## An Exploration Survival Risk Factors of Stroke Patients at a General Hospital in Northern Taiwan

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Abstract: Background: The most common serious complication following acute stroke is pneumonia. It has been associated with the increased morbidity, mortality, and medical cost after acute stroke in elderly patients. Purpose: The aim of this retrospective study was to investigate the relationship between stroke patients, risk factors of pneumonia, and one-year survival rates in a group of patients, in a tertiary referal center in Northern Taiwan. Methods: From January 2012 to December 2013, a total of 1730 consecutively administered stroke patients were recruited. The Survival analysis and multivariate regression analyses were used to examine the predictors for the one-year survival in stroke patients of a stroke registry database from northern Taiwan. Results: The risk of stroke mortality increased with age 75 (OR=2.305, p < .0001), cancer (OR=3.221, p=<.0001), stayed in intensive care unit (ICU) (OR=2.28, p <.0006), dysphagia (OR=5.026, p<.0001), without speech therapy(OR=0.192, p < .0001), serum albumin < 2.5(OR=0.322, p=.0053), eGFR > 60(OR=0.438, p < .0001), admission NIHSS >11(OR=1.631, p=.0196), length of hospitalization (d) > 30(OR=0.608, p=.0227), and stroke subtype (OR=0.506, p=.0032). After adjustment of confounders, pneumonia was not significantly associated with the risk of mortality. However, it is most likely to develop in patients who are age  $\prod$  75, dyslipidemia, coronary artery disease, albumin < 2.5, eGFR <60, ventilator use, stay in ICU, dysphagia, without speech therapy, urinary tract infection, Atrial fibrillation, Admission NIHSS > 11, length of hospitalization > 30(d), stroke severity (mRS=3-5), stroke Conclusion: In this study, different from previous research findings, we found that elderly age, severe neurological deficit and rehabilitation therapy were significantly associated with Post-stroke Pneumonia. However, specific preventive strategies are needed to target the high risk groups to improve their long-term outcomes after acute stroke. These findings could open new avenues in the management of stroke patients.

**Keywords:** stroke, risk, pneumonia, survival

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