P3-114 DEMOGRAPHIC CHARACTERIZATION AND RISK FACTORS FOR ALZHEIMER'S DISEASE IN PATIENTS FROM THE UBC CLINIC FOR ALZHEIMER DISEASE AND RELATED DISORDERS

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Background: The UBC Hospital Clinic for Alzheimer Disease and Related Disorders (UBCH-CARD) has been collecting demographic information and data on risk factors for dementia in its patient population since 1984. These data were used to characterize the UBCH-CARD patient population with Alzheimer disease (AD) and to compare this population to a Canada wide sample of AD patients. **Methods:** The UBCH-CARD patient population with a diagnosis of ''definite AD'' or ''probable AD'' (AD patients) was characterized according to demographic and family history features. Risk factors for this population were compared to those for the AD population ascertained through the Canadian Study on Health and Aging (CSHA)1. Comparisons were done using chi-square analysis with significance (p) at the 0.05 level. **Results:** UBCH-CARD AD patients were most frequently Caucasian, female, had least some high school education, worked in a technical/professional occupation, and were first-born children. Rates of family history of AD, and personal history of depression, thyroid conditions, head injury and level of education were significantly higher in the CSHA AD population compared to the UBCH-CARD AD population. However, there was a significantly lower level of family history of depression in the CSHA AD sample compared to that of UBCH-CARD. **Conclusions:** The characterization of the UBCH-CARD patients may serve as a basis for further studies. There are noted differences between the UBCH-CARD AD population and those characterized by the CSHA study. The causes and implications of these observed differences are uncertain. The UBCH-CARD may represent a unique patient population with respect to the rates of several risk factors for AD.

P3-115 CHRONIC KIDNEY DISEASE AND COGNITIVE FUNCTION IN OLDER ADULTS: THE CRIC COGNITIVE STUDY

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Background: Chronic kidney disease (CKD) is common and associated with substantial excess morbidity and mortality. The association between CKD and cognition, especially across different cognitive domains, is understudied. **Methods:** As an ancillary study, we administered a battery of six cognitive tests to a subcohort of men and women ≥55 years of age with CKD enrolled in the NIDDK-sponsored multi-center longitudinal study, the Chronic Renal Insufficiency Cohort (CRIC) Study. We estimated glomerular filtration rate (eGFR, ml/min/1.73 m2) using the four-variable Modification of Diet in Renal Disease (MDRD) equation based on serum creatinine measurement. We compared cross-sectional cognitive function test scores across eGFR strata (60 ml/min/1.73m2) using linear regression; multivariable logistic regression was used to examine the independent association between level of kidney function and clinically significant cognitive impairment defined as a test score worse <1 sd or more from the mean. **Results:** Among the 825 participants, mean (SD) age was 64.9 years (5.6), 50% were male and 45% were African American. After adjusting for age, race, education, gender, body mass index, diabetes, hypertension, and depression, those with lower eGFR had lower cognitive scores on 4 of the 6 tests (P<0.05) including global cognition, attention, executive function and confrontational naming. When compared with persons who had mild or moderate CKD (eGFR 45-60 ml/min/1.73m2), participants with advanced CKD (eGFR <30 ml/min/1.73m2) were more likely to have clinically significant impairment on tests of global cognition (adjusted OR=2.03; 95% CI 1.07, 3.86), naming (OR=1.85; 95% CI 1.04, 3.28), attention (OR=2.41; 95%CI 1.30, 4.50) and executive function (OR=2.47; 95%CI 1.38, 4.42) but not on verbal memory or fluency. **Conclusions:** Among older adults with CKD, lower level of kidney function was associated cross-sectionally with lower cognitive function on most domains, despite adjustment for comorbid conditions and demographic factors. Our results suggest that elders with advanced CKD should be screened for cognitive impairment. Future studies should identify the mechanisms linking these conditions.

P3-116 INTENSITY OF LONG-TERM PHYSICAL ACTIVITY AND LATER LIFE COGNITION IN POSTMENOPAUSAL WOMEN

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Background: Long-term strenuous physical activity decreases lifetime exposure to ovarian hormones in women and has been found to play a protective role against breast cancer; however reduction in ovarian hormone exposure has been associated with increased risk of cognitive impairment. Long-term physical activity has been found to be associated with improved cognition but the intensity required to preserve cognition is not known. Our purpose was to examine the associations between both long-term strenuous and moderate activity levels and cognition in recently postmenopausal women. **Methods:** Participants were 90 women aged 50-63 years, 1 to10 years post natural menopause, with no history of breast cancer, HRT use, psychiatric disorder, dementia or other neurological condition. Participants provided information on the amount of strenuous and moderate physical recreational activities in which they engaged during successive periods from high school to menopause. Summary measures of each type of physical activity were constructed. Neuropsychological tests measuring memory and frontal lobe functioning were also administered. **Results:** Linear regression analyses were conducted for each of 8 neuropsychological outcome measures, adjusted for age, education, reproductive years, cigarette smoking, alcohol consumption, parity, and periods of amenorrhea, to control for potential effects on outcome and exposure to ovarian hormones. Strenuous and moderate activity levels were both included in each of the 8 regression models. Long-term strenuous activity was consistently associated with poorer performance on all 8 of the neuropsychological measures: significant negative associations at $p < 0.05$ were found on tests of semantic memory, working memory, delayed verbal recall, and sustained attention. Moderate activity was consistently associated with better performance on all 8 of the outcome measures: significant positive associations at $p < 0.05$ were found on tests of cognitive flexibility, working memory, and sustained attention. **Conclusions:** Long-term strenuous activity may increase the risk of cognitive impairment in recently postmenopausal women. Thus strenuous physical activity, while protective for breast cancer, may have deleterious effects on later life cognition whereas moderate long-term physical activity may improve later life cognition. The consistency of the direction of the relationships of these preliminary findings has important implications for lifestyle recommendations and supports the need for large-scale longitudinal studies including both women and men.

P3-117 METABOLIC SYNDROME AND COGNITION IN PATIENTS WITH MANIFEST ARTERIAL DISEASE: THE SMART STUDY

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