

ASP-CHEST FOUNDATION OF THE AMERICAN COLLEGE OF CHEST PHYSICIANS GERIATRIC DEVELOPMENT RESEARCH AWARD

Award Recipient:



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CASE WESTERN RESERVE UNIVERSITY SCHOOL OF MEDICINE

PROJECT:

SLEEP DISORDERED-BREATHING AND CARDIAC ARRHYTHMIA ASSOCIATIONS WITH ALCOHOL USE AND DEPENDENCE IN ELDERLY MEN

MENTORSHIP TEAM:

BRIAN HOIT, MD	THOMAS HORNICK, MD
SHIRLEY MOORE, RN, PHD	THEODORE PARRAN, MD
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*M*y research objectives as a T. Franklin Williams Scholar include evaluating the following in a well-characterized elderly male cohort with rigorous data collection (MrOS Sleep Study):

1. The relationship between alcohol use (defined by quantity and frequency) and alcohol dependence (ascertained per CAGE questionnaire) and sleep-disordered breathing (SDB).
2. Alcohol use and nocturnal cardiac arrhythmias.
3. The association of synergistic effects of alcohol use and SDB with nocturnal cardiac arrhythmias compared to either exposure alone.

The proposed research addresses important knowledge gaps regarding the health sequelae of sleep disorders in men greater than 65 years of age, with a specific focus on the role of alcohol use on both sleep disorders and sleep disorder-related cardiovascular co-morbidity. The long-range goals of this project are to characterize the role of alcohol use in augmenting the risk and severity of SDB and arrhythmias in the male elderly population independent of other risk factors; allow for improved identification of the elderly at greatest risk for alcohol-associated sleep disorders; increase awareness of the role of alcohol in sleep disruption in the elderly; and serve as a foundation from which various geriatric public health policies and physician awareness strategies may be implemented.

There is increasing evidence that alcohol problems among older adults are growing and represent a significant public health concern. Adverse effects of alcohol and SDB may be most relevant to elderly men as this group is at increased risk for SDB, and both age and male gender are well-known risk factors of SDB. Furthermore, males appear to be more prone to SDB

when challenged by alcohol. The importance of evaluating the potential synergistic relationship between alcohol use and SDB on cardiac arrhythmia development via complementary mechanisms of alterations in autonomic nervous system activity is supported by various studies.

A wealth of data regarding alcohol exposure collected on elderly male participants in the MrOS Sleep Study provides an excellent opportunity to explore interactions between alcohol and sleep disorders, such as sleep-disordered breathing as well as nocturnal cardiac arrhythmias. The MrOS Sleep Study adds comprehensive assessments of sleep using in-home PSG and actigraphy in a subcohort of 3000 MrOS participants. The data collected span a five-year period, thereby providing a wealth of information that can be analyzed in a longitudinal manner.

I am currently an Assistant Professor at Case Western Reserve University School of Medicine/University Hospitals of Cleveland continuing the trajectory of developing a career as an independent physician research scientist. The ASP-CHEST Foundation of the American College of Chest Physicians Geriatric Development Research Award will allow me to establish geriatric pulmonary/sleep disorders and cardiac disease integrative multidisciplinary conferences, develop presentations to promote education and increase awareness regarding geriatric health issues, disseminate research findings to nursing and medical students, and target primary care physician education with a focus on increasing awareness of community physicians to geriatric-related sleep/pulmonary and cardiac issues. Through the support of this award, I will have the opportunity to continue investigating the important relationship between alcohol use and SDB as well as cardiac arrhythmias in an older male cohort while working with a mentorship team enriched with experts in the fields of pulmonary medicine, sleep medicine, geriatrics, epidemiology, and substance abuse.

