Title

Neuropsychological Differences 20 Years Before Death in Subjects with and Without Alzheimers Pathology

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Neuropsychological Differences 20 Years Before Death in Subjects With and Without Alzheimer's Pathology

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Objective. To determine if neuropsychological differences between subjects with eventual AD pathology and normals can be detected 20 years prior to post-mortem examination.

Background. Studies from numerous disciplines have recently suggested that AD may represent a chronic disease process with onset decades prior to full clinical expression. Investigation of early life characteristics which may be related to eventual dementia has been limited by the paucity of long-term prospective databases. The Baltimore Longitudinal Study of Aging (BLSA/NIA) is a 35-year multi-disciplinary database of normal aging which provides a unique opportunity to evaluate antecedent neuropsychological performance in subjects who eventually developed pathological AD.

Methods. Eleven BLSA subjects who died between the ages of 69 and 94 were pathologically classified as having AD (Khachaturian's criteria) (N = 6) or as normal (N = 5). Benton Visual Retention Test (BVRT) and WAIS-vocabulary scores from approximately 20 years prior to death were compared for both AD and normal groups. Scores were analyzed using parametric and non-parametric methods.

Results. BVRT errors were statistically different for the two groups while WAIS-voc scores weren't. (BVRT mean: AD = 6.4, normal = 1.5) WAIS-voc mean: AD = 71.4, normal = 72).

Conclusions. Lower visual memory performance, but not vocabulary, may reflect an early expression of potential AD years prior to clinical dementia.

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