

AMERICAN SOCIETY OF NEPHROLOGY-ASP JUNIOR DEVELOPMENT AWARD IN GERIATRIC NEPHROLOGY



Award Recipient:

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PROJECT:

COGNITIVE FUNCTION IN ELDERLY PERSONS WITH CHRONIC KIDNEY DISEASE

MENTORSHIP TEAM:

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Like other geriatric syndromes, the syndrome of cognitive impairment in older individuals is thought to result from the cumulative influences of multiple vulnerabilities (e.g., genetics, psychosocial stress, chronic health conditions) rather than a single etiologic factor. In this context, chronic kidney disease (CKD) represents a common and potentially important risk factor for cognitive impairment as well as a prospective marker of other chronic conditions that contribute to cognitive impairment in the elderly. Although cognitive impairment and CKD share many features, the epidemiology of dementia and milder forms of cognitive impairment in CKD and the relation between progression of CKD and the risk of cognitive decline are unknown.

The goals of this proposal are to examine the prevalence, risk factors, and adverse consequences of cognitive decline among elderly individuals with CKD within two prospective cohort studies: 1) the Health, Aging, and Composition Study (Health ABC), an ongoing seven-year cohort study in community dwelling healthy elders; and 2) a University of California, San Francisco, School of Medicine (UCSF) based longitudinal study of cognitive function in ambulatory elders with advanced CKD. These two complementary studies will help us understand the association between cognitive impairment and CKD in elderly persons.

First, using data collected in the Health ABC study, we will examine the association of baseline kidney function with cognitive decline and incident dementia. This design

will take advantage of carefully collected prospective measurements in Health ABC to examine potential mediators of cognitive impairment in CKD, such as cardiovascular risk factors, inflammation, and insulin resistance. Next, to determine the natural history of cognitive impairment in persons with CKD, we will assemble a local cohort of elderly persons with advanced CKD. By obtaining serial measurements of kidney function and cognitive function, we will be able to determine the relation between progression of advanced CKD and risk of cognitive decline prospectively over two years. Studying these relations will help define the epidemiology of cognitive impairment in older individuals with CKD and may facilitate preventive strategies by identifying modifiable factors associated with cognitive decline.

The training objectives of this proposal will be accomplished through formal and didactic training in geriatric nephrology and clinical research methods. Training activities will include participation in geriatrics and nephrology divisional conferences and biostatistics and epidemiology coursework offered through the UCSF advanced training in clinical research curriculum. These activities, in addition to didactic training from mentors in nephrology, geriatric medicine, and psychiatry, will enhance my career development in geriatric nephrology by sharpening my statistical skills, fostering collaborations within the geriatrics community, and increasing my experience conducting studies with the elderly.