POSTERIOR CORTICAL ATROPHY (PCA): CLINICAL ASSESSMENT AND CEREBROSPINAL FLUID BIOMARKERS (CSF)

E. Talassi\(^1\), A. La Sala\(^2\), A. Codemo\(^2\), A.M. Chiamenti\(^2\), C. Ruaro\(^2\), S. Poli\(^2\), C. Gabelli\(^3\)

\(^1\)ULSS 5- Centro Regionale Invecchiamento Cerebrale, Valdagno, \(^2\)ULSS 5- Centro Regionale Invecchiamento Cerebrale, \(^3\)Università di Padova, ULSS 5- Centro Regionale Invecchiamento Cerebrale, Vicenza, Italy

Introduction: PCA is a form of dementia characterized primarily by prominent disorders of higher visual processing.

Aims: To describe clinical profile and CSF biomarkers in five patients with PCA and to compare their CSF values with those of an Alzheimer's disease sample.

Methods: Clinical, cognitive, functional and neuroimaging features, CSF biomarkers (ELISA Innogenetics; ng/L) and ApoE genotype were collected.

Results: Four patients were female; the onset of symptoms was always early (≤60 years old) and preceded the diagnosis from two to five years. Three were ApoE4 carriers (one was homozygous) and two had 3/3 genotype. All subjects performed, before diagnosis of PCA, a normal ophthalmic check. MMSE score range was 12-23: all patients showed visuo-spatial deficits, but immediate verbal memory and phonemic fluency abilities were generally preserved. Three subjects had all CSF biomarkers altered and two had an isolated alteration of A\(_{β}\)\(_{1-42}\). After SPECT/PET evaluation, all patients had temporal/parietal and occipital hypometabolism/hypoperfusion and three also frontal involvement. The average of MMSE and CSF scores of PCA (MMSE=18.5±4.8; A\(_{β}\)\(_{1-42}\)=319.6±32.1, TAU=450.2±206.2, P-TAU\(_{181}\)=81.6±39.6) were not significantly different in comparison with 26 Early Onset Alzheimer's Disease (EOAD) with similar age and disease stage (MMSE=17.6±5.4; A\(_{β}\)\(_{1-42}\)=334.2±133.8, TAU=453.3±334.0, P-TAU\(_{181}\)=88.5±45.1).

Conclusions: The medical histories of these patients support a significant under-evaluation of symptoms, with delay in the diagnosis of PCA. CSF biomarkers’s alterations confirm a neurodegenerative process, but don’t help in the differential diagnosis with EOAD. Therefore, medical history, neuroimaging and an extended neuropsychological assessment appear to be crucial for an early and differential diagnosis.