### DRUG: SODIUM BICARBONATE

#### PRESENTATION:
- Vial: 8.4% 10 mL
- Vial: 8.4% 100 mL
- Oral Solution: 8.4% (1 mmol sodium per 1 mL)

#### ACTION & INDICATION:
Alkalising agent that dissociates to provide bicarbonate ions. For correction and treatment of metabolic acidosis.

#### DOSE:
**CARDIOPULMONARY RESUSCITATION:**
Sodium bicarbonate is not recommended in a resuscitation situation unless it has progressed greater than 10-15 minutes and a blood gas has demonstrated a severe metabolic acidosis. Intravenous/Umbilical arterial/venous: 1-2 mmol/kg over 30 minutes of 4.2% sodium bicarbonate. The dose could be repeated according to arterial blood gas analysis.

**CORRECTION OF pH:**
To be used for correcting metabolic acidosis if pH<7.2, BE > -10, and a normal PCO₂

Dose (mmol) = \(0.3 \times \text{weight (kg)} \times \text{Base deficit}^2\)

This is a half correction.

**MAINTENANCE OF pH**
Bicarbonate may be infused at a prescribed rate to slowly elevate pH. A rate of 1 – 2 mmol/kg/hr of 4.2% Sodium bicarbonate may be infused peripherally. 8.4% Sodium bicarbonate may be given into a central vein only. Once desired pH is reached this infusion may be ceased.

#### PREPARATION:
Diluent: Water for Injections
Dilute 1:1 or 1:2 before use. May be further diluted if required.

#### ADMINISTRATION:
For correction of metabolic acidosis, infuse dose over 2 to 6 hours (usually slower infusions for smaller babies)

**ORAL**
2 - 3 mmol/kg/day in 3 divided doses. May be given at any time with regard to feeds only if on full feeds.

#### ADVERSE EFFECTS:
- Hypernatraemia
- Increased risk of intraventricular haemorrhage.
- Alkalosis: dyspnoea, restlessness, muscle weakness, myocardial depression, convulsions, coma.
- Hyperosmolality, extravasation may cause tissue necrosis.

#### COMMENTS:
Usually not used in the acute phase of resuscitation - ensure adequate ventilation.

Monitor blood pH
Discard vial immediately after use

#### REFERENCES:
Neonatal Pharmacopaeia 2nd Ed Royal Women’s Hospital Melbourne Neofax 2013

#### DATE:
October 2013