

## **P49: Sociodemographic and Clinical Insights into Behavioral Variant Frontotemporal Dementia and Early-Onset Alzheimer's Disease in Colombia: A Comprehensive Study of Patients and Caregivers**

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**Objectives:** As life expectancy continues to rise globally, the prevalence of dementia is also increasing. However, there is a lack of studies in Latin American countries that describe the sociodemographic and clinical characteristics of dementia patients and their caregivers, potentially overlooking important differences that could impact diagnosis in a diverse population. This study aims to elucidate the sociodemographic characteristics of patients with Behavioral Variant Frontotemporal Dementia (bvFTD) and Early-Onset Alzheimer's Disease (AD), as well as their primary caregivers in Colombia, while also examining the clinical presentation of dementia.

**Methods:** A total of 83 Colombian participants were included in the study, consisting of 40 healthy controls and 43 individuals previously diagnosed with bvFTD (n = 20) and early-onset AD (n = 23). Diagnoses were established based on the current diagnostic criteria for both conditions. Participants underwent sociodemographic assessments, and a clinical evaluation was conducted. Additionally, caregivers were characterized sociodemographically.

**Results:** Most participants were female (67%) with a mean age of 63 years. Educational levels were comparable between the dementia group (12.4 years) and the control group (12.9 years). A higher proportion of dementia cases were observed in lower socioeconomic status categories (1 to 3). Past medical history of hypertension, type 2 diabetes, and traumatic brain injury was more prevalent in the bvFTD group, whereas coronary disease was more common in the AD group. Initial psychiatric misdiagnosis occurred more frequently in bvFTD (50%) compared to AD (26%), with depression being the most common misdiagnosis in both groups (37.5%), followed by bipolar disorder (25%) and anxiety (25%). Most caregivers were female (70%) with a mean age of 50 years. The most common caregiver-patient relationships were daughter (25.6%) and husband (25.6%), followed by wife (23.3%). The mean educational level of bvFTD caregivers (13.95) was higher than that of AD caregivers (12.87).

**Conclusions:** These findings provide valuable insights into the sociodemographic characteristics of dementia patients and their caregivers in Latin America, a population that is often underrepresented in research. Further exploration of diagnostic variations may be warranted, given the high prevalence of misdiagnosis in this region.

## **P50: Development of Alzheimer's Disease (AD) and Recent Stressful Life Events**

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**Background:** The sporadic nature of AD suggest that aside from biological determinants, environmental factors such as stress may play a role in the development, progression and outcome of disease. Recent data implicated stress as a potential risk factor in development of AD. This study aims to analyze the possible relationship between recent stressful life events and AD.

**Methods:** We studied 132 patients with diagnosis of probable AD, according validated criteria, in mild to moderate stages. Medium age was 72.4 years. Meantime elapsed from the initial symptoms was 2.4 years. A control group of 89 healthy individuals paired for age, sex and education was studied. A questionnaire looking for stressful life events in the 3 years before diagnosis of AD was performed to patients, caregivers and controls.

**Results:** In the AD group, 97 patients (73.5%) presented a history of significant stressful life events, 2.3 years (SD 1.4 years) before the onset of symptoms. The most common findings in the AD group were: couple death (28 cases), son's death (17 cases), history of assault or violent theft (25 cases), and history of car accident without severe injuries (13 cases). Other stressful situations were marked financial problems, bereavement, retirement, adaptive changes due to migrations and diagnosis of severe somatic disease in the family. In the control group, only 24 individuals (27%) recognized similar previous stress factors in the previous 3 years

**Conclusions:** We observed an association between stressful life events preceding the onset of dementia in a high percentage of our patients. Stress could trigger the degenerative process in AD and growing evidences suggest a dysfunction in neuroendocrine and immune system. According our results, we can establish a relationship between several stressful life events and the onset of dementia. It is an observational finding and does not imply direct causality. Future studies are required to examine this association in more detail in order to explain the possible mechanisms of this relationship.

## **Poster Session 2:**

### **P1: Clinical value of plasma soluble TREM2 in identifying mild cognitive impairment: A community-based study of the Chinese elderly**

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**Objectives:** To clarify that correlation in plasma soluble TREM2 (sTREM2) and cognitive function between mild cognitive impairment (MCI) and normal cognitive function in a Chinese community population, and further to explore whether plasma sTREM2 can be used as a blood biomarker to predict and identify MCI.

**Methods:** This study included 216 community elderly people in Shijiazhuang and Xingtai City, Hebei Province, including 106 MCI and 110 normal cognitive function (NC) subjects. The Montreal cognitive assessment (MoCA) was used, mini mental state examination (MMSE), Boston naming test (BNT), digit span test (DST) to evaluate the cognitive functions of all subjects. Fasting venous blood was collected at the same time, and ELISA was used to detect A $\beta$ 42, A $\beta$ 40, P-Tau217, P-Tau231, TREM2, sTREM2 concentration. Use software based on SPSS26.0 to analyze the data.

**Results:** 1. The level of sTREM2 in the MCI group was higher than that in NC group, and the difference was statistically significant ( $H = 4312.0$ ,  $P = 0.001$ ). There was no statistical significance in the difference of the other index between two groups ( $P > 0.05$ ). 2. Correlation analysis showed that sTREM2 was negatively correlated with P-tau217, education level, MMSE, MoCA, BNT, and DST ( $P < 0.05$ ). TREM2 was positively correlated with P-tau217 and A $\beta$ 42 ( $P < 0.05$ ). 3. Incorporate whether it was MCI as the dependent variable, gender, age, education level, living