

AMINOPHYLLINE

PRESENTATION:	Ampoules containing 250mg in 10ml, 25mg/ml of aminophylline.
INDICATION:	Reversible airways obstruction, severe acute asthma.
DOSE AND ADMINISTRATION:	<p>It is preferable to base doses on ideal body weight.</p> <p>Loading dose: This may not be needed-see below.</p> <p>If patient is not usually on oral theophylline or aminophylline then administer a loading dose of 5mg/kg by slow intravenous injection or infusion over at least 20 minutes (maximum rate is 25mg/min) i.e. 350mg for a 70kg patient. <i>The maximum loading dose is 500mg.</i></p> <p>If given peripherally dilute in 100ml glucose 5%, if given centrally it can be given undiluted.</p> <p>If patient is usually on oral aminophylline or theophylline, and current plasma theophylline or aminophylline level is in the therapeutic range or not available, do not administer a loading dose.</p> <p>When the plasma theophylline level is available, consider whether a partial or full loading dose is required. A dose of 1.2mg/kg of aminophylline will increase serum theophylline concentration by about 2microgram/ml.</p> <p>Maintenance infusion dose: 500micrograms/kg/hour i.e. 35mg/hr (35ml/hr) for a 70kg patient.</p> <p>ICU STANDARD INFUSION (for maintenance infusion): 500mg aminophylline in 500ml glucose 5% centrally or peripherally.</p>
CONCENTRATION:	Maintenance infusion: 1mg/ml
STABILITY:	Physically and chemically stable for 24 hours. Also stable in sodium chloride 0.9%.
ADDITIONAL INFORMATION:	<p>Checking levels: Therapeutic range:10-20mg/litre. Check a theophylline level 6 hours after the start of the maintenance infusion, and then daily thereafter. The time to steady state can vary widely in patients. If the first level is low, administer a top up dose (a dose of 1.2mg/kg of aminophylline will increase the serum theophylline concentration by approximately 2microgram/ml), but do not increase the infusion rate. Take a level the next day. If this level remains low, then increase the infusion rate.</p>

References:

1. British National Formulary. www.medicinescomplete.com. Accessed 07/10/19.
2. Aminophylline hydrate 25mg/ml Solution for Injection. Summary of Product Characteristics. www.medicines.org.uk. Last updated 30/05/19.
4. Intravenous aminophylline monograph. Injectable Medicines Guide (Medusa), Version 7. www.injguide.nhs.uk. Date published 27/08/19.
5. Martindale. The Complete Drug Reference. www.medicinescomplete.com Accessed 07/08/17
6. Handbook of Clinical Drug Data. 10th edition. Mcraw-Hill Companies, Inc.2002.

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