

Subject: Scope of Practice/Procedure – ALS
Magnesium Sulfate 10%

Associated Policies:

- I. Class
 - A. Electrolyte, CNS depressant, antidysrhythmic.

- II. Indications
 - A. Severe preclampsia.
 - B. Eclampsia.
 - C. Prevention and control of convulsive states.
 - D. Torsades de Pointes, ventricular tachycardia, or ventricular fibrillation refractory to Lidocaine.
 - E. Preterm labor.

- III. Therapeutic Effects
 - A. Decreases neuromuscular irritability associated with toxemia of pregnancy.
 - B. CNS depressant.
 - C. Lowers blood pressure.
 - D. Prevents and terminates seizure activity due to eclampsia by inhibiting CNS activity and relieving arteriole vasospasm.

- IV. Contraindications
 - A. Absolute:
 - 1. Second and third degree heart block.
 - 2. Evidence of severe cardiac disease or fluid overload.
 - B. Relative:
 - 1. Renal impairment, consider lower dose.
 - 2. Suspected delivery within next two (2) hours.

- V. Adverse Effects
 - A. Toxicity.
 - B. Thirst.
 - C. Diaphoresis.
 - D. Hypotension.
 - E. Flaccid paralysis.
 - F. Respiratory depression.
 - G. Circulatory depression or collapse.
 - H. CNS depression.
 - I. Heart block.
 - J. Chest pain/pulmonary edema.

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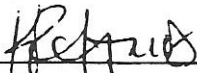
Associated Policies:

VI. Administration and Dosage

- A. Eclampsia, severe pre-eclampsia and pre-term labor loading dose: 4 Gm of 10% solution IV infusion over twenty (20) minutes. Dilute 50% Magnesium Sulfate to 10% prior to administration.
 - 1. To facilitate delivery and maintain more constant flow rate medication may be mixed to produce an IV infusion.
 - 2. Remove 10cc solution from 50cc bag of NS or D₅W. Add 10cc 50% Magnesium Sulfate, (creates a concentration of 100 mg/ml).
 - 3. Maintenance: 1 to 2 Gm 10% solution IV per hour to maintain desired effect.
- B. Ventricular Fibrillation: 1-2 Gm IVP of a 10% solution.
- C. Torsades de Pointes and Ventricular Tachycardia: 1-2 Gm of 10% solution administered over 1-2 minutes.

VII. Special Instructions

- A. Toxicity is very rare in the emergency setting with the short-term use of the medication. Toxicity usually occurs after long-term use and high maintenance doses.
- B. Calcium Chloride may be used as antidote if respiratory depression or heart block should develop.
- C. If delivery follows Magnesium Sulfate administration within twenty-four (24) hours, anticipate newborn to show signs of toxicity (e.g. respiratory depression).

Approved: 

Approved as to Form: 