

Sierra – Sacramento Valley EMS Agency Treatment Protocol

T-3P (LALS)

Pediatric Suspected Moderate/Severe Traumatic Brain Injury (TBI)

Effective: 06/01/2024 Approval: Troy M. Falck, MD – Medical Director

Approval: John Poland – Executive Director Next Review: 04/2027

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:
- GCS <13 (in infants: any decreased responsiveness, deterioration of mental status, irritation or agitation)
- Post-trauma seizures, whether continuing or not
- Multi-system trauma requiring advanced airway placement

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

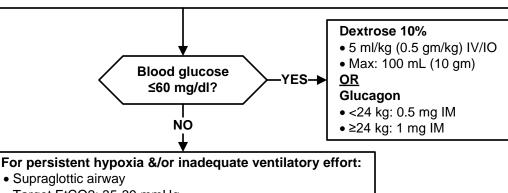
1) Hyperventilation, 2) Hypoxia, 3) Hypotension



- 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 pressurecontrolled BVM &/or ventilation rate timer is recommended if available)
- Avoid hyperventilation
 - Infant (0-24mo) ventilation rate: 25 breaths/min
 - Pediatric (2-14yo) ventilation rate: 20 breaths/min
- Maintain normothermia
- Consider the concurrent need for appropriate immobilization/spinal motion restriction



- Continuous cardiac & EtCO₂ monitoring (AEMT II)
- IV/IO NS TKO: For hypotension, bolus 20 mL/kg, repeat bolus until hypotension resolves
- Check blood glucose



- Supraglottic airway
- Target EtCO2: 35-39 mmHg
- Transport to appropriate destination & notify receiving facility of a "Trauma Alert" as soon as possible (if applicable)
- Monitor & reassess