NACC Project #5
Collaborative Study Group on Vascular Pathology

Principal investigator
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Collaborating centers
Mt. Sinai School of Medicine, Oregon Health and Science University, Rush-Presbyterian-St. Luke's Medical Center

Project description
The purpose of this multi-Center study is to develop a standardized data set that accurately portrays the nature and extent of vascular pathology in post-mortem human brain. These data will be derived from a detailed analysis of post-mortem material obtained from subjects enrolled in the Framingham Study, the Religious Orders Study, the Oregon Brain Aging Study, and the Jewish Hospital and Home for the Aged Study. This is an important initiative because no standard approach has been developed to quantify vascular damage despite several recent population-based studies suggesting that vascular pathology influences the clinical expression of Alzheimer's disease (AD). This project uses existing pathological materials and ADC databases and collect prospective data from new subjects during the year of funding. We are devising reliable methods to quantitate vascular pathology and disseminate our recommendations for a standardized data set to all ADCs. This data set is being designed to meet ADC needs for tissue diagnosis and for clinical-pathological studies. We are using this standardized data collection procedure and data set to test the hypothesis that vascular pathology has an additive effect to Alzheimer-type pathology and increase the risk for developing clinical dementia among persons with a given load of AD pathology. A multi-Center collaborative study is essential to test this hypothesis because this effort requires: 1) brain tissue from a large number of persons who have undergone annual testing of cognitive function proximate to death; 2) investigators highly experienced in quantitative neuropathology; and 3) investigators experienced in analytic techniques necessary to model multiple post-mortem, demographic, and clinical variable simultaneously. The project takes advantage of the unique resources and expertise available at the four collaborating ADCs. All have ongoing longitudinal clinical-pathologic cohort studies that can contribute brain tissue and clinical data to the proposed study, and all have particular expertise required for the success of the study.

Contact information
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