| | Sierra – Sacramento Valley EMS Agency Treatment Protocol | T-3 (LALS) |
|---|---|---|
| | **Suspected Moderate/Severe Traumatic Brain Injury (TBI)** | |
| Approval: Troy M. Falck, MD – Medical Director | | Effective: 06/01/2021 |
| Approval: Victoria Pinette – Executive Director | | Next Review: 01/2024 |

**Prehospital identification of moderate or 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 ≤13, or ≥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) **H**yperventilation, 2) **H**ypoxia, 3) **H**ypotension

**BLS**

- Assess V/S, including continuous SpO2 monitoring: Reassess V/S every 3-5 min if possible
- High-flow $O_2$ (regardless of SpO2 reading): If continued hypoxia ($SpO_2$ <94%) or inadequate ventilatory effort, reposition airway &/or initiate BVM ventilations with appropriate airway adjunct if necessary (use of a pressure-controlled BVM &/or ventilation rate timer is recommended if available)
- Maintain normothermia
- Consider the concurrent need for appropriate immobilization/spinal motion restriction

**LALS**

- Continuous cardiac & ETCO2 monitoring **(AEMT II)**
- IV NS TKO: For SBP <90 (or SBP <100 in pts ≥65 years of age), bolus 1000 mL N/S, then titrate additional fluids to maintain SBP ≥90 (or SBP ≥100 in pts ≥65 years of age)
- Check blood glucose

**Blood glucose ≤60 mg/dl?**

**YES** →

**Dextrose 50%**
- 25 gm (50 mL) IV

**OR**

**Glucagon**
- 1 mg (1 unit) IM

**NO** ↓

**For persistent hypoxia &/or inadequate ventilatory effort:**
- Consider advanced airway
- Avoid hyperventilation: target ETCO2 = 40 mmHg **(AEMT II)**
  - Ventilate at a rate of 10 breaths/min

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