**Adult Catastrophic Brain Injury Order Set**

**Blood Pressure**

**Hypertension**

Continue anti-hypertensive agent currently used and titrate to maintain SBP between 100mmHg and 140 mmHg

*If patient is not on any anti-hypertensive agent:*
Cardene drip 20mg/200ml NaCl and titrate 2.5mg/hr every 15 minutes to keep MAP 70 - 90 mmHg

Labetalol drip 300 mg/300 mL NaCl and titrate by 0.5 mg/min every 15-30 min to maintain SBP between 140-170 mmHg.
Hold for HR less than 60bpm and/or hold for SBP less than 90 mmHg

Nipride 50 mg/250 mL D5W and titrate by 0.5 mcg/kg/min every 5 minutes to maintain SBP between 90-110 mmHg, HR between 60-70 bpm.

**Hydration status**

**Normovolemic:**

IVF: 0.9% NaCl at 150mL/hr

**Hypervolemic:**

IVF: 0.45% NaCl at 60mL/hr

**Hypovolemic** (fluid deficit for the past 24 hours is equal to or greater than 2000 mL):

IVF: 0.9% NaCl at 5mL/kg/hr + volume per volume (mL/mL) replacement of urine output for 3 hrs
IVF: 0.9% NaCl at 6mL/kg/hr + volume per volume (mL/mL) replacement of urine output for 3 hrs
IVF: 0.9% NaCl at 7mL/kg/hr + volume per volume (mL/mL) replacement of urine output for 3 hrs

**IVF to follow:**

0.45% NaCl @ ________
0.25% NaCl @ ________
D5W at 3mL/kg/hr + volume replacement (mL/mL) of urine output for 3 hours
D5W at 4mL/kg/hr + volume replacement (mL/mL) of urine output for 3 hours
D5W at 5mL/kg/hr + volume replacement (mL/mL) of urine output for 3 hours

**Serum Sodium Correction**

**A. Hyponatremia**

If serum sodium is equal to or greater than 125 but less than 145 mmol/L, IVF to use 0.9% NaCl at 150mL/hr

If serum sodium is less than 125 mmol/L:
Amount of sodium replacement (mmol/h) = 0.6 x wt (kg) x 0.5 (desired correction rate mmol/h)
Recheck serum sodium q 4 hours until patient is corrected to LIP/APRN desired sodium level.

- If Serum Sodium increase is >0.5mmol/ hour, stop infusion and call LIP/APRN for further orders

**B. Hypernatremia**

Follow Hypovolemic recommendation if serum sodium 146-159

If serum sodium greater than 160 mmol/L switch IVF to:
0.45% NaCl @ ________
0.25% NaCl @ ________
D5W @ ________

**Diabetes Insipidus**

For urine output 0.5-3ml/kg/hr give Vasopressin 5 units IM or SQ q8 hours as needed
For urine output 0.5-3ml/kg/hr give Vasopressin 5 units IM or SQ q12 hours as needed
For urine output 0.5-3ml/kg/hr give Vasopressin 10 units IM or SQ q8 hours as needed
For urine output 0.5-3ml/kg/hr give Vasopressin 10 units IM or SQ q12 hours as needed

Follow hypovolemic recommendations

IV. Oliguria

Bolus 0.9% NaCl 500mL IV over 15 minutes
Repeat bolus at 0.9% NaCl if urine output is less than 100 mL 30 minutes after initial bolus IV over 30 minutes

V. Serum Potassium Correction

A. Hyperkalemia: ___ Give Calcium gluconate 10 to 20 mL of 10 percent solution IV over two to three minutes ___ Insulin Regular insulin 10 units IV with 50ml of D50.
___ Kayexalate 50gm in 30ml sorbitol solution oral or 50gm via retention enema.

B. Hypokalemia: Follow electrolyte replacement protocol

VI. Body Temperature

A. Hyperthermia: Use cooling measures to maintain temperature between 36.5°C and 37.8°C
B. Hypothermia Use warming measures to maintain temperature between 36.5°C and 37.8°C

VII. Blood Glucose

A. Hyperglycemia/Hypoglycemia: Follow Hospital sliding scale protocol:
Low dose sliding scale: ______
Medium dose sliding scale: ______
High dose sliding scale: ______

VIII. Anemia

Transfuse one unit of packed RBC if Hgb is between 8mg/dL and 10mg/dL and there is suspicious sources of bleeding
Transfuse ___ units if Hgb is less than 8mg/dL
Check Hgb and Hct 30 minutes post-transfusion

IX. Pulmonary

Albuterol 2mg per aerosol every 4 hours