145. CHA2DS2-Vasc Score as a Predictor of Short-Term Mortality in Severe COVID-19 Patients Admitted to the Emergency Department

Niyata Hananta Karunawan, Iin Irnawati, Alvin Tonang, Prihatin I. Nugroho, Dr. Adhyatma MPH Tugurejo General Hospital, Semarang, Indonesia, Dr. Adhyatma MPH Tugurejo General Hospital, Semarang, Indonesia

Body

Background: In recent studies, CHA2DS2-Vasc score prognostic value had been demonstrated in severe cardiovascular disease. Many cardiovascular risk factors comprising the score are recognized as risk factors for mortality in COVID-19. The purpose of the study is to evaluate the prognostic value of the CHA2DS2-Vasc score to predict short-term mortality in patients with COVID-19 admitted to the Emergency Department(ED).

Methods: This cohort retrospective study included a total of 193 Patients with severe COVID-19 who were admitted to ED dr.Adhyatma MPH Tugurejo General Hospital between January and July 2021. the CHA2DS2-Vasc score of each patient was calculated, stratification in CHA2DS2-Vasc risk was divided into lower risk group (CHA2DS2-Vasc score Men: 0-1 Women 0-2) and higher risk group (CHA2DS2-Vasc score men ≥ 2 women ≥ 3). Short-term Mortality was defined as < 24 hours in the emergency department.

Results: There were 92 (47.7%) men patients with a mean age of 56.12± 10.91 years old and a mean of CHA2DS2-Vasc score of 2.22 ± 1.62. Bivariate analysis showed that Women, Age >75 years, Hypertension, Diabetes Mellitus, and Higher risk group were significantly higher in COVID-19 patients with short-term mortality, $p < 0.05$. Forward stepwise logistic regression analysis demonstrated that The CHA2DS2-Vasc score of ≥ 2 (men) and of ≥ 3 (women) was an independent predictor of short-term mortality in COVID-19 patients in the Emergency Department. (RR: 6.184, 95% CI: 3.228 - 11.845; $p < 0.001$).

Conclusion: The CHA2DS2-Vasc score could be a simple tool to predict short-term mortality in patients with severe COVID-19.

Clinical Implications: My study will help enable cardiovascular clinicians to know a tool to predict short-term mortality in patients with COVID-19 admitted to the Emergency Department. this tool is CHA2DS2-Vasc score that use as usual to know high-risk embolic events in AF patients. Previous observational studies reported that the CHA2DS2-Vasc score could be used to predict pulmonary embolism. The high Prevalence of Pulmonary embolism has known as a complication of COVID-19 patients that has a predictive factor for mortality of COVID-19 patients.