

POSTER 517

Agreement Between Paramedic-Estimated Weights and Subsequent Hospital Measurements in Adults with Out-of-Hospital Cardiac Arrest

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Purpose: To assess the accuracy of paramedic estimates of adult body weights in cardiac arrest cases.

Methods: This study was a retrospective data analysis of a 15-month, multicenter study involving non-traumatic, out-of-hospital, cardiac arrest patients. Paramedic estimates of body weights were compared to weights measured in the hospital. Patients were included in the analysis only if both a paramedic weight and a measured in-hospital weight were recorded. The study population included 133 adults with return of spontaneous circulation who subsequently were admitted to the hospital. A Pearson correlation analysis was used to compare paramedic-estimated weights and measured weights.

Results: Among the 133 study patients, the correlation coefficient for paramedic estimates and the actual measured weight was 0.865. Paramedic estimates of weight were within 10% of the measured weights in 74% of the patients, and within 20% of measured weights in 93% of the patients. Subgroup analysis by gender and weight category (≤ 150 pounds and greater than 150 pounds) demonstrated no clinically significant differences in the ability of paramedics to estimate body weight.

Conclusion: Paramedic weight estimates correlated well with measured weights. Therapeutic decisions utilizing paramedic-estimated weights should not result in significant dosing errors of pharmacologic agents used in adult out-of-hospital cardiac arrest.

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Penetrating Thoracic Trauma: Prehospital Resuscitation For All?

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Objectives: To compare the prehospital characteristics of critically injured patients with penetrating thoracic trauma who survived emergency department thoracotomy (EDT) with those patients who did not survive.

Design: An eight-year retrospective chart review.

Setting: Two urban Level-I Trauma Centers utilizing three EMS provider systems.

Results: The study found that 154 patients with isolated penetrating thoracic injuries were either dead on arrival (36) or required an EDT (118). Of the 70 EDT patients with stab wounds, 15 survived; 2/42 (5%) of EDT patients with gun shot wounds survived. In three patients, the mechanism was unknown. Total field times were 19.2 ± 6.4 minutes in non-survivors ($n = 125$), and 17.7 ± 6.3 minutes in survivors ($n = 13$, $t = 1.992$, $p > .05$), a difference of 1.5 minutes (95% CI: 5.3, -2.3). There was no difference in outcome between ALS transport ($n = 123$) and BLS transport ($n = 21$, $\chi^2 = 1.35$, $p > 0.1$). Prehospital care was received by 13/17 (76%) of survivors. All survivors receiving prehospital care had some sign of life as defined by presence of purposeful movement, pulse, blood pressure, or respiratory effort.

Conclusion: All survivors of penetrating thoracic trauma had some sign of life as assessed by prehospital personnel. Total field times and mode of prehospital transport were not factors in the difference in survival rates. It is suggested that patients without any sign of life should be declared dead in the field, and that such patients should not undergo prehospital resuscitation. Thus, risks to prehospital personnel, the public, and health care providers would be avoided.