The impact of age on mortality in the intensive care unit: a retrospective cohort study in Malaysia

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Abstract Background: Age is a significant consideration for intensive care unit (ICU) admission. However, the reported associations between increasing age and mortality vary across studies, and data in the local context of Malaysia are lacking. The objective of the present study was to determine the impact of increasing age on ICU mortality. Methods: A retrospective cohort study of ICU patients was conducted between January 2020 and November 2023 at a university hospital in Malaysia. Patients were classified

into two categories according to age (years) and into four groups according to National Library of Medicine Medical Subject Headings (MeSH): young adult (19-24), adult (25-44), middle age (45-64), and elderly (>= 65). The Cochran-Armitage test for trend and Cox proportional hazards regression analyses were performed to evaluate the impact of increasing age on ICU mortality. Results: A total of 1,661 patients was analyzed. The Cochran-Armitage test showed a significant positive association between ICU mortality rate and age group (Z=-4.86, P<0.01) or MeSH category (Z=-5.36, P<0.01). After adjusting for other confounders, the strongest predictor for ICU mortality in the Cox proportional hazards regression analyses was age, with the elderly age group having the highest adjusted hazard ratio of 4.777 (95% CI, 1.128-20.231; P=0.03). Conclusions: Age had a significant impact on ICU mortality in our cohort of critically ill patients.

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Author Keywords: age groups; aged; intensive care units; mortality; prognosis

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