

Conclusion: Using these conventional parameters in severe head trauma patients (as icp and cpp), we were unable to suspect the presence of ischemia or of hypoperfusion. This emphasizes the importance of early jugular bulb metabolic monitoring in severe head-trauma patients.

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Partial Immobilization as a Means to Initiate Rapid Transport

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Introduction: Although commonly taught, cervical-spine immobilization is a relatively unproven procedure. Also, it frequently is time-consuming and could delay needed care in hemodynamically unstable patients.

Objective: To develop techniques for partial cervical-spine immobilization in order to shorten scene times in cases of major trauma with hemodynamic instability.

Methods: Techniques were developed to streamline cervical spine immobilization. They included: 1) placing the patient directly on a long backboard after a rigid collar has been applied; 2) manual stabilization of the head and neck; and 3) strapping the patient down using only gurney straps. All other strapping is done after initiation of transport. In addition, an algorithm was developed to guide paramedic students in the use of a partial immobilization when indicated. As students were tested using simulated trauma patients, inappropriate use of the algorithm was considered to be a failing performance.

Results: Of 53 students tested, 52 (98%) were able to demonstrate appropriate use of the spinal immobilization algorithm in simulated trauma patients.

Conclusions: Paramedic students can be trained to prioritize the importance of cervical spine immobilization depending on the clinical situation. Using these techniques, scene times could be reduced in some critical trauma situations.

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Splint Treatment of Injuries of the Limbs and the Cervical Spine in Disaster Situations

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Objective: To describe new splinting techniques using the SAM-Splint in various emergency and disaster situations.

Methods: Different splinting techniques were evaluated: air-splints; vacuum-splints; Kramer-splints; and the SAM-splint in the field. The splints were tested in war situations in Kampuchea, Croatia, and the Middle East, and in emergency medical services systems in Switzerland, Germany, and Austria.

Results: The SAM-Splint proved best in meeting the demands of Disaster Medicine for the following reasons: easy to apply; handling easy to learn; possible to splint all extremities and the cervical spine; can be left on for a longer time period; not affected by weather extremes; radiolucent; extremely lightweight; soft, without need for additional padding; can be cut to any size; requires small storage space; durable and reusable; and inexpensive.

Conclusion: The SAM-Splint is light and, when rolled up or folded together, easily can be stored in any bag or pocket. It comes rolled up and is transported like an elastic bandage. It becomes a splint with enough rigidity only after structural bends are performed. Then the characteristics of the material change completely, and what was once malleable is now stiff and has structure. Considering all of these characteristics, it is an ideal tool for disaster medicine.

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The Rio de Janeiro Miguel Couto Trauma Center Experience in the Management of Extremity Trauma

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Extremity trauma rarely is life-threatening, but associated injuries can be. If not managed properly, some of those lesions can produce a permanently disabled extremity

This purpose of this paper is to help the trauma team identify life- and/or limb-threatening injuries related to extremity trauma and to explain the initial management of these injuries, including application of dressings, splints, traction splints, and short-term casts. The goal of immobilization is to prevent further injury and to control pain.

In the primary survey (A, B, C, D, E) the extremities must receive attention when bleeding (exsanguination hemorrhage), which includes maintaining traction of extremities with suspected or obvious fracture, as well as application of direct pressure.

The secondary survey includes the study of perfusion alignment, deformity, and function, including neurovascular injuries and wound care protection.

The quality of care administered by prehospital and emergency department staff can affect the recovery significantly and ultimate rehabilitation of any patient with extremity trauma. The information obtained from the patient, relatives, EMTs, or bystanders at the accident scene should be included in the patient's medical record.

Open fractures, compartment syndrome, joint injuries, multiple extremities trauma, pain control, and immediate immobilization, as conducted in this Trauma Center in Rio de Janeiro, will be discussed.