

## Evaluation of Determinant Factors for Delirium in Patients with Acute Coronary Syndrome

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**Background:** Development of delirium in intensive care unit (ICU) is associated with increased mortality, prolonged ICU stay and development of post-ICU cognitive impairment. Although several patient-baseline characteristics contributing to the development of delirium such as preexisting dementia, history of hypertension and alcoholism have been established, there is paucity of data on factors contributing to the development of delirium in patients with acute coronary syndrome (ACS), who usually have several comorbidities and are subjected to various treatment-related risk factors with impaired cardiac function.

**Objective:** This study aimed to identify factors contributing to delirium among patients with ACS.

**Methods:** We retrospectively investigated 231 patients with ACS who were consecutively hospitalized in coronary care units (CCU) of a hospital between January 2017 and March 2019. Of those, 24 patients with cardiopulmonary arrest on arrival, 8 undergoing mechanical ventilation, 8 preexisting dementia and 6 transferred to general ward until next day were excluded from the study. We divided the remaining 185 patients into two groups (delirium and non-delirium) according to the presence or absence of delirium. Delirium was defined as experiencing any one of following symptoms: 1) contradictory conversation, 2) self-removal of drip infusion, 3) impaired orientation, 4) restlessness, 5) delusions and hallucinations and 6) inability to stay quiet.

**Results:** Compared to the non-delirium group, the delirium group was older ( $80.2 \pm 8.8$  vs.  $65.8 \pm 11.0$  years old,  $p < 0.001$ ); more likely to be living alone, having cerebrovascular disease and lower left ventricular ejection fraction ( $43.2$  vs.  $22.7$  %,  $p = 0.008$ ;  $25.0$  vs.  $10.6$  %,  $p = 0.017$ ;  $49.8 \pm 11.7$  vs.  $54.7 \pm 13.4$  %,  $p = 0.022$ , respectively); and more likely to have any one of the central lines, including central venous line, intra-aortic balloon pump, arterial line and temporary pacing ( $31.8$  vs.  $12.8$  %,  $p = 0.004$ ). Multivariate logistic regression analyses indicated that age and living alone were independent predictors of delirium (OR 1.16, 95% CI 1.10 – 1.23,  $p < 0.001$  and OR 2.68, 95% CI 1.05 – 6.85,  $p = 0.04$ , respectively).

**Conclusion:** In this study, 23.8% patients with ACS who were hospitalized in CCU suffered from delirium. Results revealed that age and living alone were independent predictors of delirium. However, more attention must be focused on not only physical factors but also social factors to prevent delirium in hospitalized patients with ACS.

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