WASHINGTON ADVENTIST HOSPITAL
WOMEN'S SERVICES
LABOR AND DELIVERY
COLLABORATIVE PRACTICE STANDARDS

Magnesium Sulfate Administration For Tocolysis and/or Gestational Hypertension

I SCOPE:

This policy applies to the Labor, Delivery, and Antepartum units of Women's Services.

II PURPOSE:

To ensure patient safety during the administration of Magnesium Sulfate to patients for whom this treatment modality is deemed necessary by the attending physician.

III POLICY:

Labor & Delivery nurses administer magnesium sulfate under the direct order of the attending physician as treatment for diagnoses including by not limited to preterm labor, Gestational hypertension, and Preeclampsia. All intravenous fluids will be administered on an infusion pump.

IV PROCEDURE:

A Place patient on continuous Electronic Fetal Monitoring. If uterine contractions cannot be monitored due to gestational age, or habitus, monitor per palpation and patient response.

B Start IV and collect blood work per physician orders.

C If patient presents at less than 35 weeks gestation, evaluation should be done to rule out signs of infection, bleeding and ruptured membranes prior to beginning Magnesium Sulfate therapy.

D Before initiating the administration of Magnesium Sulfate, the effects, as well as, the risks and benefits of treatment should be explained to patient and education should be documented.

E Magnesium Sulfate is dispensed as 4 Grams in 100ml of Lactated Ringers or 40 Grams in 1000ml of Lactated Ringers. **ALL IV INFUSIONS SHOULD BE ON AN INFUSION PUMP FOR ACCURATE I &O.**

F Standard dosage – 4-6 Gram bolus over 30 minutes with maintenance does of 1-3 Grams per hour.

G Infusion rate of Magnesium Sulfate to be determined by clinical response and physician orders

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1 Infusion rate
- a Bolus
  - 4 Gram bolus = 200 Milliliters/hour
  - 6 Gram bolus = 300 Milliliters/hour
- b Maintenance
  - 1 Gram/hour = 25 Milliliters/hour
  - 2 Grams/hour = 50 Milliliters/hour
  - 3 Grams/hour = 75 Milliliters/hour

H Assess vital signs, deep tendon reflexes and perform lung auscultation prior to starting the Magnesium Sulfate infusion.

I Vital Sign
1. During initiation of magnesium sulfate infusion, vital signs should be assessed every 5 minutes for 30 minutes.
2. Blood Pressure should then be assessed every 15 minutes for at least one hour or until stable.
3. Following the hour, Blood Pressure should be assessed every hour unless increased monitoring is warranted due to patient's condition or ordered by physician.

J Monitor intake and output closely.
1. Maintain total IV intake at 125 ml/hr or per physician order.
2. Urine output can be obtained by bed pan and should be maintained at a level of at least 120ml/4hr.
3. Foley catheter should be inserted when urinary output criteria is not met

K Assess every 2 hours for the following (unless increased monitoring is warranted by patient's condition or ordered by physician):
1. CNS alterations
   - a LOC
   - b Blurred Vision
   - c headache
2. Deep Tendon Reflexes (DTR's),
3. Clonus
4. Breath sounds

L Magnesium levels should be drawn 3-4hours after completion of bolus. Following initial draw, additional levels should be drawn as indicated patient's symptoms or per physician order.

1 **Magnesium Levels**
- a Normal 1.6 to 2 meq/dl
- b Therapeutic 4 to 7 meq/dl (determined by diagnoses and patient's response)

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M Monitor for signs of Magnesium Sulfate toxicity:

i. Loss of DTR's
ii. Pulse < 60 BPM
iii. Output < 30 ml/hr by urinary catherer
iv. Slurring of speech
v. Flushing sensation after initial loading dose
vi. C/O dyspnea or respiration < 12/min

N **ANTIDOTE FOR MAGNESIUM SULFATE TOXICITY**

1 **Calcium Gluconate 1 ampule** (10 ml) IV push over 3 minutes to prevent respiratory arrest or ventricular fibrillation.

O Inform anesthesia department and pediatrician of patient status.

V Reference:

1 AAP/ACOG 2002. Guidelines for Perinatal Care. Fifth Ed.
2 Diagnosis and Management of Preeclampsia and Eclampsia. ACOG Practice Bulletin No.33.
3 Mattson,s., Smith,J. (2000) Core Curriculum for Maternal-Newborn Nursing (2nd Ed). Philadelphia, PA. W.B. Saunders.