BACKGROUND

Elevation of cardiac troponin (cTn-I) in non-coronary artery disease conditions such as acute ischemic stroke (AIS) portends a poor prognosis. It is unclear if this poor prognosis is secondary to concomitant acute coronary syndrome (ACS), unmasking of high-risk stable coronary artery disease or a different etiology.

OBJECTIVE

The purpose of this study is to evaluate the utility of elevated cTn-I in predicting occult coronary ischemia using non-invasive investigations in patients who presented with an AIS.

METHODS

Consecutive patients who presented with an AIS between January and December 2014 were included. cTn-I levels were correlated to findings on standard 12-lead electrocardiogram (ECG), 2D-echocardiogram and myocardial perfusion imaging studies by board-certified cardiologists. The primary endpoint was the presence of reported ischemia on noninvasive testing. Secondary endpoints included length of stay, National Institutes of Health Stroke Scale (NIHSS) and mortality.

RESULTS

526 AIS registry patients were included in the analysis. Ischemic changes on ECG and wall motion abnormality on 2D-echocardiography were more common in patients with elevated cTn-I compared to patients with normal cTn-I (19.8% vs. 11.6%, p = 0.036 and 34.2% vs. 11.6%, p = 0.026, respectively). Elevated cTn-I was associated with a longer length of stay and a trend toward higher mortality and NIHSS.

CONCLUSIONS

cTn-I elevation in AIS is associated with a significantly higher incidence of occult ischemia on noninvasive testing. Collaborative practices between Stroke Neurologists and Cardiologists are called for to further understand the implications of an elevated cTn-I in AIS patients and potential benefits of risk-stratification.