



Suspected Moderate/Severe Traumatic Brain Injury (TBI)

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Prehospital Identification of Moderate/Severe TBI

- Any pt with a mechanism of injury consistent with a potential for a brain injury, and one or more of the following:
 - <65 years of age with a GCS \leq 13, or \geq 65years of age with a GCS <15 (or decrease from baseline)
 - Post-traumatic seizures
 - Multi-system trauma requiring advanced airway placement

For any patient with a suspected moderate/severe TBI, avoid/treat the three TBI “H-Bombs”:

- 1) Hyperventilation, 2) Hypoxia, 3) Hypotension

BLS

- Assess V/S, including continuous SpO₂ monitoring and pupil exam: Reassess V/S every 3-5 min if possible
- High-flow O₂ (regardless of SpO₂ reading)
- If continued hypoxia (SpO₂ <94%) or inadequate ventilatory effort, proceed through the following in a stepwise manner:
 - Reposition airway
 - Initiate positive pressure ventilation with appropriate airway adjunct if necessary (use of a pressure-controlled BVM &/or ventilation rate timer is recommended if available)
- Avoid hyperventilation (ventilate at a rate of 10 breaths/min)
- Maintain normothermia
- Consider the concurrent need for appropriate immobilization/spinal motion restriction

LALS

- Continuous cardiac & EtCO₂ monitoring (AEMT II)
- IV/IO NS TKO: For SBP <110 bolus 1000 mL N/S, then titrate additional fluids to maintain SBP \geq 110
- Check blood glucose

Blood glucose \leq 60 mg/dl?

YES

Dextrose 10%

- 10 - 25 gm (100 - 250 mL) IV/IO
- OR
- Glucagon**
- 1 mg (1 unit) IM/IN

NO

For persistent hypoxia &/or inadequate ventilatory effort:

- Supraglottic airway
- Target EtCO₂: 35-39 mmHg (AEMT II)

- Transport to appropriate destination & notify receiving facility of a “Trauma Alert” as soon as possible (if applicable)
- Monitor & reassess