

# Catastrophic Brain Injury Guidelines

\*These are **suggestions** for treating a patient with a catastrophic or devastating brain injury.\*  
Consider obtaining a critical care consult if not already involved in patient care.

## 1. Maintain SBP $\geq$ 100 (MAP $\geq$ 60)

- a. Consider invasive hemodynamic monitoring
- b. Ensure adequate hydration to maintain euvolemia
- c. Central line placement may need indicated
- d. Vasopressors (more than one may be needed)
  - i. Dopamine
  - ii. Vasopressin
  - iii. Levophed
  - iv. Neosynephrine
- e. Consider initiation of levothyroxine drip to help support patient during times of instability

## 2. Treat Diabetes Insipidus (urine output $>$ 3 ml/kg/hr x 2 hrs)

- a. DDAVP 0.5 – 1.0 mcg IVP q 2-3 hours
- b. Vasopressin drip 1 – 2.5 u/hr
- c. If urine output  $<$  0.5 ml/kg/hr, ensure euvolemia and SBP  $\geq$  100
- d. Maintain fluid balance by tracking strict I & Os and consider appropriate fluid bolus

## 3. Maintain PaO<sub>2</sub> $\geq$ 100 and pH 7.35-7.45

- a. Adjust TV or PC to maintain PaCO<sub>2</sub> 35-45 and pH 7.35-7.45
- b. PEEP 5-8 cm H<sub>2</sub>O
- c. Pulmonary hygiene (suction and turn q 2 hours if not contraindicated)
- d. Respiratory treatments to prevent bronchospasm

## 4. Core Temperature 36 – 37.5 C

- a. Bair hugger or warming/cooling blanket

## 5. Monitor and Treat Electrolytes

- a. Sodium (134-145 mmol/L)
- b. Potassium (3.5-5 mmol/L)
- c. Magnesium (1.8-2.4 meq/L)
- d. Phosphorus (2.0-4.5 mg/dL)
- e. Ionized Calcium (1.12-1.3 mmol/L)
- f. Glucose (80-150), treat with insulin drip if needed

## 6. Monitor and Treat Low Hgb and Hct

- a. Hgb  $>$  8 g/dL and Hct  $>$  24%
- b. For disseminated intravascular coagulation (DIC)
  - i. FFP 4 units
  - ii. Platelets 10 pack
  - iii. PRBCs 2 units if Hgb  $<$  9 and/or Hct  $<$  30
  - iv. Vitamin K 10 mg IV

## 7. Consider Starting a Prophylactic Antibiotic

**\*\*Iowa Donor Network's Clinical Team is available 24/7/365 to support your hospital team. Please call 800-831-4131 to learn how we can collaborate on patient care.\*\***