CALCIUM GLUCONATE for slow intravenous injection

Presentation

- Calcium gluconate 10% contains 0.22 mmol calcium in 1ml (10ml amps)

Prescribing

Prescribe in terms of calcium salt (i.e. the amount of calcium in mmol to give) on the once only section of drug chart for "bolus" doses.

- Dose for "bolus": 0.1 mmol/kg (maximum 6.6mmol = 30ml) over 10 minutes.

Storage

Store at room temperature

Preparation/ Dilution

Dilute to at least 0.04 mmol/ml i.e. dilute to five times volume for peripheral administration using sodium chloride 0.9%.
Can be given undiluted via central access.

Route of Administration

CENTRAL access should be used unless emergency. See below for risk minimisation if only peripheral access

If only peripheral access available, then dilute to five times volume. Avoid using peripheral access over joints and scalp veins. Where there is no central option opt for proximal well placed cannula..

Rate of Administration

"Bolus" dose over 10 minutes.
Continuous infusions have been used see separate monograph

Stability

Use immediately - assign expiry of 1 hour on IV additive label.

Flushes

Sodium chloride 0.9%.

Common Compatibilities at Terminal Y-site

IV maintenance fluids containing sodium chloride or glucose, with or without potassium chloride.

Monitoring/ Other comments

It is an absolute contraindication to give calcium salts at the same time as ceftriaxone, even via different lumens- one infusion must be completed before administering the second drug.
If there are any signs of bruising or mottled skin around cannula site, injection must be stopped immediately and referral made to clinician and plastic surgery team ensuring the plastics team aware that a calcium salt has extravasated
Rapid IV injection can cause vasodilation, hypotension, bradycardia, syncope and cardiac arrhythmias, therefore ECG monitoring is recommended.

Extravasation Risk

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Extravasation of calcium salts are serious. If any signs of mottling, bruising or any suspicion of extravasation stop infusion and inform senior staff member and plastic surgery team on call immediately.

Extreme of pH	Hyperosmolar	Vasoactive	Vesicant
No pH 5.5-8.2	Not if diluted	No	Yes

Calculation example

6.8 kg child with ionised calcium of 0.8 mmol/L requiring calcium replacement of 0.1 mmol/kg. Patient has non-central line

Prescribe on the once-only section of drug chart as below:

PRESCRIPTION FOR ONCE-ONLY

Date and Time to be given	Medicine (Approved Name)	Dose	Route	Prescriber's Signature & PRINT
1/2/12 08:00	CALCIUM GLUCONATE	0.7mmol	IV	Dr Jones JONES 213
	Over 10 minutes dilute to 15ml			

Prepare as follows:
Draw 3.2 ml of calcium gluconate and make up to 15 mls using sodium chloride 0.9%. Label syringe as per Trust Policy. Attach to IV line and give over 10 minutes via syringe pump.