Background: There has been interest in an unusual clinical phenomenon, in which a patient draws a complex figure in a position that is grossly rotated relative to the original. This implicates theories of objective recognition and visuospatial function. It has been claimed that rotated drawings was related to the dysfunction of parieto-occipital lobe or frontal lesions. However, the range of perfomance as well as anatomical correlation remains obscure. **Methods:** 76 year old woman with right caudate nucleus infarction case. **Results:** A 76-year-old, uneducated woman visited to our hospital because she had wandering on the familiar road to the daughter's house 2 days ago. She had no history of impairment with cognition and active daily living (ADL). She had recognized hypertension for twenty years. On neurological examination, she was alert and no deficit of motor and sensory system on grossly except cognition found. Her performance on neuropsychological tests was impaired in frontal executive function and verbal memory as well as copying of Rey-Osterrieth Complex figure. The figure was rotated in copying tasks by 90-degree conterclockwise. On Brain Magnetic Resonance Image (MRI), acute infarction in the head of right caudate nucleus region was observed. After 2 month later, rotation recorvered at follow up neuropsychological evaluation. **Conclusions:** Many connections exist between frontal lobe and basal ganglia. Our result suggests that frontal lobe-basal ganglia dysfunction by caudate infarction can be concerned for rotated drawing.

P4-095 THE PREVALENCE AND IMPACT OF TYPE 2 DIABETES IN MILD COGNITIVE IMPAIRMENT AND ALZHEIMER'S DISEASE

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Background: Research suggests an elevated risk of Alzheimer's disease (AD) among persons with type 2 diabetes (T2DM), even after controlling for other comorbid illnesses such as cardiovascular disease. It remains unclear if mild cognitive impairment (MCI) also is associated with higher rates of T2DM or whether the presence of T2DM contributes to cognitive impairment in MCI. The present study examined the prevalence of T2DM in patients diagnosed with MCI in comparison to patients with AD and healthy older controls participating in the Michigan Alzheimer's Disease Research Center (MADRC). **Methods:** A total of 212 participants were recruited (mean age = 72.41; 51% female) and underwent a neurologic examination and cognitive testing at the time of their MADRC enrollment. Patients' demographics, medical and family health histories, as well as functional status were assessed. Of the 212 participants, consensus diagnosis established 21% as MCI, 41% as AD. Another 38% were healthy older volunteers. For MCI patients, the differential effects of T2DM status were separately examined in both amnestic and nonamnestic patients. **Results:** The prevalence of T2DM in the normal control group was 6%, and 12% in the AD group. The prevalence T2DM in the MCI group was 19%. Among the MCI patients, the prevalence of T2DM was 19% in the amnestic group and 50% in the nonamnestic group. Among all MCI patients, those with T2DM performed more poorly on measures of immediate verbal memory (p=.049) and immediate visual memory (p=.001) than those without. Further, a trend also was observed for patients with T2DM to perform more poorly on delayed verbal and visual recall measures (p=.061, and p=.070, respectively). Within the AD group no differences were evident between T2DM and non-T2DM groups. Among controls, nonparametric testing demonstrated cognitive difficulties consistent with those observed in MCI with T2DM. **Conclusions:** These findings suggest that T2DM may contribute to cognitive difficulties in non-demented older adults, particularly those with nonamnestic MCI. Longitudinal follow-up of these individuals will be important in more clearly understanding the impact of T2DM in predicting cognitive decline over time and better clarifying the relationship between T2DM and possible underlying pathology associated with MCI.

P4-096 PRECLINICAL ALZHEIMER'S DISEASE CANNOT BE RELIABLY IDENTIFIED IN THE ANTEMORTEM SETTING USING STANDARD CLINICAL AND NEUROPSYCHOLOGICAL TEST MEASURES

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Background: Preclinical Alzheimer's disease (pAD) can be seen in the brains of many cognitively normal subjects at autopsy. The lack of clinical symptoms in such cases has been hypothesized to relate to ''cognitive reserve''. Subtle clinical signs including neuropsychological test profiles may aid in the potential antemortem identification of subjects with pAD. **Methods:** The University of Kentucky Alzheimer's Disease Center follows a large group of cognitively normal subjects that agree to undergo extensive longitudinal annual clinical evaluations and consent to brain autopsy at death. Since 1989, 160 cognitively normal subjects have come to autopsy from this group. Detailed neuropathological and antemortem clinical data are presented and analyzed to determine the clinical variables that may aid in the antemortem identification of subjects with pAD. **Results:** All subjects were cognitively normal on last examination before death (mean time from last examination to death was less than one year). pAD in this group was defined by NIA-Reagan intermediate or high-likelihood of AD despite the absence of clinical symptomatology (n=32, 20%). Other classifications include: pathologically normal (NIA-Reagan low or no-likelihood of AD, n=91), β-amyloid predominant pathology (CERAD probable or definite, Braak stage II or lower, n=14), neurofibrillary tangle predominant pathology (CERAD possible or no, Braak stage III or higher, n=23). While Folstein MMSE ($p<0.01$) and category fluency ($p<0.05$) differentiated subjects without AD pathology from those with pAD in unadjusted analyses, statistical significance was lost after correction for age, education, gender, and time from last testing to death. Trailmaking A & B, CERAD word list learning/delayed recall/recognition, Boston Naming test, and CERAD T-scores were unable to differentiate neuropathologically normal from pAD subjects in either unadjusted or adjusted analyses. **Conclusions:** pAD cannot be reliably detected in cognitively normal elderly persons using standard clinical and neuropsychological test data. Antemortem detection of pAD is dependent on the development and validation of imaging, CSF, serum or other biomarkers of disease that are currently be developed and validated in centers worldwide.

P4-097 ACCURACY OF REPORTED FAMILY HISTORY AND EFFECTIVENESS OF MEDICAL RECORD REQUESTS IN GENETIC COUNSELING FOR ALZHEIMER'S DISEASE

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Background: Family histories are obtained by a genetic counselor for all new patients assessed at the UBC Hospital Clinic for Alzheimer Disease and Related Disorders (UBCH-CARD) using a systematic interview. The genetic counselor invests significant effort to obtain medical records to confirm family histories of memory concerns, dementia, or Alzheimer's disease (AD) as reported by families. An accurate family history is important in the management and genetic counseling of persons with dementia. Family histories can play a role in determining follow-up options such as genetic testing, DNA banking and/or planning for autopsy confirmation of AD. The process of requesting and interpreting medical records is labor intensive and time consuming. Here, we sought to determine how often the receipt of medical records changes the information and recurrence risks provided during a genetic counseling session. **Methods:** The number of record requests made for the 394 new patients seen by the genetic counselors at UBCH-CARD in 2005 and 2006 was quantified and categorized according to outcome. The accuracy of reported family histories was assessed by comparing them