Assessment

Prior to administration:
- Obtain a complete health history including allergies, drug history, and possible drug interactions.
- Assess respiratory status and deep tendon reflexes.
- Assess for the presence or history of malnutrition, hypomagnesia, seizure activity, preeclampsia, and kidney disease.
- Obtain serum magnesium level and renal profile.

Potential Nursing Diagnoses
- Injury, Risk for, related to disease conditions and adverse effects of drug
- Knowledge, Deficient, related to drug therapy

Planning: Client Goals and Expected Outcomes

The client will:
- Exhibit improvement in serum magnesium level.
- Immediately report side effects such as lowered pulse, dizziness, difficulty breathing, and weakness.
- Demonstrate an understanding of the drug’s action by accurately describing drug side effects and precautions.

Implementation

Interventions and (Rationales) | Client Education/Discharge Planning
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Assess magnesium level to determine deficiency. (The therapeutic range is very narrow; toxic levels may develop quickly.) | Instruct client that magnesium sulfate should only be taken on the advice of a healthcare provider.
Monitor vital signs frequently throughout intravenous infusion. (Magnesium sulfate depresses respirations, pulse rate, and rhythm.) | Instruct client to report any difficulty breathing, low pulse rate, or dizziness.
Report urine output of less than 100 ml/h to healthcare provider. (Clients who have impaired renal function may have decreased renal clearance, leading to toxicity.) | Instruct client to report problems with urination or edema.
Observe newborns for signs and symptoms of magnesium toxicity if the mother received magnesium sulfate during labor. (The neonate may have received some amount of magnesium that could cause skeletal muscle and cardiac muscle depression.) | Advise laboring mothers who are receiving magnesium sulfate that the newborn will be monitored closely after birth.

Evaluation of Outcome Criteria

Evaluate the effectiveness of drug therapy by confirming that client goals and expected outcomes have been met (see “Planning”).
- The client’s lab values exhibit an improvement in serum magnesium level.
- The client verbalizes side effects that require reporting.
- The client demonstrates an understanding of the drug’s action by accurately describing drug side effects and precautions.