Drug Classification: 40:12 Replacement Preparations

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<td>3% Sodium Chloride for Infusion</td>
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Pharmacy and Therapeutics Committee-approved Indications for Inpatient Use:
- 3% sodium chloride for infusion is indicated for the treatment of severe hyponatremia (Na <120 mEq/L) or moderate hyponatremia (Na 120-130 mEq/L) marked by symptoms such as seizures or coma.
- 3% sodium chloride for infusion is not indicated for the treatment of mild hyponatremia (Na >130 mEq/L) or moderate hyponatremia (Na 120-130 mEq/L) without marked symptoms.
- 3% sodium chloride for infusion is indicated for osmolar therapy in patients with cerebral edema and elevated intracranial pressure to achieve a target serum sodium concentration between 145-155 mEq/L.
- Note: Administration of 3% sodium chloride for infusion in non-ICU areas must be co-signed by an attending physician. Prescribers who initiate therapy in a non-ICU area are expected to ensure appropriate clinical and laboratory monitoring. Due to the level of monitoring provided, appropriate non-ICU areas include the Emergency Department, Cardiac, and IMCU.

Usual Dosage:
- For sodium replacement in most patients:
  - Initial infusion rates of 0.3 to 0.6 mEq/kg (ideal body weight) per hour is appropriate (equal to 0.35 to 0.7 mL/kg/hr of hypertonic saline 3%).
  - Higher rates for a short period of time (1 to 2 mL/kg/hr) may be considered for severe deficit (serum sodium less than 110 mEq/L) or if patient is experiencing seizures or other severe neurological symptoms.
- After serum sodium is corrected to 120 mEq and the patient is not exhibiting serious neurologic symptoms (i.e., seizure, coma), therapy should be changed to fluid restriction and/or sodium chloride 0.9% infusion with or without diuretics.
- Desired serum sodium correction for acute onset of hyponatremia (onset <48 hours)
  - Initial rate: 1-2 mEq/L per hour for the first 2-3 hours.
  - Max rate: ≤20 mEq/L for first 24 hours (if feasible, keep correction rate below 12 mEq/L per 24 hours to minimize CNS adverse effects)
  - Complete correction should take place over 48 to 96 hours
- Desired serum sodium correction for chronic onset of hyponatremia (onset ≥48hrs) or unknown onset
  - Initial rate: 0.5 mEq/L per hour
  - Max rate: <10 mEq/L for the first 24hrs
  - Complete correction should take place over several days

Administration:
Hypertonic saline (3%) can be irritating to tissues and should be infused through a central catheter, or in emergent situations, in a large patent vein (i.e., antecubital fossa vein or larger).
Monitoring/Outcomes:
Baseline serum electrolytes, serum creatinine and BUN are required. Frequent monitoring of serum sodium levels (i.e., every hour) is suggested until the patient is asymptomatic, then less frequent monitoring (i.e., every 4-8 hours) may be used until the serum sodium is within the normal range. Rapid correction of hyponatremia can result in Central Pontine Myelinolysis characterized by para or quadraparesis, dysphagia, dysarthria, double vision and loss of consciousness.

Patients should be monitored for neurological changes every 2 hours. Vital signs (blood pressure, pulse, respirations, temperature) should be monitored every 2 hours. Urine output should be monitored every 4 hours (maintain strict I&O’s).

Special Handling Procedures:
- 3% Sodium Chloride for Infusion is not considered a hazardous drug.
- 3% Sodium Chloride for Infusion is considered a high-alert drug.