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EVALUATION OF PHYSIOLOGICAL VARIABLES IN DETERMINING TIME TO MORTALITY AFTER STROKE ASSOCIATED PNEUMONIA

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Background and aims: Stroke-associated pneumonia (SAP) frequently complicates stroke and is associated with significant mortality. The aim of this study was to investigate the relationships between the National Early Warning (NEWS) score, and its components, including respiratory rate, heart rate, temperature, oxygen saturations, oxygen requirement, and alertness level, derived prior to antibiotic initiation, with time-to-mortality in SAP.
Methods: Data for patients with SAP (n=254) were extracted from a core dataset of stroke patients admitted to Manchester Centre for Clinical Neurosciences (2013-2021). Clinician diagnosis of SAP was made if pneumonia occurred within 7 days of hospital admission. Kaplan-Meier survival curves were generated to assess parameters influencing survival at pre-defined time periods (1 year and 5 years). The association of these parameters with time-to-mortality were analysed using multivariable Cox regression models.
Results: The median age was 82y (72y-88y), 50.8% were male, and median NIHSS was 9. Mortality within 1 year was 58.3% and 70.9% within 5 years. In the Kaplan-Meier analyses, respiratory rate $\leqslant$18/minute and a total NEWS score $<$3 were significantly associated with survival at both 1y and 5y, and heart rate $<$86 beats/minute significantly associated with survival at 1y. In the multivariable analyses, time-to-mortality was independently associated with respiratory rate only (HR 1.094, 95% CI 1.045-1.145, $p<0.001$).
Conclusion: This study has identified parameters within the NEWS score that are associated with survival in SAP patients. Further studies are warranted to identify physiological parameters which could guide optimal treatment and improve outcomes in SAP patients.
Disclosure: No

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ACCURACY OF SARC-F QUESTIONNAIRE AS A SCREENING METHOD FOR SARCOPENIA IN CHRONIC STROKE PATIENTS: A PRELIMINARY STUDY

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Background and aims: Sarcopenia is defined as an age-related decline in skeletal muscle mass and muscle strength or physical performance. The European Working Group on Sarcopenia in Older People revised consensus in 2018 (EWGSOP2) recommended the SARC-F questionnaire as a screening test for sarcopenia. The aim of the study was to evaluate the accuracy of the SARC-F questionnaire in stroke patients and to determine whether the same or different cut-off points should be applied.
Methods: Ambulatory stroke patients aged $\geqslant$ 40 years with residual hemiparetic deficits were included. The Asia Working Group for Sarcopenia revised criteria in 2019 (AWGS 2019) was used to diagnose sarcopenia. The specificity, sensitivity, negative and positive predictive values, and area under the curve (AUC) were calculated.
Results: Thirty-seven participants with chronic stroke were enrolled. Their average age was 60 years. Sarcopenia was identified in 12 patients (32.4 %). SARC-F score demonstrated the highest Youden's index when the cut-off point was 5 (AUC 0.71, 95 % CI 0.53-0.89). The sensitivity, specificity, positive predictive value, and negative predictive value were 66.7 % (95 % CI 34.9 % – 90.1 %), 72 % (95 % CI 50.6 % – 87.9 %), 53.3 % (95 % CI 26.6 %– 78.7 %), and 81.8 % (95 % CI 59.7 % - 94.8 %), respectively.
Conclusion: The SARC-F questionnaire is deemed suitable as a screening tool for sarcopenia in stroke patients. To improve the accuracy of SARC-F questionnaire in diagnosing sarcopenia in chronic stroke patients, the cut-off score of 5 should be applied.
Disclosure: No

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ASSOCIATION OF N-TERMINAL PRO-BRAIN NATRIURETIC PEPTIDE LEVEL WITH IN-HOSPITAL COMPLICATIONS AFTER AN ACUTE ISCHEMIC STROKE

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Background and purpose: Previous studies have shown the relationship between N-terminal pro-brain natriuretic peptide (NT-proBNP) and the stroke mortality and functional outcome after an acute ischemic stroke (AIS). However, the knowledge about its association with systemic and neurological in-hospital complication is scarce. Our purpose is to analyze it.
Methods: Observational study that included consecutive AIS patients during a 1-year period (2020). We analyzed vascular risk factors, pre stroke treatments, laboratory data (including NT-proBNP), stroke severity, acute treatments, and the development of in-hospital complications (systemic and neurologic). Multivariate analyses, that included NT-proBNP levels, were performed to identify if NT-proBNP is independently associated with complications. The receiver operating characteristic curve (ROC) curve was performed to obtain the optimal NT-proBNP cutoff point for the development of in-hospital complications.
Results: A total of 308 patients were included. Median of age (IQR) 63 (23.5) years old; 69,5% males. Median of NT-proBNP (IQR) 254 (1218) pg/dl. Ninety-six (31.1%) developed systemic and 62 (20.12%) neurological complications. The multivariate analyses showed that NT-proBNP was associated with systemic complications (OR 1.138, 96% CI 1.009 – 1.284) but not with neurological complications, adjusted by confounders. The ROC curve showed the predictive value of NT-proBNP with an area under the curve of 0.708. (95% CI, 0.639–0.777; $p<0.001$) and pointed to 296.5 pg/dL of NT-proBNP (66.7% sensitivity and 62.1% specificity) as the optimal cutoff level for developing systemic complications during hospitalization (Figure).
Conclusion: NT-proBNP could be a predictor of systemic, but not neurological, in-hospital complications in patient with ischemic stroke.