Does Field Intubation Worsen Outcome for Trauma Patients Without Lethal Brain Injury?

This study presents disturbing data suggesting that the answer is yes.

Prospective data on field intubation of adult trauma patients are scant. These authors prospectively collected data on patients admitted to a trauma center over 1 year with Glasgow Coma Scale (GCS) scores ≤8 and Head Abbreviated Injury Scale (HAIS) scores ≥3 who were intubated in the field by paramedics or immediately on arrival by trauma anesthesiologists.

Paramedics determined the need for intubation and followed a strict protocol for use of rapid sequence intubation. Patients were excluded if they died from nonsalvageable traumatic brain injury (TBI) within 48 hours, required long (>30 minutes) field extrication, or could not be intubated in the field. Of 191 patients who suffered blunt (92%) or penetrating (8%) trauma, 78 (41%) were intubated in the field, and 113 (59%) in the hospital. The 2 groups did not differ in age, GCS scores, Injury Severity Scores, and HAIS scores. Patients intubated in the field had significantly higher mortality (23.0% vs. 12.4%), risk for nosocomial pneumonia (49% vs. 32%), number of days in the ICU (15.2 vs. 11.7), and number of hospital days (20.2 vs. 16.7) than did those intubated in the hospital.

Comment: These alarming data must be placed in context. The field-intubation group had significantly longer times from dispatch to emergency department arrival and to the operating room. More importantly, the hospital-intubation group had significantly higher incidences of neurosurgical intervention (34% vs. 14%) and subdural and epidural hematomas (30.1% vs. 11.5%), suggesting that more patients in this group had TBI that was amenable to neurosurgical evacuation. A randomized prospective trial is needed to resolve these issues.

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