ABSTRACT

Background: The CST is a recently developed interactive computerized instrument designed to assess functional cognitive domains impaired by Alzheimer's disease (AD); namely, orientation, visuospatial abilities, verbal fluency, memory, attention, and executive processing in approximately 10 minutes. The CST is accessible via the Internet and is easily self-administered with rudimentary computer skills. It can also be administered by a caregiver, family member or primary care physicians in the home or office settings. **Methods:** This study consisted of 101 total subjects (54 female; 47 male) with a mean age of 74.76, range 53 – 94, SD 8.20. The AD patients met all criteria set forth by NINCDS/ADRDA . All patients completed the CST prior to routine neurocognitive procedures. **Results:** There are significant differences between AD patients and controls in the mean total score for the CST and in the mean time of completion. The AD group shows deficits in memory, animal naming, orientation, and in clock-face construction. All patients identified as being demented on the MMSE were likewise identified on the CST. A more complete analysis comparing the MMSE and CST will be completed as larger numbers of cognitively impaired patients are examined. **Conclusions:** The data in this early CST study indicate that AD impacts verbal fluency, memory, orientation to day, month and year, as well as executive decisions necessary for correct completion of the clock construction task. These results suggest that the CST is sensitive to deficits in the numerous cognitive domains affected by AD. Early detection of combination deficits may provide primary care physicians, caregivers and the individual vital information for early diagnosis and intervention in AD. The CST and MMSE appear to detect cognitive deficits in an effective manner. The CST demonstrates the ability to effectively detect multiple cognitive deficits with a high degree of accuracy (93%) compared to MMSE (67%) in differentiating between Control, MCI and stages of AD.