



Abstract

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PI Title:

Project Title: The Electrocardiogram in Subarachnoid Hemorrhage

Abstract: *A two-year program of training and research is proposed to study the frequency, characteristics, and clinical significance of electrocardiographic (ECG) abnormalities that occur during the acute phase of subarachnoid hemorrhage (SAH). SAH is a serious neurological disorder in which ECG abnormalities have been reported in patients without pre-existing cardiac disease. All prior investigations of this phenomenon were limited by incomplete ECG data obtained from either a single or daily 10-second ECG tracing or a single-lead rhythm strip. The proposed study will, for the first time, utilize newer computer assisted ECG technologies to collect continuous 12-lead ECG information during the entire intensive care period. The specific aims of the study will be to: 1) describe the types of ECG waveform abnormalities that occur in patients with SAH; 2) describe the frequency, duration, reversibility, and timing in the clinical course of these abnormalities; 3) investigate the relationship between ECG abnormalities and demographic, neurological, clinical, and outcomes variables; 4) explore which demographic, neurological, or clinical variables may predict the occurrence of ECG abnormalities; and 5) investigate which ECG abnormalities may predict unfavorable patient outcomes. A long-term goal of the applicant's program of research is the development of a risk-stratification tool, based on ECG abnormalities, for patients with SAH.*

Thesaurus Terms:

cardiovascular disorder, cerebrovascular disorder diagnosis, electrocardiography, meninges hemorrhage, nervous system disorder age difference, cerebral aneurysm, computer assisted diagnosis, diagnosis quality /standard, diagnostic test, gender difference, human mortality, neurologic manifestation,

racial /ethnic difference, vasospasm

bioimaging /biomedical imaging, computer program /software, human subject, medical record, patient oriented research, predoctoral investigator, ultrasound blood flow measurement

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