

The Risk of Post-stroke Pneumonia and Its One-Year Disability in Taiwan

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Abstract : Background: Evidence exists that pneumonia is a frequently encountered complication after stroke which is associated with a higher rate of mortality and increased long-term disability Purpose: To determine the predictors associated with the risk of one-year disability in acute stroke. Methods: Data for this longitudinal follow-up study were extracted from a tertiary referral medical center's stroke registry database in Northern Taipei. Eligible patients with acute stroke admitted to the hospital and completed a one-year follow up were recruited for analysis. Favorable outcome was defined as a modified Rankin Scale score ≤ 2 . SAS version 9.2 was used for the multivariable regression analyses to examine the factors correlated with the one-year disability in stroke patients. Results: From January 2012 to December 2013, a total of 1373 (mean age: 70.49 ± 15.4 years, 913(66.5%) males) consecutively administered acute stroke patients were recruited. Overall, the rate of one-year disability was 37.20%(404/1086) in those without post-stroke pneumonia. It increased to 82.93 %(238/287) in patients developed post-stroke pneumonia. Factors associated with increased risk of disability were age ≥ 75 (OR= 4.845, $p < .0001$), female /gender (OR=1.568, $p = .0062$), previous stroke (OR= 1.868, $p = < .0001$), dementia (OR= 2.872, $p = .0047$), ventilator use (OR= 4.653, $p < .0001$), age ≥ 75 /pneumonia (OR=1.236, $p < .0001$), ICU admission (OR=3.314, $p < .0001$), nasogastric tube insertion (OR= 4.28, $p < .0001$), speech therapy (OR= 1.79, $p = .0142$), urinary tract infection (OR= 1.865, $p = .0018$), estimated glomerular filtration rate (eGFR > 60)(OR= 0.525, $p = .0029$), Admission NIHSS > 11 (OR= 2.101, $p = .0099$), Length of hospitalization > 30 (d) (OR= 5.182, $p < .0001$). Conclusion: Older age, severe neurological deficit, complications, rehabilitation intervention, length of hospitalization > 30 (d), and cognitive impairment were significantly associated with Post-stroke functional impairment, especially those with post-stroke pneumonia. These findings could open new avenues in the management of stroke patients.

Keywords : stroke, risk, pneumonia, disability

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