

## Patient Outcomes Following Out-of-Hospital Cardiac Arrest

**Authors :** Scott Ashby, Emily Granger, Mark Connellan

**Abstract :** Background: In-hospital management of Out-of-Hospital Cardiac Arrest (OHCA) is complex as the aetiologies are varied. Acute coronary angiography has been shown to improve outcomes for patients with coronary occlusion as the cause; however, these patients are difficult to identify. ECG results may help identify these patients, but the accuracy of this diagnostic test is under debate, and requires further investigation. Methods: Arrest and hospital management information was collated retrospectively for OHCA patients who presented to a single clinical site between 2009 and 2013. Angiography results were then collected and checked for significance with survival to discharge. The presence of a severe lesion (>70%) was then compared to categorised ECG findings, and the accuracy of the test was calculated. Results: 104 patients were included in this study, 44 survived to discharge, 52 died and 8 were transferred to other clinical sites. Angiography appears to significantly correlate with survival to discharge. ECG showed 54.8% sensitivity for detecting the presence of a severe lesion within the group that received angiography. A combined criterion including any ECG pathology showed 100% sensitivity and negative predictive value, however, a low specificity and positive predictive value. Conclusion: In the cohort investigated, ST elevation on ECG is not a sensitive enough screening test to be used to determine whether OHCA patients have coronary stenosis as the likely cause of their arrest, and more investigation into whether screening with a combined ECG criterion, or whether all patients should receive angiography routinely following OHCA is needed.

**Keywords :** out of hospital cardiac arrest, coronary angiography, resuscitation, emergency medicine

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