

Pediatric Protocol: Pediatric Traumatic Brain Injury

Definition: Any blunt or penetrating injuries to head or face resulting in change in mental function – this can range from somnolence, to combativeness, to coma.

Basic Life Support:

- Evaluate patient according to Initial Trauma Assessment and Treatment Protocol. Take precautions for c-spine injury.
- Provide supplemental oxygen.
- Provide suction as necessary.
- Take seizure precautions – keep airway clear, loosen tight clothing, NEVER put anything in the mouth, and clear the area of sharp objects.
- Elevate head 30 degrees WITHOUT flexing neck.
- Consider hypoglycemia for altered mental status and be prepared to treat per local protocols.

Advanced Life Support:

- Apply Cardio-Respiratory Monitor and pulse oximeter if available.
- If child is hypoventilating or apneic, begin Bag-valve mask ventilation while maintaining c-spine precautions. Consider intubation for prolonged transports (>20 minutes) if intubation is necessary:
 - **Use Braslow tape to estimate weight**
 - In a critically ill or injured child, (arrest or severe shock), proceed immediately to IO access if IV access can not be immediately obtained.

Contact MEDICAL CONTROL

- Attempts at IV access should be made en route but may be attempted at the scene. Transport should not be delayed for multiple attempts at initiation of an IV, or IO
- Sedation (Medication) should occur prior to intubation for traumatic brain injury per protocol to prevent further increased intracranial pressure

- Premedicate with **2% lidocaine 1 mg/kg IV/ IO push** (100 mg maximum total dose, flush with 3-5 cc NS) 30 seconds to 1 minute prior to intubation.
 - * Lidocaine is thought to transiently reduce intracranial pressure during Intubation.

MINIMIZE ON-SCENE TIME

- Provide IV/ IO and fluids at TKO rate unless hypotension, significant volume loss, or traumatic arrest. Run fluids at appropriate rate according to condition.
- If seizures develop and last for greater than 20 seconds, administer Valium (diazepam) 0.1mg/kg IV/ IO slow push every 3 – 5 minutes (**Max dose 5mg**) until seizure stops. **Use Braslow tape to estimate weight.**
- If using **Valium (Diazepam) PR** dose as follows:
 - Age 2-5 yo = .5mg/kg (**Max 20 mg PR**)
 - Age 6-11 yo= .3mg/kg (**Max 20mg PR**)
 - Age 12yo and over= .2mg/kg (**Max 20 mg PR**)