Abstract

OBJECTIVE:

A prospective follow-up study to evaluate the ability of cardiac ultrasonography performed by emergency physicians to predict resuscitation outcome in adult cardiac arrest patients.

METHODS:

Ultrasonographic examination of the subxiphoid cardiac area was made immediately on presentation to the emergency department with pulseless cardiac arrest. Sonographic cardiac activity was defined as any detected motion within the heart including the atria, ventricles or valves. Successful resuscitation was defined as any of: return of spontaneous circulation for ≥20 min; return of breathing; palpable pulse; measurable blood pressure.

RESULTS:

The study enrolled 149 patients over an 18-month period. The presence of sonographic cardiac activity at the beginning of resuscitation was significantly associated with a successful outcome (19/27 [70.4%] versus 55/122 [45.1%] patients without cardiac activity at the beginning of resuscitation).

CONCLUSIONS:

Ultrasonographic detection of cardiac activity may be useful in determining prognosis during cardiac arrest. Further studies are needed to elucidate the predictive value of ultrasonography in cardiac arrest patients.