COVID-19 infections since June 14, 2021 was 2.17%, while CFR for Southeast Asia were 1.39%. CFR in Indonesia so far were 3.05%. This missed from the target of the 2005-2025 RPJMK (Middle long run national health planning) in achieving healthy Indonesia; handling epidemic diseases must be able to reduce the mortality rate below 1%. The government issued the Decree of the Minister of Health Republic of Indonesia No. HK.01.07/Menkes/2020 concerning the Determination of Vaccine Types for the Management of COVID-19. However, the existence of this policy did not reduce the mortality rate trend of COVID-19 in Indonesia. Hypertension and diabetes mellitus were the larger risk factors for COVID-19 mortality. Guo *et al.* 2020 found comorbid COVID-19 sufferers were hypertension 24.7% and diabetes mellitus 21.2%. However, Mikami *et al.*, 2020 stated differently that hypertension and diabetes mellitus were not at risk of COVID-19 mortality. **AIM:** Objective of this study was to estimate the average tendency of hypertension and diabetes mellitus as risk factor for COVID-19 mortality. **METHODS:** Meta-analysis with 16 articles analyzed by RevMan 5.4. **RESULTS:** pHR for hypertension was 1.15 (95% CI 1.00 - 1.32) and diabetes mellitus was 1.21 (95% CI 1.13 - 1.29). **CONCLUSION:** Hypertension had risk 1.15 times and diabetes mellitus had risk 1.21 times for COVID-19 mortality.