MAGNESIUM SULFATE

PHARMACOLOGY & MECHANISM OF ACTIONS:
- Antiarrhythmic
- Anticonvulsant
- Magnesium is a cation that is present in human cells and intracellular fluid
- The effects of hypomagnesaemia in cardiac arrest are well known
- Hypomagnesaemia is associated with a high frequency of cardiac arrhythmias (particularly refractory V. Fib.), cardiac insufficiency and sudden cardiac death.
- Magnesium sulfate may be effective in the treatment of torsades de pointes, even in the absence of hypomagnesaemia.

INDICATIONS:
- Recurrent or refractory ventricular fibrillation and pulseless ventricular tachycardia following initial measures with defibrillation, epinephrine and antiarrhythmic.
- Cardiac arrest associated with Torsades de points or suspected hypomagnesemic state (e.g. alcoholics).
- Eclampsia (seizures accompanying pregnancy): active seizure after 20th week of pregnancy, or within 48 hrs post-partum.
- Severe asthma in prolonged transports

CONTRAINdications:
- Any patient with heart block
- Patient in active labor

ADMINISTRATION:

<table>
<thead>
<tr>
<th>PARAMEDIC</th>
<th>ADULT</th>
<th>PEDIATRIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>CARDIAC INDICATIONS/HYPOMAGNESMIC STATE</td>
<td>Mix 2.0 g in 20 mL NS for 10% solution; administer over 2 minutes IV</td>
<td>CARDIAC INDICATIONS/HYPOMAGNESMIC STATE</td>
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<tr>
<td>PRE-ECLAMPSIA</td>
<td>Active seizure after 20th week of pregnancy or within 48 hours post-partum.</td>
<td>Mix 2 g in 20 mL NS for 10% solution</td>
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<tr>
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<td>Mix 2.0-2.5 g in 20 mL NS for 10% solution administer over 2 to 3 minutes.</td>
<td>Give weight appropriate amount (25 to 50 mg/kg)</td>
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SEVERE ASTHMA IN PROLONGED TRANSPORTS

PRECAUTIONS & SIDE EFFECTS:
- Flushing
- Sweating
- Mild bradycardia
- Hypotension
- Severe hypomagnesaemia may produce depressed reflexes, flaccid paralysis, circulatory collapse, respiratory paralysis and diarrhea. This would not be expected unless unrecognized preexisting hypermagnesemia is present.