146.3×10⁶/L; RBC 17374×10⁶/L; glucose 4.1 mmol/L; protein 1.4 g/L); mean peripheral WBC 8.2×10⁹/L; RBC 3.9×10⁹/L. Mean pediatric age was 1.4 years; CSF profile (mean WBC 171.8; RBC 41763; glucose 2.7; protein 1.7); mean peripheral WBC 12; RBC 7.2. The observed LP CSF WBC value was 47% of predicted (r^2=0.54 pediatric cohort; r^2=0.91 adult cohort). *Conclusions:* True CSF leukocytosis in both pediatric and adult patients could be missed in a traumatic CSF sample if correction is based on current formulas. We propose a modifcation: ObservedCSFWBC =0.5×[CSFRBC×BloodWBC/BloodRBC].

P.041

Does brain tissue oxygenation (BtO2) predict cognitive decline in patients undergoing hemodialysis? A feasibility study

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Background: Cognitive impairment is highly prevalent in individuals with end stage kidney disease (ESKD) undergoing hemodialysis. The cause is not understood. Our overall hypothesis is that repetitive cerebral hypoperfusion during hemodialysis contributes to accelerated cognitive dysfunction in this patient population. *Methods:* All participants underwent a baseline assessment with the KINARM, a robotic device that provides quantitative metrics of the sensorimotor control of the upper limb in humans. For patients undergoing hemodialysis, BtO2 was monitored during one dialysis session per week. Follow up KINARM assessment was done at 3 months. *Results:* To date, 7 patients have completed baseline testing, with 3 being re-evaluated at 3 months. At baseline, patients were impaired on of the 8 tasks, with the exception of a test of working memory. There was a variable correlation between hemodynamics (e.g. blood pressure and heart rate), fluid removal, and BtO2 levels. At 3 months, the 3 patients improved on the majority of the performance metrics assessed with the KINARM. *Conclusions:* The KINARM is a feasible instrument to measure cognitive dysfunction in individuals with ESKD. In a small cohort, there is improvement in neurocognitive function 3 months after the initiation of dialysis.

Movement

P.042

Associations of pain and depression with marital status in patients diagnosed with Parkinson's disease

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Background: Depression and pain are significant clinical problems that are comorbid with Parkinson's disease (PD). However, the relationship of these variables with the marital status of patients with PD has not been explored in previous studies. The goal of this study was to assess the possible relationship between depression prevalence, depression severity, and pain interference with the marital status of the sufferers of PD. *Methods:* This study included 40 patients and 40 healthy control participants who were assessed for depression prevalence and pain interference using The Hospital Anxiety and Depression Scale and the Brief Pain Inventory, respectively. *Results:* When compared to the control groups, the PD (Single) group was found to have the highest prevalence of depression, followed by the PD (Married) group whereas the Control (Single) group was found to have a higher prevalence than the Control (Married) group ($P < 0.0001$). A main effect was found on depression severity ($P < 0.0001$), but no significant differences were observed between the PD groups. Lastly, PD (Single) patients had significantly greater pain interference scores than the PD (Married) patients ($P < 0.05$) with no other significant case-control or control-control group differences. *Conclusions:* Patient-spouse relationship may have a mitigating effect on patient outcomes of depression prevalence and pain interference.

P.043

Perceptual descriptors and clinical determinants of pain in Parkinson's disease: focus on patients' experiences

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Background: Pain is a disabling non-motor symptom of Parkinson's disease (PD), which remains underacknowledged, undertreated and often undeclared by patients in the clinical practice. Prevalence of pain ranges from 40-75% among PD patients; however, clinical determinants and self-reported perceptual experiences of pain require further research. *Methods:* 121 PD patients (age: 67.3±11.4) from community-based clinic were analyzed cross-sectionally. Perceptual experiences and clinical predictors of pain were assessed using structured interviews, questionnaires and neurological examinations. *Results:* 80 (66%) PD patients reported pain; 65 (54%) described the severity as 'moderate/high'. Dystonic was the most frequent clinical pain 37/80 (48%), followed by neuropathic (36%), akathisia (29%) and musculoskeletal (28%). More than one type of clinical pain was assessed in 22 (28%) patients. Aching was the most common perceptual descriptor of pain (46%), followed by sharp/deep (30%), tension (18%) and dull (14%). PD localized on the right side quadrupled the odds of pain on the right (OR=4.4, 95%CI [1.1-18.2]); and pain described as 'sharp' predicted neuropathic pain (OR=5.6, 95%CI [1.1-29.2]). Pain prevalence also increased with progressive Hoehn-and-Yahr stage. Interestingly, only 51% of patients perceived effects of PD medications on pain symptomology. *Conclusions:* Perceptual descriptors of pain can provide novel approaches to classify, treat and manage PD. Longitudinal investigations with larger sample are warranted.