

fold increased delirium risk. The altered anesthetic-induced brain EEG patterns in patients who go on to develop postoperative delirium may reflect latent pre-clinical/pro-dromal Alzheimer's disease and/or neurovascular pathology.

Categories: Aging

Keyword 1: electroencephalography

Keyword 2: neurocognition

Keyword 3: neural circuitry

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4 Characterizing Cognitive Profiles and Postoperative Cognitive Risk in Older Adults Presenting for Elective Surgery

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Objective: Older adults represent 50% of surgical patients and are disproportionately at risk of poor cognitive outcomes after surgery including delirium, accelerated cognitive decline, and dementia. Delirium alone is estimated to occur in up to 50% of older adults postoperatively, while research indicates it is preventable in 30-40% of cases. Individuals with pre-existing cognitive impairments or neurodegenerative diseases are at the highest risk of such outcomes, but (1) cognitive diagnoses are grossly underrepresented in patients' medical records, and (2) routine preoperative cognitive clearance remains rare. The purpose of this presentation is to demonstrate the extent and nature of cognitive vulnerability in older adults preparing for elective surgery within a tertiary care hospital. A case series is also reviewed to illustrate varying surgical outcomes with and without consideration of preoperative cognitive risk.

Participants and Methods: This presentation incorporated IRB-approved and data honest broker management to assess diagnoses and cognitive profiles of adults age 65 and older electing surgery with anesthesia between January 2018 and December 2019. Data were assessed across two phases of the Perioperative Cognitive Anesthesia Network (PeCAN) program within the University of Florida and UF Health. First, data from the

preoperative anesthesia clinic were reviewed for the percentage of patients with cognitive difficulties within the patient problem list. Second, based on neuropsychological domains, the cognitive profiles of patients assessed by neuropsychologists within the preoperative anesthesia clinic were divided into primary attention, primary memory, or combined memory attention. From these patients, the presenter highlight cases to demonstrate how individuals with cognitive difficulties can be provided care by a multidisciplinary team to mitigate the presence of postoperative complications.

Results: Of 14,794 older adults entering the tertiary care medical center for surgical procedures, 4% (n=591) of the sample had ICD cognitive or neurodegenerative codes in the record. When a comprehensive neurobehavioral assessments were conducted on 1,363 of these presurgical patients, 70% had confirmed cognitive deficits on neuropsychological testing. These deficits included primary attention and executive deficits (12%), primary memory impairment (27%), or both attention and memory impairment (31%). Cases from these patients are reviewed and highlight how preoperative cognitive risk status can inform conservative perioperative practices including opioid-sparing analgesia, depth of anesthesia monitoring, and postoperative inpatient geriatric medicine consultation.

Conclusions: Medical records listed cognitive diagnoses in 4% of hospital preoperative medical records, yet neuropsychological assessment of a subset of cases revealed a markedly higher rate of impairment. Patients with preoperative cognitive assessment show cognitive symptoms consistent with known neurological disorders of aging including Alzheimer's disease and cerebrovascular disease. Appreciation of pre-existing neurocognitive disorders can alter perioperative practices to prevent or reduce the risk of delirium and other postoperative neurocognitive changes. These data and cases reviewed will highlight how neuropsychology can be involved in perioperative care and champion perioperative interventions for perioperative "rescues".

Categories: Aging

Keyword 1: delirium

Keyword 2: dementia - Alzheimer's disease

Keyword 3: cerebrovascular disease

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Paper Session 05: Head trauma and stroke related topics

2:15 - 3:45pm
Thursday, 2nd February, 2023
Town & Country Ballroom C

Moderated by: Lena Dobson

1 Post-stroke Apathy, Pseudobulbar Affect and Memory Loss Hinder Return-to-Work After CVA

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Objective: Post-stroke depression (PSD) and anxiety disorders are the most common psychiatric issues that occur after cerebrovascular accident (CVA), with prevalence rates of up to 50%. Less studied, post-stroke apathy and pseudobulbar affect (PBA) also occur in a subset of individuals after CVA leading to reduced quality of life. Cognitive impairments also persist, especially memory, language, and executive difficulties. Residual cognitive and emotional sequelae after CVA limit return-to-work with between 20-60% becoming disabled or retiring early. This study examined the frequency and relative contribution of cognitive, behavioral and emotional factors for not returning-to-work after CVA.

Participants and Methods: Participants included 242 stroke survivors (54% women, average age of 59.2 years) who underwent an outpatient neuropsychological evaluation approximately 13 months after unilateral focal CVA. Exclusion criteria were a diagnosis of

dementia, comprehension issues identified during assessment, multifocal or bilateral CVA, and inpatients. Predictors of return-to-work included in logistic regression analyses were psychological (depressive and anxiety disorders, apathy, PBA, history of psychiatric treatment before stroke) and neuropsychological (memory, executive functioning) variables. Depression and anxiety were diagnosed using DSM-IV-TR or -5 criteria. Apathy was operationalized as diminished goal-directed behavior, reduced initiation and decreased interest that impacted daily life more than expected from physical issues after stroke (including self- and family-report using the Frontal Systems Behavior Scale [FrSBe]). PBA was defined by the Center for Neurologic Study-Lability Scale and clinical judgment based on chart review.

Results: Post-stroke apathy persisted in 27.3% of patients 13 months after stroke, PBA persisted in 28.2% of patients (i.e., uncontrollable crying spells not simply attributable to depression alone, uncontrollable laughing spells), anxiety disorders persisted in 18.6% of patients (mainly panic attacks), and PSD persisted in 29.8% of patients. Memory loss persisted in 67.4% of patients and executive difficulties persisted in 74.4% of patients. Thirteen months after stroke, 34.7% of individuals had returned-to-work and 47.1% had not returned-to-work. The other 18.2% were not working either at the time of their stroke or after the stroke. Logistic regression indicated that post-stroke apathy, PBA, and memory loss were significant predictors of not returning-to-work (odds ratio $p < 0.001$). Patients who experienced post-stroke apathy were 7.1 times more likely to not return-to-work after stroke ($p=0.008$), those who suffered from PBA were 4.8 times more likely to not return-to-work ($p=0.028$), and those with memory loss were 6.6 times more likely to not return-to-work ($p=0.005$). PSD, history of treatment for psychiatric issues before the stroke, presence of an anxiety disorder after stroke, and executive difficulties were not significant predictors ($p's > 0.05$).

Conclusions: Results replicate the finding that return-to-work is hindered by residual cognitive deficits after stroke and extends previous research by clarifying the multifactorial emotional and behavioral barriers to not returning-to-work. Results highlight the importance of quantifying post-stroke apathy and pseudobulbar affect in a standard neuropsychological work-up after stroke to identify candidates for services to facilitate