ARGININE (L-arginine 50%) administration (IV)

(Each ampoule Of Arginine 50% concentrate for injection contains 5g in 10mls = 50g in 100mls = 50%)

Dose:
Stat dose (if required)
250mgs/kg over 90 minutes
Maintenance dose:
250 - 500 mgs/kg/day

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Use maximum concentration only:
100mg/ml preparation
(i.e. 100mg in 1ml = 10,000mg in 100ml = 10g in 100ml = 10% solution

Note: % = g / 100mls. (e.g. 1% = 1g in 100ml / 10% = 10g in 100ml)

Based on the dose/kg/day, the following are the adminsitration options for a 24 hour infusion:

A.
If dose is ≤ 6g / day the following method of administration is used

B.
If dose is > 6g / day the following method of administration is used

Using a 50 ml syringe, withdraw 40mls from a 500ml bag of 10% dextrose and add 10 ml of arginine 50% concentrate for injection (1 vial) to the syringe, therefore syringe contains a solution of 5g in 50ml.
(i.e. 5g in 50ml = 10g in 100mls = 10% solution = 100mg in 1ml)
(note: if 5 – 6 g/ day required the syringe will last < 24 hours)

Remove 200 ml from 500 ml bag of Dextrose 10%
Insert 80ml of Arginine 50% concentrate for injection
(8 vials= 80ml = 40g)
As 80 ml Arginine has been added to the solution there is now 40 grams of Arginine in a volume of 400 mls*
(i.e. 40g in 400ml = 10g in in 100ml (10% solution) = 100mg in 1ml.

May be prescribed a as a stat / bolus infusion (over 1.5-2 hours) or continuous.
(Always a continuous infusion in PICU)

*500ml bags do not contain exactly 500ml – average contents is 520-540ml. This calculation is based on a volume of 520mls in bag.

Prescription Includes :
Infusion fluid – 10% dextrose
Volume & Drug dose to be added –
drug name (grams in final volume)
solution percentage concentration
dose in mgs/kg/day
calculated dose in g/day
dose in mls /day
Rate ml/hr
Doctors signature & date

Prescription example

250 mg / kg / day prescribed for 40kg child.
40 kg x 250mg = 10,000mgs = 10g /day
As dose > 6g /day option B is used
10000 ÷ 100 x 1 = 100 mls/day = 4.2mls/hr

Date	Infusion fluid	volume	Drug or electrolyte dose to be added	Rate ml/hr	Prescribers full signature	Date discontinued	Administered by:	Witnessed by:	Time
1/1/13	10% Dextrose	40g of arginine in 400ml final volume = 10% solution Dose = 250mgs/kg/day =10g/day = 100ml/day		4.2 ml/hr	Dr Bloggs Pager 007	3/1/13 Dr Bloggs 007	SN	SN	1400hr