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HICCUPS: AN ATYPICAL PRESENTATION OF LATERAL MEDULLARY SYNDROME

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ABSTRACT

Background: Persistent hiccup related to lateral medullary syndrome is rarely reported as usually it resembles other gastrointestinal abnormality. It is often overlooked and can cause aspiration pneumonia.

Methods: We report a case of an elderly man who presented with persistent hiccups and later diagnosed to have lateral medullary syndrome.

Results: 73-year-old Malay male presented with desaturation and persistent hiccups. On further history, he complained of giddiness, right sided body weakness and recurrent choking episode. On clinical examination, he was found to have right sided Horner syndrome, right ataxia and left sided sensory loss and dysphagia. CT Brain showed multifocal lacunar infarctions. Due to suspicious of posterior circulation stroke, urgent MRI was done and showed features of acute right lateral medullary infarction with small haemorrhagic transformation most likely due to arterial thrombus within the right vertebral artery. He was treated for ischemic stroke and aspiration pneumonia.

Conclusion: Persistent hiccups is one of unique presentation that can occur in a case of lateral medullary syndrome. It was postulate that there is denervation super sensitivity due to palatal myoclonus in this group of patients.

OUCH, WE BE BURNIN' YA: A CASE REPORT ON CENTRAL POSTSTROKE PAIN SYNDROME - DEJERINE-ROUSSY SYNDROME

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ABSTRACT

Introduction: Dejerine Roussy syndrome defined by painful paraesthesia in any part of the body usually coupled with sensory abnormalities which occurs days to years after infarction of the ventroposterolateral thalamus.

Case Presentation: 53 years old man wheeled in with unusual grievance of hyperaesthesia and increased pin prick sensation even on innocuous stimulus such as touch. He has been known to have dyslipidaemia and stroke. He presented with worsening numbness and sharp pain over bilateral upper limbs and lower limbs, more prominent over the left side of the body past one week and unable to walk past one day. Upon examination, patient's GCS 15/15, blood pressure was 148/94mmHg with HR 80, RR 20, temperature 36.8° and P/S 6/10. He had left sided hyperesthesia exaggerated pain on light touch and power of left side upper and lower limb 3/5. Patient was given IV Tramadol. CT scan revealed right-sided infarct in the internal capsule. His left-sided hyperesthesia was attributed to thalamic stroke. Over the next 5 days in ward, he reported decrease in his left sided discomfort after initiation of amitriptyline in conjunction with tramadol.

Discussion: Dejerine-Roussy syndrome can occur due to disruption of the somatosensory at any level such as the thalamus, medulla, or cerebral cortex and causes numbness and tingling occurs weeks to months later. Diagnosis should be done with exclusion of other possible causes of pain. The management includes amitriptyline (tricyclic antidepressants), lamotrigine, gabapentin, pregabalin, carbamazepine, and phenytoin (anticonvulsants). Opioids can be used if antidepressants and anticonvulsants are not effective. TENS effective in combination with social support and family education.

Conclusion: Central post-stroke pain is usually the foremost limiting symptom after their stroke, chronic, and may be life-long even if treatment given earlier. Prompt recognition and accurate diagnosis in emergency department will allow early commencement of definitive management such as amitriptyline or gabapentin which will reduce morbidity of this patient.

STROKE SEVERITY, ONSET-TO-DOOR TIME, DOOR-TO-NEEDLE TIME COMPARISON: PRE & DURING COVID19 ERA IN A DISTRICT HOSPITAL

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ABSTRACT

Introduction: The current COVID19 pandemic had caused a significant impact to the healthcare system and stroke care worldwide. Less patients had presented to hospital within stroke golden hour due to fear of COVID19.

Objective: To compare the stroke severity, onset-to-door time (ODT), door-to-imaging time (DIT), door-to-needle time (DNT) of ischaemic stroke patients during the pre and COVID19 era at Seberang Jaya Hospital.

Methods: This is a retrospective cross-sectional study of acute ischaemic stroke patients who had received intravenous thrombolysis (IVT) at Seberang Jaya Hospital from March 2019 to February 2020 (Pre-COVID19), and from March 2020 to February 2021 (during COVID19 Era). Data was extracted from the medical records and National Stroke Registry.

Results: A total of 20 and 53 ischaemic stroke patients had received IVT during pre-COVID19 and COVID19 era respectively. Mean NIHSS upon admission was 11.76 (SD = 5.23) for pre-COVID-19 era, and 14.4 (SD = 5.65) for COVID19 era. The mean ODT was 92.96 (SD = 44.65) minutes for pre-COVID19 era, and 116.86 (SD = 58.83) minutes for COVID19 era. The mean DIT was 29.05 (SD = 14.44) minutes for pre-COVID19 era, and 24.03 (SD = 21.92) minutes for COVID19 era. The mean DNT was 91.65 (SD = 33.71) minutes for pre-COVID19 era, and 73.77 (SD = 37.6) minutes for COVID19 era.

Conclusion: Our study showed an increase in stroke severity, and also a longer ODT in the COVID19 era. However, the acute stroke care services were not affected in our center.

INTRAVENOUS THROMBOLYSIS IN ACUTE STROKE IN STROKE READY HOSPITALS WITHOUT NEUROLOGISTS: BENEFICIAL EFFECTS IN NIHSS AND MRS IMPROVEMENTS

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ABSTRACT

Introduction: We explore the safety and effectiveness of intravenous thrombolysis (IVT) among multi-ethnic Asian stroke patients when administered by Physicians in acute stroke ready hospitals (ASRHs) without in-house neurologists.

Methodology: We conducted a multi-centre, periodic cross-sectional study involving analysis of real-world data. All available ASRHs in Malaysia were included. Clinical data of consecutive patients (January 2014-March 2021) who received IVT within 4.5 hours from stroke onset was collected through review of medical records. Patients who received other reperfusion therapies within 90 days following IVT were excluded. Post-IVT NIHSS and mRS trends were analyzed using Friedman test, followed by Wilcoxon signed-rank test continually and post-hoc test with Bonferroni correction for multiple comparisons. Univariate and multivariate regression models were employed to identify the factors associated with various clinical outcomes following IVT

Results:
Eighty-two multi-ethnic Asian adults (mean age: 56.4±12.6 years, median NIHSS: 12 (9-16) at presentation) were included. IVT conferred both short term (significant improvements in NIHSS for up to 7 days) and longer term (significant improvements in mRS for up to 3 months) benefits, on top of the fair efficiency of service delivery (median door-to-needle time: 93 (60-125) minutes) and safety profile (acceptable rates of haemorrhagic complications). Forty (48.8%) patients recorded favourable functional outcomes with mRS≤1 at 3 months post-IVT. Such improvements were associated with younger age, female gender, shorter door-to-needle time, yet not significantly influenced by ethnicity. Factors associated with poor functional outcomes, intracranial haemorrhages, and mortality include older age and longer door-to-needle time.

Conclusions: Despite a multitude of multifaceted challenges/limitations in logistics, healthcare facilities, and human resources, it is still possible, provided with concerted efforts to work within the confines of these limitations in addition to strict adherence to evidence-based protocol, to provide beneficial stroke thrombolysis service safely and fairly efficiently, even in resource-limited non-stroke centres without neurologists.

ACUTE INSPIRATORY STRIDOR AS AN UNUSUAL PRESENTATION OF BRAINSTEM STROKE

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ABSTRACT

Introduction: Respiratory stridor caused by central aetiologies are uncommon but may lead to life-threatening consequences to the patients. Here, we report a case of brainstem ischemia presented with weakness and acute inspiratory stridor.

Case Presentation: A 56 years old gentleman with underlying diabetes mellitus, hypertension and dyslipidaemia presented with sudden onset giddiness and a fall. Upon arrival, he was unable to speak but can follow simple commands with presence of left sided weakness. Initial CT brain was normal. Intravenous thrombolysis was initiated, unfortunately he developed worsening stridor and was intubated for airway protection. The thrombolytic therapy was halted due to concern of reaction towards alteplase. Reassessment post stabilization revealed ophthalmoplegia with loss of brainstem reflexes. Subsequent MRI revealed restricted diffusion involving pons, midbrains, superior cerebral peduncle, both thalamus, left parietal and both cerebellum; likely due to posterior circulation thromboembolic phenomenon.

Discussion: Inspiratory stridor as manifestation of ischaemic stroke is rare as this is caused by bilateral disruption of the supply to the recurrent laryngeal branch of the vagus. In the absence of any local cause and other signs of anaphylaxis reaction, central cause such as brainstem stroke should be considered as early intervention may improve survival and reduce associated neurological impairment.

Conclusion: Although uncommon, brainstem infarct should be considered in patients presenting with acute inspiratory stridor particularly in absent of obvious local causes. Early recognition and prompt treatment may improve patient's morbidity and mortality.

OVERVIEW OF ISCHEMIC STROKE MANAGEMENT FOLLOWING STROKE CODE ACTIVATION PATHWAY AT DISTRICT HOSPITAL

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ABSTRACT

Introduction: Most stroke patients are managed by non neurologist especially at district hospitals. The objective of this study is to study the clinical spectrum of ischemic stroke and its management in accordance to the 9 Key Performance Indicators (KPI) and patients outcome by Modified Rankin scale (MRS) following Stroke Code Activation Pathway under Penang Seberang Prai District Hospital Cluster System.

Methodology: Retrospective study conducted at Department of General Medicine Hospital Bukit Mertajam from May 2020 until May 2021. Inclusion criteria, patients aged more than 18-year-old with stroke symptoms within 4.5 hours from onset, wake up stroke and well-established infarction or normal non contrasted CT brain. Stroke symptoms beyond 4.5 hours from onset, stroke mimic symptoms and non contrasted CT brain shown hemorrhage or mass were excluded.

Results: A total of 51 patients recruited, 25 Malay, 17 Chinese, 8 Indian and 1 other race. Male 38 patients and female 13 patients with mean age of 60 (SD 14) years old. Mean Body Mass Index (BMI) 25.9 (SD 2.4). Premorbid risk factors are hypertension 44 patients 29.7%, Obesity 35 patients (23.6%), smoking 30 patients (20.3%), diabetes mellitus 24 patients (16.2%) and dyslipidemia 15 patients (10.1%). Those presented with limb weakness 38 patients (45.2%), slurring of speech or aphasia 17 patients (20.2%), facial asymmetry 16 patients (19%) and numbness 13 patients (15.5%). The median National Institute of Health Stroke Scale (NIHSS) is 3 range (0-7). The mean time for plain CT brain at referral hospital is 40 minutes (SD 3.5). Among the 9 KPI recommended by Stroke Council Malaysian Society of Neuroscience, we achieved 100% in performing ECG, swallowing test and stroke education. This is followed by 98% in antithrombotic therapy by end of hospital day two and discharged on cholesterol reducing medication respectively. Assessed for rehabilitation 94.1%, discharged on antithrombotic therapy 92.2%, 7.8% administered thrombolytic therapy and 3.9% had deep vein thrombosis therapy. The mean length of stay is 3 days (SD 1.3) with mean MRS of 1 (SD 0.9) upon discharge.

Conclusion: Early presentation to hospital with relatively low NIHSS will shorten length of hospital stay with good clinical outcome by MRS. The Stroke Code Activation Pathway has improving acute stroke care at District Hospital.

ONSET TO TREATMENT TIME OF ISCHAEMIC STROKE THROMBOLYSIS AND FUNCTIONAL OUTCOME IN A DISTRICT HOSPITAL

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ABSTRACT

Introduction: Thrombolysis with intravenous recombinant tissue plasminogen activator (IV-rTPA) is a gold standard and effective treatment in acute ischaemic stroke (AIS) patients who presented within 4.5 hours. Efficacy of IV-rTPA had been shown to be time dependent, however the influence of onset to treatment (OTT) time on functional outcome among AIS patients in local settings is uncertain.

Objective: We aimed to determine the association between OTT time and functional outcome among AIS patients thrombolysed with IV-rTPA in Seberang Jaya Hospital.

Methods: This is a retrospective cross-sectional study involving all AIS patients who were thrombolysed in Seberang Jaya Hospital from 2019 to 2020. Functional outcome was assessed using modified Rankin scale (mRS) after 3 months of treatment, and a score of 0-2 was categorized as good outcome whereas a score of 3-6 was considered as poor outcome respectively.

Results: Among 61 patients treated with IV-rTPA, the median OTT time was 195 minutes. More than half (57.4%) of thrombolysed patients were in 3-4.5 hours window. Patients who were thrombolysed in 3-4.5 hours period have higher percentage of poor outcome (n=35; 62.9%), followed by those thrombolysed in 2-3 hours (n=19; 47.4%) and 1-2 hours (n=7; 42.9%). This demonstrates that patients with earlier OTT time have better functional outcome although it is not statistically significant (P = 0.454).

Discussion and Conclusion: A shorter OTT time showed a better functional outcome among AIS patients in our centre. This study highlights the importance of prompt action in the management of hyperacute stroke.