

Managing Patients presenting to the Emergency Room with Chest Pain

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A. Purpose

Management of patients presenting to the emergency room with chest pain suggestive of ischemia is challenging. Currently, less than 30 percent of the patients admitted to the hospital for "rule out MI" are found to have an acute coronary syndrome. Over the past several years, chest pain units, which are designed to rapidly triage and risk stratify patients in the emergency room, have been found to be safe and cost effective. In particular, patients with a nondiagnostic EKG and a low to moderate suspicion for an acute coronary syndrome comprise a large proportion of admissions. Under the chest pain algorithm, this particular group of patients will undergo early exercise or pharmacologic stress test with SPECT imaging with a negative test ensuring an early discharge. This study will be conducted to determine if patient characteristics and symptoms can predict a negative or positive stress test. By distinguishing truly low risk patients, a period of observation with negative serial EKGs and cardiac enzymes may be sufficient for a safe and early discharge. Medical centers without a chest pain unit would benefit economically from this strategy.

B. Methods

Eligible patients will be enrolled through the emergency room. If the patients consent, they will be asked to fill out a questionnaire which will ask them questions about their medical history and their presenting symptoms.

These items on the survey will be analyzed with multiple logistic regression to determine high and low risk characteristics which correspond to a positive and negative stress test result, respectively.

C. Study subjects:

a. Inclusion criteria:

- Presenting with chest pain to the emergency room
- Age >20
- Low to moderate suspicion for acute coronary syndrome

b. Exclusion criteria:

- History of MI
- EKG which shows
- ST segment elevation, depression, or T wave inversions in ≥ 2 contiguous leads or Q waves
- History of stable angina
- History of CUF
- Prehospital or ED observation of hypotension, cardiac arrest, ventricular arrhythmia
- New onset Afib
- Uncontrolled hypertension (sys >200, dias >1 10)
- Development of elevated troponins
- ED observation of EKG changes consistent with ischemia
- Recurrent chest pain highly suspicious of ischemia