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FALLS AFTER STROKE AT THE UNIVERSITY OF MALAYA MEDICAL CENTRE FALLS CLINIC

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ABSTRACT

Introduction: Stroke is a leading cause of disability world-wide. Moreover, post-stroke individuals are at higher risk for falls. Several observational studies have identified a variety of demographic, post-stroke functional impairment and physiological factors that increase the risk of falls among this group.

Objectives: The aim of this study was to compare the frequency of falls among post-stroke individuals compared to individuals without stroke. Secondly, to evaluate characteristics associated with falling and to describe the consequences of fall associated with stroke.

Methods: Data collected from the Falls Clinic, University Malaya Medical Centre registry (since June 2013 to October 2018) were analysed for this retrospective cross-sectional study. The data collected including patient demographics, predisposing factors and symptoms related to fall and the fall's consequences such as hospitalisation and fracture.

Results: Out of 918 fallers, 96 of them are faller had a background of stroke, in which 43 are males (44.8%) and mean age was 74 years old. Fallers with stroke were more likely to report dizziness 35.4% (p-value 0.012), hearing problems 13.5% (p-value 0.002) and visual problem 19.8% (p-value 0.003) than fallers without stroke. In term of consequences, the result showed stroke survivors had sustained injuries related to fall such as fracture (7.3%), soft tissue injuries (8.3%). Nine individuals (9.4%) visited emergency department post-fall and seven (7.3%) required hospitalisation.

Conclusion: Using a real-world falls registry, we identified than fallers with stroke had different characteristics compared those without stroke. In particular, dizziness was a prominent symptom. Future studies should be targeted at develop stroke-specific fall intervention as individuals with stroke make up over 10% of all patients presenting to a fall service.

OUTCOMES OF THROMBOLYSIS THERAPY FOR ACUTE ISCHEMIC STROKE IN A NON-NEUROLOGIST GOVERNMENT HOSPITAL IN NORTHERN REGION OF MALAYSIA

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ABSTRACT

Introduction: A stroke team involved multidisciplinary team from emergency, medical, radiology and laboratory department formed in Hospital Sultan Abdul Halim (HSAH), a non-neurologist government hospital to provide thrombolytic therapy for acute ischemic stroke (AIS) since September 2019 with support from neuromedical team from Hospital Seberang Jaya and neurosurgical team from Hospital Sultanah Bahiyah. There are limited data on thrombolytic therapy for AIS in non-neurologist hospital. We therefore analysed data of stroke thrombolysis to determine its favourable outcomes with National Institutes of Health Stroke Scale (NIHSS) and modified ranking scale (mRS) 0-2.

Methods: We retrospectively reviewed all AIS patients who had stroke activation from September 2019 until May 2020. We received stroke activation from emergency physician during office hours (8am – 5pm). Patient received Intravenous alteplase rt-PA (0.9mg/kg) within 4.5 hours of AIS symptom onset with NIHSS score 6-22. NIHSS were recorded and mRS were evaluated upon discharge and during follow up.

Results: There were total of 41 stroke activations from September 2019 to May 2020. Of these, 7 patients were thrombolysed, 57% were male with median age of 61 years old (IQR 46-67). The median of prethrombolysis NIHSS was 18 (IQR 6-20) with improvement of 4 point (IQR 0.5-5.5) change at 24h postthrombolysis. No patient developed major bleeding and angioedema complications. Inpatient case fatality rate was 14.1%. The Median mRS upon discharge was 4 (IQR 4-5). 5 cases out of 7 cases had been assessed after 3 months with median change in mRS was 2 point improvement (IQR 0-3). 80% achieved favourable outcome (MRS 0-2) at 3 months.

Conclusions: Thrombolytic therapy is effective and safe to be given to AIS patient in non-neurologist hospital with collaboration from multidisciplinary team.

ACUTE STROKE UNIT OF SEBERANG JAYA HOSPITAL – TAKING BABY STEPS

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ABSTRACT

Introduction: Studies have shown that comprehensive and coordinated care delivered by multidisciplinary team in acute stroke unit (ASU) benefit acute stroke patients in many ways. However, it is not widely available in Malaysia. Thus Seberang Jaya Hospital has taken baby steps in starting our ASU service on 11 November 2019 to become a Primary Stroke Centre for northern region of Malaysia.

Objective: We aimed to study the demography, length of stay and key performance index of ASU from 11 November 2019 until 29 February 2020.

Methods: This is a retrospective cross sectional study. Data were extracted from ASU Admission Bundle of all patients whom were admitted to the ASU of Seberang Jaya Hospital, from 11 November 2019 to 29 February 2020.

Results: A total of 127 patients were admitted to ASU during the study period. Two third (62.7%) of them were males and 37.3% were females. Majority were Malays (47.5%), followed by Chinese (34.7%), Indians (11.0%) and foreigners (6.8%). The mean age was 57 years old (SD 12.7 years) and the mean NIHSS was 3 (SD 2.9). Almost all the patients (97.4%) received stroke education from the ASU nurse, 92.4% had swallowing test performed by occupational therapists and 92.7% were seen by physiotherapist before discharged. Average length of stay was 2.25 days.

Conclusion: We hope to expand our ASU service to cover more severe strokes in the future as we train more nurses and doctors in acute stroke care.

DEMOGRAPHIC AND CHARACTERISTICS OF ACUTE STROKE REGISTRY, HOSPITAL SEBERANG JAYA (ASTRO-HSJ)

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ABSTRACT

Introduction: Stroke registry is a valuable tool to gather information on epidemiology and clinical management of stroke patients for benchmarking and to improve patients' care. Department of Emergency and Trauma Hospital Seberang Jaya (ETDHSJ) started our Acute Stroke Registry on 1 January 2019 as we serve as a Primary Stroke Centre for northern region in Malaysia. In this study we aim to provide comprehensive overview of our acute stroke patients.

Method: All acute stroke patients presented to ETDHSJ from 1 January 2019 to 31 December 2019 whom stroke code was activated were included in this study. Data were retrieved from online stroke code registry Google Form and patients' medical record.

Result: A total of 73 stroke codes were activated in the study period. Two third were males (n=50, 68.5%) and 31.5% females (n=23). Racial distribution was Malays (46.6%), Chinese (31.5%), Indians (20.5%) and foreigners (1.4%). Mean age was 58 years old (range 21 to 87 years). Majority (n=70, 95.9%) were acute stroke with known onset within 4.5 hours while 4.1% were wake-up strokes. Most of the patients came to hospital by their own transport (64.7%). The therapeutic yield for thrombolysis was 35.6% (n=26). Among the reasons why thrombolysis were not administered include intracranial bleed (17.8%), low NIHSS (12.3%) and high NIHSS (5.5%). Interestingly, we also found that the stroke onset time peaked at 10:00-10:59am. On average, patients took 1 hour 43 mins (SD 1 hour 10mins) from onset of stroke symptoms to reach hospital.

Conclusion: This data allows us to understand our local community and to strategize patient-centered care and education to combat against this disabling disease.

ASSESSING WHITE MATTER HYPERINTENSITIES AND NEUROCOGNITIVE PROFILE IN APPARENTLY ASYMPTOMATIC INDIVIDUALS USING GRAPHICAL MEASUREMENT ASSESSMENT

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ABSTRACT

Background: White matter hyperintensities (WMHs) are related to both impaired mobility and decreased cognitive functioning. This study utilised contour plot, surface plot, and scatterplot methods to assess the proportion of WMHs and neurocognitive profiles in apparently asymptomatic individuals in a single-center sub-urban population-based cohort in North-East Peninsular Malaysia.

Methods: Sixty subjects were recruited through simple convenience random sampling, from Hospital Universiti Sains Malaysia. An online-based cardio-cerebrovascular risk prediction (QRISK2) was utilized to determine the cardio-cerebrovascular risk for the recruited subjects and underwent 3T MRI brain scan followed by neurocognitive assessment using Wechsler Adult Intelligence Scale (WAIS-IV) for Perceptual Reasoning Index (PRI), Working Memory Index (WMI) and Processing Speed Index (PSI). Data were analyzed using MINITAB and SPSS software through contour plot, surface plot and scatterplot.

Results: Among 60 subjects, 19 of them had WMHs predominantly among elderly subjects. WMHs subjects had lower neurocognitive performance compared to subjects without WMHs, however, the differences were not significant, and the variability of neurocognitive performance among subjects was based on brain region predilections. No significant association between subjects with and without WMHs in neurocognitive profiles and QRISK2 scores appeared to be correlated to the presence of WMHs. Moreover, this study found that in elderly individuals, CSVD may contribute to a decline in neurocognitive performance especially in processing speed. The findings of the research were based on the analysis of contour plot, surface plot, and scatterplot for regression. Results for contour plot and surface plot showed that WMI, PRI, and PSI having significant association and also Block Design, Matrix Reasoning, and Visual Puzzle having a significant association. In addition, the result for the scatterplot method was used to explore the relationship between Digit Span with Letter Number Sequencing and Symbol Search with Coding.

Conclusions: Given that presence of WMHs may also indicate an increased risk of symptomatic cerebrovascular events, thus careful interpretation is required to determine its clinical relevance for the individual subjects. This study concluded that the use of contour plot, surface plot, and scatterplot method can provide a better understanding of a studied variable, by showing the actual relationship and examine the behaviour of the influenced variables in detail through the pattern obtained from the plots.

SURVEY ON POST-STROKE CARE SERVICES AFTER DISCHARGE FROM HOSPITAL TAIPING

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ABSTRACT

Introduction: Stroke is commonly associated with long term morbidity and mortality. Its management should be continuous and involve multiple disciplines. Lack of coordination and integration of services might compromise the care especially after the acute event. Hence, this survey aimed to study the quality of care received by stroke survivors.

Methods: Cross sectional study using phone interview method was performed on stroke cases which were discharged between 1/10/2019 and 31/12/2019 in Hospital Taiping. Survey was performed at least 8 weeks after discharge with the aim to assess patients during the transitional period between hospital and health clinics.

Results: 81 cases were called and 55 subjects (67.9%) responded. The mean age of patients was 63, ranging from 30 to 90. Male patients consisted 52.7% while female 47.3%. The majority of respondents consisted of caregivers while only 4 respondents were patients. 10% of respondents were not satisfied with the education on the disease they received while patients were hospitalised. 4 had inadequate medication supplied and 5 were confused with the medication regimen. 34.5% of cases had no follow-up appointment for physiotherapy or occupational therapy, mainly because no referral was provided. 21 cases (38.2%) had sought for health care attention earlier than their outpatient appointments. It was due to various reasons such as infection, fall and somatic pain. There were also 5 cases which experienced loss to follow-up due to logistic difficulties.

Conclusion: In order to improve the quality of care, interventions targeting service delivery at different levels should be planned and coordinated. We propose to strengthen pre-discharge planning and post-discharge monitoring.

EXPLORING THE UTILIZATION OF ANIMAL-ASSISTED INTERVENTION FOR INDIVIDUALS UNDERGOING INPATIENT STROKE REHABILITATION

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ABSTRACT

Introduction: Animal-assisted interventions (AAI) is defined as therapeutic modalities which engage animals to improve the physical, emotional, cognitive, and social functioning of humans. AAI are classified into animal-assisted activities (AAA), animal-assisted therapy (AAT) and service animal programs (SAP). AAI are typically used as an adjunct to standard rehabilitation interventions. The utilization of AAI for clinical indications to improve outcome has gained recognition and momentum; but more evidence is required to determine its effectiveness.

Objective: Single-centre illustrative report to demonstrate the narrated benefits of AAI for individuals undergoing inpatient stroke rehabilitation.

Method (Illustrative Report): The AAI session was designed in tandem with the goal of providing environmental enrichment to the inpatient rehabilitation setting. Motor skill, tactile, neglect, communications skills and mood optimization were main therapeutic targets. Pre-AAI planning stage involved developing safety and infection control measures. Criteria and consent for participation in AAI was clearly outlined. Appropriate animals were screened to determine suitability for the animal-assisted activities with patients. Small mammals and colourful avians were chosen to enhance motor skills including stroking, lifting, feeding while simultaneously providing visual, tactile, and auditory stimulation. All patients consented to voluntary participations. Narrative responses were obtained via interview and video-recording.

Results: There was an overall positive response in favour of utilizing AAI as an adjunct to inpatient rehabilitation program. Narrative response showed high level of acceptance. Majority of participants proposed for regular and structured AAI sessions. No infection was reported post AAI sessions.

Conclusion: It is feasible to organize AAI in the inpatient hospital setting as potential adjunct to structured stroke rehabilitation. High-quality prospective studies are necessary to capture its clinical benefit in rehabilitation practice. Future recommendations include determinants of the effectiveness of AAI, and to explore the facilitators and potential barriers of incorporating AAI as adjuncts to standard rehabilitation.