evaluated the stroke alert yield in a non-teaching hospital system. *Methods:* A retrospective review of radiology reports for stroke alerts using PACS archive. Cases were then followed for 72 hours to determine the types of advanced imaging obtained and the findings of those studies. *Results:* From January to March 2014, 269 stroke alert head CTs were performed. Subsequent imaging included 128 MRIs (48%), 25 CTAs (9%) and 2 angiograms (0.7%). There were 58 (22%) tissue-defined strokes and 16 were non-lacunar (6% stroke alerts). 61% of stroke alert head CTs were negative or reported microvascular change. Other findings included large vessel occlusion (5%), intracranial stenosis (1.5%), extracranial stenosis(1.5 %), intracranial hemorrhage (9%) and masses (13%). *Conclusions:* Most stroke alerts were negative for tissue-defined stroke. Based on this data, universal use of CTA in the ER to triage patients with acute neurologic symptoms may not be appropriate. An updated triage system to facilitate endovascular rescue is being analyzed for changes to advanced imaging utilization and yield.

Neurophysiology

EEG

P.068

Reliability of EEG reactivity in assessment of comatose patients utilizing a standardized protocol

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Background: Electroencephalogram (EEG) is used in evaluating thalamocortical function in comatose patients. EEG reactivity is increasingly being recognized as a potentially important predictor of outcome in comatose patients. There are no existing guidelines or standardized testing for EEG reactivity assessment. We will report the use of a clinically implemented standardized reactivity testing protocol in comatose patients to determine accurate prognosis. *Methods:* In this retrospective study we report results from standardized reactivity testing from January 2016 to May 2016. Five stimuli (Calling name, clapping, nasal tickle, noxious stimulus, tracheal suctioning) were applied at one minute intervals in comatose patients of all etiologies. The EEG background reactivity will be analyzed by two independent electroencephalographers ad correlated to clinical outcome. *Results:* The methods for establishing EEG reactivity and the inter-rater reliability in determining EEG reactivity will be reported. *Conclusions:* EEG background reactivity is likely beneficial in determining prognosis. However, reliable methods for eliciting and determining EEG reactivity in comatose patients are necessary.

P.069

The predictive factors of electroencephalograms with epileptiform activity in psychiatric patients

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Background: Psychiatrists commonly use electroencephalogram (EEG) to rule out epilepsy as a cause of psychiatric symptoms. A large number of these studies are normal. Our study aims to identify the predictive factors of an EEG with epileptiform activity in these patients. *Methods:* We performed a retrospective study of the EEG results and chart reviews of the 208 psychiatric patients at Royal University Hospital in Saskatoon, Saskatchewan from 2013-2015. The EEG results were correlated with several factors known to increase the probability of an abnormal recording including history of seizures, previously abnormal EEGs, imaging abnormalities, medications known to cause epileptiform discharges, electroconvulsive therapy, prematurity, brain infection, childhood febrile seizures, head trauma, and family history. *Results:* Of the 208 EEGs performed, 176 (84%) were normal (77%) or essentially normal (7%). Epileptiform activity was found in 13 EEGs (6.3%), of which 9 (4.3%) had a previous EEG with epileptiform activity. Focal slowing appeared in 12 EEGs (5.8%), two of which had previous abnormal EEGs. Generalized slowing was found in 7 EEGs (3.4%). *Conclusions:* We conclude that the majority of EEGs in patients with psychiatric manifestations are normal. The most predictive factor for epileptiform activity in this population is a previous EEG with epileptiform discharges. Other predictive factors are under review.

P.071

Eeg activity during withdrawal of life sustaining therapies in the ICU: a substudy of the death prediction and physiology after removal of therapy study

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Background: Donation after circulatory death (DCD) is a recently accepted source for solid organ donation in Canada. Standards for circulatory death vary within and between countries and little is known about neurologic function at the time of circulatory death. This pilot study will explore the electrical physiology of the brain during the dying process following withdrawal of life support and at the time of declaration of circulatory death. *Methods:* This single-centre pilot study will build on preliminary data from the DDePICt (Death Determination Practices in Intensive Care) research program. With institutional approval and signed consent from the substitute decision maker, participants will undergo continuous 10-20 EEG (cEEG) monitoring in addition to monitoring vital signs during the dying process and for 30 minutes after the declaration of death. *Results:* Preliminary results including cEEG, blood pressure with arterial wave forms, EKG activity and oxygen saturations are currently under analysis and will be presented. *Conclusions:* It is feasible to study neurologic function during withdrawal of life support and these results will allow us to further understand the electrical activity of the brain during the dying process.