

CAT Block 2

Journal of Trauma/Prehospital Emergency Medicine

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Journal of Trauma; Burton, Dunn, Bradshaw et. al “A statewide, prehospital medical service selective patient spine immobilization protocol”

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Question:

Will the implementation of a statewide, prehospital ems selective patient spine immobilization protocol have improved outcomes?

Intro:

Due to the devastating nature of spinal injuries and potential risks of exacerbating injuries, a shotgun approach regarding immobilization has been applied in the EMS setting for trauma patients. There are no randomized controlled studies regarding the benefit of the current practices regarding rigid immobilization. There is now proven evidence however of adverse effects of using spinal immobilization. This study was designed to assess the ability of prehospital spinal decision making regarding the use of immobilization and assessing the presence of spinal fractures and the outcomes.

Methods:

The study evaluated the utility and outcome of a statewide selective spinal immobilization protocol in the first 12 months after its implementation. The assessment protocol consisted of an algorithm in which the normal qualifiers such as: unreliable sensorium; distracting injury, abnormal sensory/motor exam, or spine pain/tenderness would lead to immobilization. With all the above negative, even with a viable mechanism, immobilization was not used. The previous protocol was changed by the state EMS board and implemented over 18 months prior to the start of the study date.

Primary outcomes evaluated included incidence of spinal fractures, the correlation between EMS provider decision and presence of fractures categorized as stable or unstable (any fracture requiring operative stabilization)

Limitations:

The study occurred in only one state. The study consisted of a categorization of stable vs. unstable fractures without further specificity into the nature of the fractures, therefore not differentiating unstable fractures that were not repaired surgically but by more conservative means. There was no discrepancy in the qualifications of the prehospital personnel whether BLS certified or higher.

Discussion:

The results showed that only one patient with an unstable spine fracture went without mobilization out of 32,000 patients. Therefore it shows that prehospital providers can accurately assess acutely injured trauma patients and delineate between those needing immobilization and those not. The study showed that over half that patient's appropriately went without immobilization and therefore without the associated co-morbidities that accompany unnecessary immobilization.
