

analysis assessed if pre-operative cognition affected post-operative quality of life. Methods: PD patients receiving bilateral STN-DBS (n=100) were prospectively studied using STROBE guidelines. All had Montreal Cognitive Assessment (MoCA), motor (UPDRS), mood (BDI-II), and quality of life (Parkinson Disease Questionnaire summary index, PDQ-39-SI). Two cohorts, pre-operative MCI (MoCA:18-25) and normal cognition (MoCA:26-30), had post-operative PDQ-39-SI at 1-year. The primary outcome was the proportion of patients with an improved PDQ-39-SI at 1-year. Results: Cohorts were not significantly different in age, severity of illness, response to dopamine, or mood. MCI was present in 27/100. Improved quality of life at 1-year occurred in 75% with normal cognition and 70% with MCI ($p=0.54$) with $RR=1.1$ (95% CI, 0.8-1.5). Linear regression analysis showed no correlation between pre-operative cognition and post-operative outcome ($R^2=0.02$). Conclusions: Parkinson's patients with MCI should be offered DBS if their motor symptoms require surgery. Guidelines for DBS surgery in PD should change from "dementia is contraindicated" to "patients require adequate cognitive functioning, MoCA greater than equal to 18."

B.6

Endovascular treatment of acute ischemic stroke in patients with pre-morbid disability: a meta-analysis

F Bala (Calgary) *B Beland* (Calgary)* *E Mistry* (Nashville) *M Almekhlafi* (Calgary) *M Goyal* (Calgary), *A Ganesh* (Calgary)

doi: 10.1017/cjn.2022.101

Background: Trials of endovascular thrombectomy (EVT) for acute stroke have excluded patients with pre-morbid disability. We performed a meta-analysis to assess the effectiveness and safety of EVT in patients with pre-morbid disability. Methods: According to PRISMA guidelines, we searched for studies describing outcomes in patients with pre-morbid disability (modified Rankin Scale [mRS] 2-5), treated with EVT or medical management (MM). Random-effects meta-analysis was used to pool outcomes including return to baseline mRS at 90 days, symptomatic ICH (sICH), and 90-day mortality. Results: We analyzed 14 studies of patients with pre-morbid disability (mRS2-5: EVT=1,373, MM=253). Compared to medical therapy, EVT was associated with higher likelihood of return to baseline mRS (OR=2.37, 95%CI:1.39-4.04) and a trend towards lower mortality (OR=0.68, 95%CI:0.46-1.02), with similar odds of sICH (OR 1.01, 95%CI:0.49-2.08). In studies comparing patients with vs. without pre-morbid disability treated with EVT, similar results were found except that pre-morbid disability, when defined more strictly as mRS 3-5, was associated with mortality (OR 3.49, $p<0.001$). Conclusions: In patients with pre-morbid disability, EVT carries a higher chance of return to baseline mRS compared to patients treated with MM or without pre-morbid disability, although with higher mortality than patients without pre-morbid disability. These findings merit validation with randomized controlled trials.

CHAIR'S SELECT ABSTRACTS - CHILD NEUROLOGY/NEUROPHYSIOLOGY (CACN/CSCN)

C.1

Cerebral venous sinus thrombosis in preterm infants

R Christensen (Toronto)*

doi: 10.1017/cjn.2022.102

Background: Previous studies of neonatal cerebral venous sinus thrombosis (CVST) have focused on term infants, and studies of preterm infants are lacking. In this study, we examined the clinical and radiological features, treatment and outcome of CVST in preterm infants. Methods: This was a retrospective cohort study of preterm infants (gestational age <37 weeks) with radiologically confirmed CVST. All MRI/MRV and CT/CTV scans were re-reviewed. Clinical and radiological data were analysed using descriptive statistics, ANOVA and chi-square tests. Results: A total of 26 preterm infants with CVST were included. Of these, 65% were late preterm, 27% very preterm and 8% extreme preterm. Most (73%) were symptomatic at presentation with seizures or abnormal exam. Transverse (85%) and superior sagittal (42%) sinus were common sites of thrombosis. Parenchymal brain injury was predominantly periventricular (35%) and deep white matter (31%) in location. Intraventricular hemorrhage occurred in 46%. Most infants (69%) were treated with anticoagulation. None of the treated infants had hemorrhagic complications. Outcome at follow-up ranged from no impairment (50%), mild impairment (25%) and severe impairment (25%). Conclusions: Preterm infants with CVST are often symptomatic and have white matter brain lesions. Anticoagulation treatment of preterm CVST appeared to be safe and was not associated with hemorrhagic complications.

C.2

Muscular MRI pattern recognition for muscular dystrophies: the era of artificial intelligence beyond a systematic review

I Alawneh (Toronto)* *H Gonorazky* (Toronto), *S Alawnah* (Sharjah)

doi: 10.1017/cjn.2022.103

Background: Genetic neuromuscular diseases (NMD) are a heterogeneous group of disorders comprised hundreds of genes. Despite the advanced genetic testing modalities, about 40 % of patients with NMD do not have a diagnosis. Muscle MRI has been proven as a useful tool to orientate the genetic testing by looking at the muscle involvement severity pattern. Moreover, muscle MRI patterns can be specific and informative for muscular dystrophies and yet can be characteristic and diagnostic. Methods: Systematic review was conducted to review muscle MRI patterns for all Limb Girdle Muscle Dystrophies (LGMD). Then, we applied artificial intelligence (AI) on muscle MRI patterns for LGMDs and other NMDs