BACKGROUND

Mild cognitive impairment (MCI) is a heterogeneous condition with at least three possible subtypes: amnestic-subthreshold MCI (AS-MCI), non-amnestic MCI (NA-MCI), and subjective memory loss (SML). This study aimed to assess the conversion rates of these subtypes to Alzheimer Disease (AD) and non-AD dementias over a four-year follow-up period.

OBJECTIVES

The primary objectives of this study were to determine the annualized conversion rates to AD in MCI and SML, and to compare these rates across the three subtypes. Secondary objectives included identifying predictors of conversion to AD and examining the impact of specific neuropsychological measures on conversion rates.

METHODS

The study included 133 subjects with the diagnosis of MCI or SML identified at the Alzheimer's Disease and Memory Disorders Center, Department of Neurology, Baylor College of Medicine, Houston, Texas. Clinical assessment at the baseline and annual follow-up visits included a comprehensive battery of neuropsychological tests, psychometric testing, and screening laboratory studies.

RESULTS

A total of 41 subjects converted to AD during the four-year follow-up period. The annualized conversion rate to AD was highest in the AS-MCI group (21.0% per year) and lowest in the NA-MCI group (8.0% per year). The presence of the APOE ε4 allele was a significant predictor of conversion to AD, with a hazard ratio of 6.2 (95% CI 2.6-14.5, p<0.001).

CONCLUSION

The results of this study highlight the importance of early intervention in MCI and SML to prevent the progression to AD or non-AD dementias. The high conversion rate to AD in the AS-MCI group underscores the need for targeted interventions for this subgroup.

REFERENCES


ACKNOWLEDGEMENTS

This work was supported by the National Institute on Aging (R01-AG037124) and the Alzheimer's Disease and Memory Disorders Center, Department of Neurology, Baylor College of Medicine, Houston, Texas.