This article provides research of cardiac biomarkers being drawn in the prehospital setting compared with the emergency department (ED) on intervals critical to the diagnosis of acute myocardial infarction” DuCharme et al (2019).

Abstract:

This article provides research of cardiac biomarkers being drawn in the prehospital setting compared with the emergency department (ED) on intervals critical to the diagnosis of acute myocardial infarction. This is a retrospective chart review of patients brought to the ED of a single, urban teaching hospital by a single emergency medical service (EMS) agency with a chief complaint of “chest pain.” We abstracted specific patient characteristics, intervals, positive troponin values, and rates of hemolysis from hospital records utilizing a custom data abstraction tool designed for this study through consensus of the authors. Data were compared between patients who did and did not have prehospital laboratory work performed for cardiac biomarkers utilizing parametric and nonparametric tests when appropriate. Of the initial 49 patients identified, 41 met inclusion criteria; 20 patients (49%) did not have prehospital EMS laboratory results drawn while 21 (51%) patients did have prehospital laboratory results drawn. Overall, 17% (7/41) had positive cardiac biomarkers. The groups were similar with regard to age, gender, race, and medical history. Median time (interquartile range) in minutes, from ED arrival to laboratory results available was shorter for patients with EMS laboratory results compared with those without EMS laboratory results: 53 (45-64)
versus 71 (54-95) (P = .02). Time from ED arrival to disposition decision (P = .39) and total ED length of stay (P = .12) were similar between groups. In this preliminary study, prehospital laboratory results were associated with shorter times from ED arrival to the results being available.

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