Dementia vs. Depressive Pseudodementia in the Geriatric Population

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Literature Review

• Dementia is a disorder that is characterized by impairment in learning and memory including handling complex tasks, ability to reason, orientation, as well as language (DSM-IV, 1994).
• Mild cognitive impairment (MCI) is a syndrome characterized by cognitive decline greater than expected for an individual's age and level of education but does not markedly interfere with ADLs; a risk state for progression to dementia (Gauthier et al., 2006).
• Depressive Pseudodementia is a major depressive disorder in which cognitive impairment is secondary to the affective disorder (Richly et al., 2012).
• The annual monetary cost per person attributable to dementia in 2010 ranged roughly from $31,000 to $70,000 based on self-reported out-of-pocket spending as well as nursing home care, suggesting a total cost between $157 billion and $215 billion; similar to the financial burden of heart disease and cancer (Hurd et al., 2013).
• Detection could be problematic in both the inpatient as well as outpatient primary care setting. Although no studies have accurately determined the prevalence of missed or delayed diagnosis of dementia especially due to time constraints during routine office visits, estimates suggest a substantial number of cases (Bradford et al., 2009).
• MMSE is a widely used cognitive test however is not sensitive for mild dementia and may be influenced by age, education, language, motor, and visual impairments (Freidl et al., 1996). Montreal Cognitive Assessment (MoCA) on the other hand appears to be more sensitive to mild cognitive impairment compared to MMSE (Pendlebury et al., 2012).
• Results from the MoCA validation study showed that the MMSE had a sensitivity of 18% to detect MCI, whereas the MoCA detected 90% of MCI subjects. MMSE had a sensitivity of 78%, whereas the MoCA detected 100% in the mild AD group. Specificity for both MMSE and MoCA were 100% and 87%, respectively (Nasreddine, 2005).
• The Geriatric Depression Scale (GDS) is a useful screening for depression in the elderly however in populations with mild dementia, it does not retain its validity (Burke et al., 1991). The Patient Health Questionnaire – Nine Item (PHQ-9) is an instrument to screen for depression and has good test-retest reliability, consistency, and sensitivity to change in depression over time (Lowe et al., 2004).
• The Yousef Pseudodementia Scale (YPSS) is a short questionnaire that was devised to classify patients with dementia and pseudodementia correctly – 98% of dementia and 95% of depression cases (Yousef, 1998).

Research Question

This study aims to evaluate if the YPSS has a discriminating power comparable to the MoCA and PHQ-9 in distinguishing MCI/dementia from depressive pseudodementia.

Literature Review

• 140 participants from two arms of the study (70 from the Clark Sleeth Family Medicine Center and 70 from Sundale nursing home) will be recruited to participate in the study.
• Inclusion Criteria:
  • Individuals who present to the Clark Sleeth Family Medicine Center who are at least 65 years of age with a chief complaint suspicious for cognitive impairment and/or depression.
  • Sundale nursing home residents with complaints suspicious for cognitive impairment and/or depression.
• Exclusion Criteria:
  • Patients with blindness and/or illiteracy.

Methods

• The research project will be explained to the patients by research staff. Consent will be obtained from eligible individuals that are willing to participate in the study.
• Subjects from clinic will be given a PHQ-9 form while waiting for the provider to arrive.
• A psychologist from the Family Medicine Behavioral Medicine will use the MoCA form to evaluate for cognitive impairment either before or after the clinic encounter.
• The provider will then use the YPSS to further evaluate the patient. If the psychology staff is not available during the same clinic encounter, the MoCA will be done on a follow up visit.
• Similarly, patients from Sundale nursing home will be given the PHQ-9 form to screen for depression. Subjects will also be evaluated using the MoCA.
• The subject will be subsequently evaluated with the YPSS for comparison.
• Research staff will provide assistance to the subjects if necessary to facilitate completion of questionnaires.
• Participants will be informed that they may withdraw from the study at any time.

Measures

• Montreal Cognitive Assessment (MoCA): MoCA is a cognitive screening test designed to assist clinicians and health professionals for detecting mild cognitive impairment. The MoCA is a one-page 30-point test which could be administered in approximately 10 minutes. The test appears to be more sensitive in detecting mild cognitive impairment as well as early Alzheimer’s disease compared to MMSE.
• Patient Health Questionnaire – Nine Item (PHQ-9): PHQ-9 is a self-report instrument designed to screen for depression based on the 9 DSM-IV criteria for major depression. The questionnaire establishes the diagnosis of depression, does not require further confirmation, and could be completed in approximately 2 minutes.
• Yousef Pseudodementia Scale (YPSS): YPSS is a short questionnaire that was devised to classify patients with dementia and pseudodementia correctly. Upon conception of the study, the scale was evaluated and accurately identified 98% (43/44 cases) of dementia cases and 95% (60/63 cases) of depression. It consists of 18 items and should not take more than 8 minutes to complete.

Sample Size and Data Analysis

• A power analysis (G*Power) was conducted and it was determined that a sample of 59 participants will be adequate to detect a small to medium effect size in this research project. Although 118 (59 from each group) participants will be needed for the results of the study to have sufficient power, we will gather 140 due to incomplete data collection.
• All measures will be examined for missing data. All data will be initially screened for the presence of outliers and problems of skew or kurtosis. An alpha level of p < .05 will be used for all statistical analyses. Data will be analyzed utilizing a SPSS 21.0 database that will be developed specifically for this project.

References