NEUROICU Guideline:
Cerebral Salt Wasting- Treatment with 3% NaCl

**Goal:** To maintain Serum Sodium >140mmol/L in Neurosurgical/Neurological patients experiencing cerebral salt wasting.

**Patient Eligibility:**
1. Patient must be in the NeuroICU and administration of therapy must be per protocol.
2. Patient must meet one of the following criteria
   a. Serum Sodium < 120 mEq/L
   b. Serum Sodium < 135 mEq/L and ICP >10 mm Hg

**Contraindications:**
1. **Severe CHF**
   a. Hypoxia due to pulmonary edema
   b. Pink, frothy secretions
   c. Severe pulmonary edema on CXR
2. Chronic hyponatremia
3. **Significant volume overload:**
   a. CVP ≥10 mmHg or PAOP ≥12 mmHg
   b. Use caution if CVP >15mmHg or PAOP >20mmHg

**Monitoring:**
All patients receiving 3% NaCl for the treatment of cerebral salt wasting must have the following parameters monitored and documented:
1. Central venous pressure via a central venous catheter OR pulmonary artery occlusion pressure via a pulmonary artery catheter
2. Serum Na⁺ every 2 hrs
3. All other monitoring and documentation per NeuroICU protocol

**Protocol:**
**Use must be approved by Neurocritical Care Attending**
**HTS must be infused via a central venous catheter**

1. **Serum Sodium 120 – 135 mmol/L and ICP < 10 mmHg or no ICP monitoring in place:**
   a. Patient is to be started on oral NaCl +/- fludicortisone 0.1mg PO/PNGT tid
   b. Monitor Serum Sodium levels every day
   c. Therapy endpoint:
      i. Serum Na⁺ consistently >135mmol/L x 2 days

2. **Serum Sodium ≤120 mmol/L:**
   a. MD will order continuous 3% NaCl IV infusion at a rate of 30 – 100 ml/hr.
   b. Serum Na⁺ levels will be checked every 2 hours
   c. Titrate 3% NaCl drip to achieve target Na⁺ 140-145mmol/L. May increase 10ml/hr every two hours to maximum of 100 ml/hr
   d. Therapy endpoints:
      i. Serum Sodium ≥140mmol/L
      ii. Signs/symptoms of volume overload or heart failure develop

3. **Serum Sodium 120 – 135 mmol/L and ICP > 10 mmHg:**
   a. MD will order continuous 3% NaCl at a rate of 10-50ml/hr
   b. Serum Na⁺ levels will be checked every 2 hours
   c. Titrate 3% NaCl drip to achieve target Na⁺ 140-145mmol/L. May increase 10ml/hr every two hours to maximum of 100 ml/hr
   d. Therapy endpoints:
      i. Serum Sodium> 140mmol/L
      ii. Signs/symptoms of volume overload develop or heart failure develop