Catastrophic Brain Injury Guidelines

Consider obtaining a critical care consult if not already involved in patient care. See patients’ attending physician for orders.

**Maintain SBP > 100 (MAP > 60)**
1. Consider invasive hemodynamic monitoring
2. Adequate hydration: Ensure adequate hydration to maintain euvoelma
3. Vasopressor support: If hypotensive post adequate rehydration, utilize Dopamine as the first pressor of choice up to 20 mcg/kg/min followed by Levophed up to 30 mcg/min if needed.

**Maintain Urine Output > 0.5ml/kg/hr < 400ml/hr** (consider DI if > 4cc/kg/hr x 2 hrs)
1. Treat Diabetes Insipidus with Vasopressin drip 1-4 units/hr, if UO still > 400ml/hr, give DDAVP 0.5 mcg IVP every 2-3 hours or replace UO ml to ml
2. If UO falls below 0.5ml/kg/hr, assess fluid status—may need rehydration or BP support

**Maintain PO2 > 100 & pH 7.35-7.45**
1. Adequate ventilation: 5.0-8.0 PEEP
   aggressive respiratory hygiene if not contraindicated by patient’s condition (turn every 2 hours, suction as indicated)
   respiratory treatments to prevent bronchospasm

**Other orders to consider:**
1. Monitor and treat electrolytes maintaining the following:
   - Sodium: 134 – 145 mmol/L
   - Potassium: 3.5 – 5.0 mmol/L
   - Magnesium: 1.8 – 2.4 meq/L
   - Phosphorus: 2.0 – 4.5 mg/dL
   - Ionized Calcium: 1.12 – 1.3 mmol/L

2. Monitor glucose and treat with insulin drip if needed (keep 80-150) rather than SQ. Utilize hospitals tight glycemic control protocol.

3. Monitor and treat Hgb/Hct/coagulation factors (especially if GSW or other penetrating head injury)
   - Maintain Hgb > 8.0 g/dL and Hct > 30%
   - If PT > 18.0 give 2u FFP
   - If Fibrinogen 70-100 give 2u FFP, if < 70 give cryoprecipitate
   - If platelets < 50 give 6pk of platelets
   *remember to recheck labs after treatment

4. Maintain temp 36-37.5 Celsius with bair hugger/warming-cooling blanket

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