SODIUM BICARBONATE (Bicarb)

1.0 Classification
- Alkalinizing agent; electrolyte

2.0 Mechanism of Action
- Increases plasma bicarbonate which buffers metabolic acidosis

3.0 Indications
- Cardiac arrest patients with pre-existing or suspected hyperkalemia (renal failure)
- Cardiac arrest patients with suspected ASA overdose
- Cardiac arrest patients with suspected DKA
- Sodium channel blocker overdose (e.g. Tricyclic Antidepressant overdose) with wide complex tachycardia, hemodynamic instability, or cardiac arrest

4.0 Contraindications
- None

5.0 Precautions
- It is important to maintain adequate ventilation to ensure CO₂ elimination
- Sodium bicarbonate deactivates epinephrine and dopamine therefore cannot be given through the same line
- Sodium bicarbonate should not be administered with calcium chloride simultaneously as a precipitate can form which may clog the line

6.0 Route
- May be given IV/IO

7.0 Dosage
- Adult
  - 1 mEq/kg initially, then 0.5 mEq/kg every 10 minutes as needed (persisting wide complex QRS, hemodynamic instability or cardiac arrest)

- Pediatric
  - 1 mEq/kg slow push, then 0.5 mEq/kg every 10 minutes as needed (persisting wide complex QRS, hemodynamic instability or cardiac arrest)

8.0 Supplied
- 50 mL preloaded syringe containing 50 mEq of sodium bicarbonate

9.0 May Be Given By
- In cardiac arrest: ICP/ACP/CCP
- For wide complex tachycardia due to sodium channel blocker OD: ICP (with order from Clinical Support Paramedic)/ACP/CCP
10.0 Adverse effects
   • None

11.0 Special notes
   • Irrigate the IV/IO line before and after infusion
   • Patients may be placed on a sodium bicarbonate infusion during interfacility transfers for conditions such as TCA overdose or rhabdomyolysis
   • Pregnancy category C [if the patient will benefit from a Category C drug, it is generally used]

12.0 References
   • Cardiac Arrest Adult Clinical Practice Guideline
   • Toxicological Emergencies Clinical Practice Guideline
   • Compendium of Pharmaceuticals and Specialties (CPS)

*Electronically Signed
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