(CI) = 0.01-0.13, p = 0.02) and not associated with physical activity or sleep problem or hours of sleep (p > 0.05). Animal fluency score was associated only with HEI (Adjusted B = 0.05, 95% CI = 0.01-0.09, p = 0.02). DDS score was not associated with HEI, PA, or sleep problem (p > 0.05) but associated with hours of sleep (p = 0.03). Stratified analysis by race/ethnicity showed that CERAD total score was associated with HEI only in White (Adjusted B = 0.08, 95% CI = 0.01-0.15, p = 0.02). DISCUSSION/SIGNIFICANCE OF IMPACT: CERAD total score was associated with HEI and not associated with PA or sleep problem. Promoting healthy eating is important for improving cognition in elderly population. Culturally sensitive and linguistically appropriate programs that involve community and care providers are needed to promote healthy eating for elderly population.

3111

Heart Rate Variability as a Predictor of Post-Operative Cognitive Dysfunction in Older Adults

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OBJECTIVES/SPECIFIC AIMS: The objective of this project is to determine whether HRV, collected peri-operatively, is predictive of cognitive decline among older adults who undergo elective surgery/anesthesia. METHODS/STUDY POPULATION: This project is a part of the ongoing INTUIT/PRIME study, which is collecting pre- and post-operative cognitive testing, fMRI imaging, CSF samples, and EEG recordings from 200 older adults (age ≥ 60) undergoing elective non-cardiac/non-neurologic surgery scheduled to last > 2 hours at Duke University Medical Center and Duke Regional Hospital. This project utilizes data from the first 60 INTUIT participants who contributed continuous heart rate data before and during surgery. Participants undergo cognitive testing prior to surgery (baseline) and at 6 weeks after surgery. Our primary dependent variable is the change in the composite score from baseline to 6-weeks. Delirium is assessed in the hospital with the twice daily 3D-CAM tool, so we will report the proportion of individuals with 6-week cognitive decline who exhibited delirium in the days following surgery. Participants' echocardiogram (ECG) recordings are extracted pre- and intraoperatively from B650/B850 patient monitors with VSCapture software. HRV is defined as the variability between successive R-spikes or inter-beat-intervals on ECG. RESULTS/ANTICIPATED RESULTS: We anticipate that lower intraoperative HRV is associated with worse cognitive decline at 6 weeks after surgery. As secondary objectives, we will determine whether pre-operative HRV or change in HRV (from pre-operative to intra-operative measures) are predictive of cognitive decline after surgery. We expect that in-hospital delirium will be detected in a higher proportion of those with 6-week cognitive decline, compared to those with stable or improved cognition at 6 weeks. DISCUSSION/SIGNIFICANCE OF IMPACT: HRV may address the present need for pre- and intra-operative cognitive risk stratification in the elderly. Physiological indices like HRV have the potential to dramatically change our understanding of CI in older adults undergoing surgery, as they offer an accessible, cost-effective, and non-invasive means whereby clinicians, particularly those unfamiliar with the nuances of geriatric and CI/dementia-related care, can monitor patients and refer those at high-risk of CI after surgery for early intervention.

3525

Improvement in Suicidal Ideation after Repeated Ketamine Infusions: Relationship to Reductions in Symptoms of Posttraumatic Stress Disorder, Depression, and Pain

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OBJECTIVES/SPECIFIC AIMS: Given the heightened risk for suicide seen in individuals with PTSD+MDD, this report explored the effect of repeated ketamine infusions on SI in a cohort of veterans. METHODS/STUDY POPULATION: Veterans with PTSD+MDD (n = 15) received six intravenous infusions of 0.5 mg/kg ketamine on a Monday-Wednesday-Friday schedule over a 12-day period. All subjects endorsed SI at baseline. Outcome measures included the Montgomery-Asberg Depression Rating Scale (MADRS) total score, MADRS suicidal ideation item, and PTSD symptom Checklist for DSM-5 (PCL-5) subscales (intrusion, avoidance, negative alterations in cognition and mood, and marked alterations in arousal and reactivity), and visual analog scale of pain. Measures were collected immediately before and 24-hours after each infusion. RESULTS/ANTICIPATED RESULTS: Significant improvement in SI was observed 24-hours after the first infusion (Z = 3.21; p = .001) and remained significantly improved at all other post-infusion time points. Improvement in SI at the conclusion of the infusion series was significantly correlated with PTSD subscales of avoidance (r(12) = .610, p = .021), negative alterations in cognition and mood (r(12) = .786, p = .001), alterations in arousal and reactivity (r(12) = .729, p = .003), and pain (r(12) = .591, p = .013), even when controlling for improvement in symptoms of depression. DISCUSSION/SIGNIFICANCE OF IMPACT: The present analysis provides evidence of improvement in SI in a cohort of veterans with PTSD+MDD. Improvements in suicidality were correlated with PTSD symptom subscales and pain independent of improvement in depression. This report extends the interpersonal theory of suicide as it applies to posttraumatic pathology by demonstrating a significant association between improvements in all subclusters of PTSD, improvement in pain and improvement in suicidal ideation.

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Improving Individual Clinical Outcomes in a Sequential Multiple Assignment Randomized Trial (SMART)

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OBJECTIVES/SPECIFIC AIMS: This work develops an algorithm that identifies patients in a Sequential Multiple Assignment Randomized Trial (SMART) who should switch treatments prior to the end of a stage because clinical effectiveness via their current intervention is unlikely. This algorithm uses as inputs patient baseline and interim measurements to assign a probability that a patient should switch or stay on their current intervention. First, the algorithm will be derived assuming both a linear and non-linear patient trajectory. Second, the performance of the algorithm will be assessed

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