**Methods:** A total of 576 consecutive patients with stroke (mean age, 65.2 years; range, 23–93 years) were screened for delirium from 2012/8/1 through 2014/7/31 in acute stroke care unit of a tertiary referral hospital. We screened delirium with the Confusion Assessment Method (CAM). Once delirium was suspected, we evaluated the symptoms with Korean Version of the Delirium Rating Scale-Revised-98 (K-DRS-R-98). Neurologic deficits were assessed with the NIH Stroke Scale at admission and discharge and functional ability with the Barthel Index (BI) and modified Rankin Scale (mRS) at discharge and 3 months after discharge. **Results:** Thirty-eight patients with stroke (6.7%) developed delirium during admission in acute stroke care unit. Patients with delirium were significantly older (70.6 vs 64.9, p=0.001) and smoking cigarette more frequently (40% vs 24%, p=0.033) than without delirium. In terms of clinical features, delirium group had significantly higher rate of major hemispheric stroke (55% vs 26%, p<0.001) and showed poorer functional performance at discharge and 3 months after discharge and significantly longer hospitalization period. Independent risk factors for delirium were older age, cigarette smoking and major hemispheric stroke. **Conclusions:** Cessation of current cigarette smoking during admission was associated with post-stroke delirium. The occurrence of delirium after stroke is associated with longer hospitalization period and worse outcomes and should be monitored and managed carefully.

**Poster Presentations: Wednesday, July 27, 2016**

**P4-136** CIGARETTE SMOKING IS AN INDEPENDENT RISK FACTOR FOR POST-STROKE DELIRIUM

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**Background:** Post-stroke delirium is a common problem in care of stroke patients and is known to be associated with longer hospitalization, high short term mortality and increased need for long-term care. It usually occurs in about 10–30% of patients but only a little has been studied about the risk factors of post-stroke delirium in acute stroke care unit. **Methods:** A total of 576 consecutive patients with stroke (mean age, 65.2 years; range, 23–93 years) were screened for delirium from 2012/8/1 through 2014/7/31 in acute stroke care unit of a tertiary referral hospital. We screened delirium with the Confusion Assessment Method (CAM). Once delirium was suspected, we evaluated the symptoms with Korean Version of the Delirium Rating Scale-Revised-98 (K-DRS-R-98). Neurologic deficits were assessed with the NIH Stroke Scale at admission and discharge and functional ability with the Barthel Index (BI) and modified Rankin Scale (mRS) at discharge and 3 months after discharge. **Results:** Thirty-eight patients with stroke (6.7%) developed delirium during admission in acute stroke care unit. Patients with delirium were significantly older (70.6 vs 64.9, p=0.001) and smoking cigarette more frequently (40% vs 24%, p=0.033) than without delirium. In terms of clinical features, delirium group had significantly higher rate of major hemispheric stroke (55% vs 26%, p<0.001) and showed poorer functional performance at discharge and 3 months after discharge and significantly longer hospitalization period. Independent risk factors for delirium were older age, cigarette smoking and major hemispheric stroke. **Conclusions:** Cessation of current cigarette smoking during admission was associated with post-stroke delirium. The occurrence of delirium after stroke is associated with longer hospitalization period and worse outcomes and should be monitored and managed carefully.

**P4-138** GENETIC AND COGNITIVE RESERVE FACTORS ASSOCIATED WITH DELIRIUM SEVERITY IN OLDER ADULTS WITH DEMENTIA

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**Background:** Delirium is a common and deadly neuropsychiatric syndrome in older adults with dementia. The effects of delirium persist long after hospitalization, are associated with high healthcare costs, and manifest as worsening global cognition. Genetic and cognitive reserve factors may influence delirium severity, but results have been mixed in cognitively intact populations. The goal of this study was to extend previous work on genetic and cognitive reserve factors related to delirium in people with dementia during a post-acute care (PAC) stay. Our aims were to determine: 1) if delirium severity was associated with APOE status and occupational complexity, and 2) if decline in delirium severity associated with these same factors over a PAC stay. **Methods:** Control group data (n=142) from a completed randomized clinical trial (ClinicalTrials.gov identifier: NCT01267682) were used to address the aims of the study. APOE status was determined by extracting DNA from buccal swabs to identify the six APOE genotypes comprising the APOE *e2, *e3 and *e4 alleles. Occupational complexity was derived from the Lifetime of Experiences Questionnaire. Covariates examined included age, gender, education, Clinical Dementia Rating Scale (CDR), and the Charlson Comorbidity score. Data were nested (i.e., days nested within persons) and analyzed using multilevel models. **Results:** The presence of an e4 allele (B = 0.53 (0.23), p = .03) and higher CDR (B = 0.59 (0.19), p = .002) were associated with greater delirium severity at baseline. The presence of an e4 allele was also associated with greater average delirium severity (B = 0.42 (0.20), p = .04). Occupational complexity did not predict baseline delirium severity or average delirium severity. We also estimated the trajectories of delirium severity by tertiles of occupational complexity: 1 SD above the average occupational complexity (high), 1 SD below the average occupational complexity (low) and those with average occupational complexity. The low occupational complexity group was the only group to show a significant decrease in delirium severity during the course of their PAC stay (B = -0.02 (0.01), p<.01). **Conclusions:** Individual differences, including genetics and cognitive reserve factors contribute to the severity of delirium in older adults with dementia.

**P4-137** FRAILTY AND EXECUTIVE FUNCTIONING: DOES A RELATIONSHIP EXIST BETWEEN THEM?

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**Background:** The frailty syndrome (in the elderly) is characterized mainly by loss of functional reserve. Which determines greater susceptibility to external aggression by reducing the response mechanisms and their effectiveness in preserving homeostasis. This syndrome may increase the risk of cognitive impairment, but the existing evidence is not yet conclusive. Because executive functions (EF) are high order cognitive functions that allow efficient goal-oriented behaviors, it is proposed that EF can be associated to frailty syndrome. We tested the association between EF alterations and frailty. **Methods:** The database of the population-based study of the Dementia Research Group 10/66 in Mexico (2009) was used for this study. A frailty model proposed, include 4 domains: gait speed, low energy expenditure, exhaustion and weight loss. A frail elderly was considered if two or more of these domains were affected. We excluded subjects who had other conditions that may affect EF, such as: dementia, neuroinfection and head injuries. **Results:** 1549 subjects were included in this study; their average age was 74 years (SD± 6.39), 60.2% were females with an average age 75 (SD± 6.4) and 74 years (SD± 6.1) for men. The marital status was mainly married (50.3%). The frailty prevalence was 23.4% (19.5% and 3.9% met two and three criteria respectively), 31% of the frail subjects also had alterations in the Luria test (p<0.01) and 32.8% had alteration in verbal fluency test (p=0.08). **Conclusions:** There are scarce literature reports that describe the relationship between EF and frailty, and their results are contradictory. Most reports have look for the association of specific EF such as attention and process speed to frailty. This report contributes adding evidence of the EF alterations in frail subjects. Since we confirm that there is a relationship between these pathologies. Further studies are needed to clarify the influence that each one has over the other.

**P4-139** NEUROPSYCHIATRIC SYMPTOMS DISTRESS COMPARISON BETWEEN CAREGIVERS OF ALZHEIMER DISEASE AND FRONTOLOBAR DEGENERATION PATIENTS

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Background: Neuropsychiatric symptoms (NPS) are common in dementia and they have an important role over the caregiver distress; the instrument most widely used to explore them is the Neuropsychiatric Inventory (NPI-i) it includes a caregiver distress scale. The goal of this study was to identify and compare the NPS in subjects with Alzheimer’s Disease (AD) and Frontotemporal lobar degeneration (FTLD) and analyze the distress caused for the NPS to the caregivers in different stages of the disease. Methods: Two groups of patients were studied: one with 37 AD and other with 12 FTLD patients, assessed from January 2015 to January 2016 at the National Institute of Neurology of Mexico. The NPS and the caregiver distress were evaluated by the NPI-i. Results: For the whole group (N=49), the mean age was 64 years (SD ± 12.8), 65% were women. None of the sociodemographic variables analyzed showed statistical significant difference. The minumetal state examination (MMSE) average score was 15 (SD ± 6) for the whole group, for the AD group the MMSE average score was 15 points (SD ± 6) and for the FTLD group 14 points (SD ± 7). Also we graded the severity of the dementia (clinical criteria and MMSE score), 16 (31%), 10 (20%) and 15 (33%) were the patients with mild, moderate and severe dementia. Regarding the presence and severity of the NPS two showed statistical differences: elation/euphoria (p=0.01 and p=0.02 for presence and severity respectively), and appetite/eating (p=0.05 and p=0.01 for presence and severity respectively). The symptoms that showed statistical significance regarding the caregiver distress between both groups were for mild dementia: elation/euphoria (p=0.008) and disinhibition (p=0.03); for moderate dementia agitation/aggression (p=0.03). For severe dementia the symptoms that had statically significant difference were: depression/dysphoria (p=0.01), aberrant motor behavior (p=0.03), nighttime behavior (p=0.02), and appetite/eating (p=0.05). Conclusions: What attract our attention were the differences of the symptom’s distress reported for the caregivers at the later stages of the diseases, this may be influenced by other external factors. The interest to treat the stressfulness of the caregiver is mainly to maintain the highest quality of life possible for both: patient and caregiver.

**P4-140** OBSESSIVE COMPULSIVE SYMPTOMS BEFORE FRONTOTEMPORAL DEMENTIA: A REVIEW OF IMAGING CASE SERIES

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Background: Evidence shows that compared to healthy controls, obsessive compulsive disorder (OCD) patients have frontal brain hyperactivity and regional (white and grey matter) volume differences but not focal atrophy. Also, obsessive compulsive symptoms (OCS) occasionally preceede (up to 27 years) the clinical diagnosis of Frontotemporal Dementia (FTD). This relationship may affect brain morphology and functionality. Understanding of the possible imaging differences may improve differential diagnosis. Aim: To examine the structural (MRI, CT) and functional (PET, SPECT) imaging of case-reports currently published on manifestation of OCS prior to FTD. We hypothesis that these cases have a different neuroanatomical substrate in comparison to OCD alone, as presented in the literature. Methods: Individual-patient data were extracted from case-reports after systematic searches on PubMed (N=29) and EMBASE (N=84). Inclusion criteria consisted of cases OCs or OCD prior to clinical diagnosis of FTD, with imaging data. Results: Twenty cases of OCD and OC prior to diagnosis of FTD that reported data on structural and/or on functional imaging were included in our analysis. Atrophy via MRI/CT was frequently reported in frontal lobe [FL: 16 cases (80%)], temporal lobe [TL: 14 cases (70%)], parietal lobe [PL: 2 cases (10%)], caudate nuclei [2 cases (10%)], and insular/amygdala [1 case]. These cases of OC/ OCD prior to FTD predominantly reported symmetric presentation, 7 of the TL (50%), and 11 of the FL (69%) cases. The most common PET/SPECT observations were, 7 cases of TL hypometabolism (HM), 3 cases of TL hypoperfusion (HP), 7 cases of FL-HM, 6 cases of FL-HP, 2 cases of PL-HM, 1 case of occipital lobe-HM, and 1 caudate nuclei-HM. The lateralization presentation for these HM and HP were sporadic. Conclusions: In contrast to what is reported in the neuroimaging literature on OCD alone, our findings from the case-series of patients with OCs/OCD prior to FTD show abnormal brain imaging in terms of atrophy and hypo-function, with heterogeneous distribution and lateralization.

**P4-141** MOTOR ASPECTS OF DAILY LIVING FOLLOW COGNITIVE AND FUNCTIONAL STATUS BUT NOT BEHAVIOURAL SYMPTOMS IN PATIENTS WITH LEWY BODY DEMENTIA SYNDROMES

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Background: Lewy body dementia syndromes present motor impairment and neuropsychiatric symptoms among their main manifestations. It is unclear how motor signs are associated with behavioural and functional status in these patients. Methods: Participants with Parkinson’s disease dementia (PDD) or dementia with Lewy bodies (DLB) were screened with the Movement Disorder Society Unified Parkinson’s Disease Rating Scale (MDS-UPDRS), the Clinical Dementia Rating Sum-of-Boxes (CDR-SB), the Mini-Mental State Examination (MMSE), the 12-item Neuropsychiatric Inventory (NPI), a 15-item Clock Drawing Test (CDT), the Brazilian Version of the Zarit Caregiver Burden Interview (ZCBI), the Index of Independence in Activities of Daily Living (ADL) and Lawton’s Scale for Instrumental Activities of Daily Living (IADL). All tests were correlated with each other by way of linear regressions, with the threshold of significance at p<0.05. Results: We included 47 patients, considering 14 patients with PDD (29.8%) and 33 patients with DLB (70.2%); 23 patients (48.9%) had mild dementia, 15 patients had moderate dementia (31.9%), and 9 patients (19.2%) had severe dementia; 21 patients (44.7%) used Levodopa (12 with PDD and 9 with DLB). For all patients, MDS-UPDRS Parts I (Non-Motor Experiences), II (Motor Experiences) and III (Motor Examination) were associated with each other (p<0.01). MDS-UPDRS Parts II and III were associated with the CDR-SB, the ADL and IADL for all patients (p<0.01). MDS-UPDRS Part II scores were associated with the CDT for DLB (p<0.01) and PDD (p<0.01), with the ZCBI for DLB (p=0.02) and PDD (p=0.01), and with the MMSE for DLB (p<0.01) and PDD...