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## **Prevalence of and Factors Associated with Mini-Mental State Examination (MMSE)-Assessed Cognitive Function Deficit in Patients on Peritoneal Dialysis (PD)**

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MMSE has been used to assess cognitive function for more than two decades. Patients on dialysis due to chronic renal failure (CRF) have a high prevalence of risk factors for cognitive impairment. We undertook a cross-sectional study in the dialysis unit of IMEPEN Foundation, UFJF-Brazil, in order to assess the prevalence of and factors associated with cognitive impairment, as determined by the MMSE, in CRF patients on PD. Twenty-three patients were assessed with the MMSE in the period November-December, 2005. Assessment included demographic data, co-morbidity, CRF etiology, length and type of dialytic therapy, laboratory measurements of the 3 previous months (Kt/V, hemoglobin, calcium, phosphate, iPTH, free-T4 and TSH), Verbal Fluency Test and BDI-assessed depression. Mean age was  $60.6 \pm 14.4$  years, and 56.5% were females. Half the patients had diabetic nephropathy, 87% had hypertension. Mean length of dialytic therapy was  $30.5 \pm 21.7$  months, and Kt/V was  $1.9 \pm 0.8$ . Only 4% scored 30 (normal) on MMSE. 35% scored 26-29 (questionable dementia), 39% scored 21-25 (mild dementia), 17% scored 11-20 (moderate dementia), and 4% scored 0-10 (severe dementia). The Verbal Fluency Test showed 50% of the patients to have impairment of evoked memory. BDI showed 43.5% of the patients with mild depression, with 56.5% being classified as moderate. MMSE correlated with the Verbal Fluency Test ( $r=0.43$ ,  $p=0.04$ ), with years of education ( $r=0.47$ ,  $p=0.026$ ), and the presence of stroke sequelae ( $r=0.715$ ,  $p<0.000$ ). The Verbal Fluency Test correlated with age ( $r=0.536$ ,  $p=0.008$ ), years of education ( $r=0.599$ ,  $p=0.003$ ), and benzodiazepine use ( $r=0.476$ ,  $p=0.025$ ). There was no correlation of cognitive function, although there was strong correlation of BDI with age ( $r=0.519$ ,  $p=0.01$ ). Our study revealed an elderly population, with high prevalence of cognitive impairment as assessed by the MMSE. Evoked memory, as assessed by the Verbal Fluency Test, was shown to be highly compromised, correlating with age and drug use. We concluded that this is a high risk population for dementia, periodical screening testing with MMSE and Verbal Fluency Test being warranted.