Trauma: Head Injury, Adult

- ABCs
- C- spine immobilization
- Oxygen 100% (1)
- Assist ventilations prn
- Calculate GCS (2)

Glasgow Coma Scale?

(< 8) → See Intubation Protocol (3) (4)

See Intubation Protocol (3) (4) → Hypertonic Saline 3 or5% NaCl 325 mL bolus (5)

(> 9) → Consider Intubation (3)

Hypertonic Saline 3 or5% NaCl 325 mL bolus (5) → B/P ?

B/P ? → < 90 mmHG →
- See Shock Protocol (6)
- If not already given: Hypertonic
- Saline 3 or 5% NaCl 325 mL bolus IV

B/P ? → > 90 mmHG → IV NS TKO (7)

IV NS TKO (7) → Consider Mannitol 1 gm/kg IV if neurologic deterioration with unilaterally dilated pupil or bilaterally dilated pupils in the face of Severe neurological trauma. (8)

History:
1. Time and mechanism of injury
2. Loss of consciousness
3. Glucose
4. Evidence of seizure
5. Medical history
6. Allergies
7. Helmet and/or restraint use

Differential:
1. Skull fracture
2. Brain injury (concussion, contusion, hemorrhage, or laceration.
3. Epidural/ subdural hematoma
4. Alcohol Intoxication
5. Subarchnoid / intracranial hemorrhage.
6. Spinal injury
7. Hypoglycemia
8. Abuse

1. Oxygen 100% per non-rebreather mask
2. Aggressive ventilatory support may be needed. If the patients ventilations are note effective – intubate.
3. Avoid nasal intubation.
4. End-Tidal CO2 should be maintained between 35-40 mmHG
5. Hypertonic Saline to be given in all head injuries with GCS < 8 UNLESS B/P is > 150/90.
6. Isolated head injuries rarely cause shock. If shock is present look for another cause. Give Hypertonic Saline first, Packed cells second, then a fluid bolus to maintain SBP > 100.
7. If B/P stable, restrict fluids.
8. Do not give Mannitol if B/P < 120/70.