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Background: Genetic studies identified an association between Alzheimer's disease (AD) and common polymorphisms in the *MS4A* and *TREM* loci, each containing cluster of homologous genes. **Methods:** We searched for rare coding variants in 15 genes mapped to these loci by next generation sequencing of a North American dataset (210 cases and 233 controls). **Results:** Analysis of the *MS4A* gene-cluster revealed loss-of-function variants in 6 controls and 3 cases. Investigation of the *TREM* gene-cluster detected known AD associated *TREM2* substitutions (p.R47H, p.D87N and p.H157Y) affecting both TREM2 isoforms (NM_018965 and NM_001271821). We also identified two cases with novel *TREM2* variants (p.L205P and p.G219C), which mapped only to the isoform NM_001271821. A p.S248R substitution in the homologous *TREML2* gene was detected in 5 controls and 1 case suggesting a protective effect (pooled p-value = 0.033). **Conclusions:** Our study advocates for the importance of mutation analysis of controls, particularly for GWAS loci containing SNPs with a minor allele frequency higher in controls versus cases (e.g. *MS4A* locus), to search for functional variants with a protective effect.

P2-174 IMPULSIVITY IN ALZHEIMER'S DISEASE AS DETECTED BY D-CPT

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Background: Behavioral symptoms are among the most disruptive features of Alzheimer's Disease (AD). Data on correlation of impulsive symptoms with disease duration and disease stage as well as disease presentation is limited. This study aimed to assess the correlation between impulsivity and disease characteristics. **Methods:** Data from consecutively admitted 20 mild and 20 moderate stage AD patients were retrospectively evaluated. All patients had dementia due to AD according to IWG criteria. Patients included in the study were on stable antidementia treatment for at least three months. None of the patients were under psychiatric treatment at the time of evaluation. All patients had at least one brain imaging as well as neuropsychological testing. Impulsivity was tested using Moxo d-CPT as a part of neuropsychological assessment. **Results:** There were 22 females and 18 males. The mean age was 72.8 years. Mean education level was 5.8 years. 26 patients were staged as moderate stage AD whereas rest were mild AD. 6 patients (35,7%) in mild AD group and 14 patients in moderate AD group (53,8%) significant impulsivity according to Moxo d-CPT results. Frequency of impulsive symptoms were significantly higher in moderate AD group compared to mild AD group ($p<0,05$). There was a negative correlation between executive functions and impulsivity ($p<0,01$). There was a positive correlation between disease duration and impulsivity ($p<0,01$). **Conclusions:** Impulsivity is frequent even in the early stages of AD. Impulsivity in AD is correlated with disease duration and executive dysfunction.

P2-175 NEUROPSYCHIATRIC SYMPTOMS OF DEMENTIA AND CARER BURDEN: CONSIDERING THE ROLE OF CARER MANAGEMENT STYLE: FINDINGS FROM THE BESYDE PILOT STUDY

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Background: It is well established that neuropsychiatric symptoms in dementia are linked to carer burden. Increasing evidence suggests this relationship to be bi-directional. While research has linked carer management styles to greater carer burden (Hinrichsen and Niderehe, 1994), the impact of carer management style on neuropsychiatric symptoms have not yet been examined. Using data from the Behavioural and Psychological Symptoms of Dementia (BeSyDe) pilot study, we examined the role of carer management style on care-recipient neuropsychiatric symptoms and carer burden. **Methods:** Structured interviews were conducted with 38 community-dwelling dyads comprising people with dementia and neuropsychiatric symptoms (age range 63-91 years; 20 males; mean MMSE = 19.6) and their carers (age range 44-88 years; 15 males; mean MMSE = 29.4, 30 spouses and 8 children). Carer management style was assessed using the Quality of Informal Care measure (QoIC, McClendon and Smyth, 2013) which assesses six independent caregiving styles (personalized, respectful, compensatory, punitive, controlling and withdrawing). Frequency and severity of neuropsychiatric symptoms were assessed using the Neuropsychiatric Inventory (NPI). Carer burden was assessed using the Zarit Burden Index (ZBI). Associations were tested in a multiple regression analysis using a bootstrap of 1000 samples. **Results:** Strong associations were reported between NPI total scores and ZBI ($r = .63$) and with QoIC factors ($r = .73$). Similarly, QoIC were strongly related to ZBI ($r = .78$). Multiple regression analysis revealed that any association between NPI total scores and ZBI was fully attenuated by the inclusion of the QoIC factors. Compensatory ($\beta = 1.49$ (SE = .55) $p = .011$) and punitive ($\beta = 3.63$ (SE = 1.17) $p = .004$) caregiving were the strongest drivers of carer burden. **Conclusions:** This pilot study provides initial evidence of associations a) between carer management style and neuropsychiatric symptoms in people with dementia, and b) carer management style and carer burden. The findings from this pilot study highlight the need to consider the role of carer management style, especially compensatory and punitive caregiving, when investigating the impact of care-recipient neuropsychiatric symptoms on carer burden. More research is needed to confirm the current findings of this pilot study.

P2-176 PREVALENCE OF MILD BEHAVIORAL IMPAIRMENT (MBI) IN A MEMORY CLINIC POPULATION AND THE IMPACT ON CAREGIVER BURDEN

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