COGNITIVE ASSESSMENT OF ADULTS WITH DOWN SYNDROME

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Introduction: Down Syndrome (DS) is the most frequent genetic disorder, occurring in 1 of 800 live births. The prevalence of early dementia due to Alzheimer's Disease (AD) in DS patients is as high as 60% by age 60-70 years.

Aims: To establish baseline cognitive performance of DS individuals prior to the development of dementia and to identify correlations between cognitive variables, behavioral measures and activity-of-daily-living (ADL) function.

Methods: The evaluation process included MMSE, Geriatric Depression Scale (GDS), Neuropsychiatric Inventory (NPI) and ADCS-ADL questionnaire. In addition, a novel array of designated neurocognitive tests was administered, including a naming test (BNT), matrices completion (RPM), verbal fluency (COWAT), short-term memory and praxis exam (CDT).

Results: 50 adults (age>18) with DS were examined, 34 (68%) of the subjects were male, with an average age of 27 (±8.6) years. The MMSE was successfully completed for 43 of 49 subjects, with an average score of 18.4 (±5.1). Signs of depression by GDS questionnaire were found in 8 (16%) patients. The designated test array was completed for 37 out of 49 patients (75.5%). A positive correlation was found between the MMSE score ($R^2=0.48$) and the ADCS-ADL performance ($R^2=0.3643$) and the designated test array. Demographic variables (age, gender, education) bore no statistically significant correlation with test performance.

Conclusions: Obtaining baseline cognitive performance of DS patient was feasible. The data from this study will be used to develop large-scale trials to establish a baseline performance level for individuals with DS as well as to detect cognitive deterioration over time.