CALCIUM

PRESENTATION:	Ampoules containing **calcium gluconate** 10% w/v: Equivalent to 2.25mmol of calcium per 10ml **OR** equivalent to 2.23mmol of calcium per 10ml. **There is significantly more calcium in 10ml ampoules of calcium chloride (10mmols) when compared to calcium gluconate (2.23mmol).** Calcium chloride may cause massive tissue necrosis on extravasation. Calcium chloride ampoules will be available **only** for CVVHD with calcium citrate anti-coagulation. Please refer to CVVHD protocol.
INDICATION:	Correction of acute hypocalcaemia **Emergency situations**: Cardiac arrest, hyperkalaemia, shock states, haemorrhage/massive transfusion, calcium channel blocker overdose
REFERENCE RANGES:	Ionised Calcium: 1.18-1.30mmol/L NB: Lab calcium results are now corrected for albumin level as Adjusted Calcium. Ionised Calcium may be more relevant especially in liver disease/transplant or massive transfusion. Asymptomatic low calcium levels usually require no treatment, **rarely requires replaced if ionised calcium is >1mmol/L** – discuss with consultant.
DOSE AND ADMINISTRATION:	Peripheral or central administration (**preferred route via CVC**). **Infusion**: Depending on the calcium gluconate preparation available: - 4.5mmol **OR** 4.46mmol **calcium gluconate** 10% in 100ml glucose 5% or sodium chloride 0.9% over at least 30 minutes. For 4.5mmol, add 20mls of calcium gluconate (equivalent to 2.25mmol/10ml) to 100ml glucose 5% or sodium chloride 0.9%. **OR** For 4.46mmol, add 20mls of calcium gluconate (equivalent to 2.23mmol/10ml) to 100ml glucose 5% or sodium chloride 0.9%. **Bolus:** In an emergency, undiluted 4.5mmol OR 4.46mmol may be given over 5 minutes into a large vein. Doses may need to be repeated as required or followed by a continuous infusion.
STABILITY:	Physically and chemically stable for 24hours at room temperature.

ADDITIONAL INFORMATION:	For calcium channel blocker poisoning – follow TOXBASE advice

References:
1) Calcium Gluconate Injection, Summary of Product Characteristics, Hameln Pharma Ltd, Last updated June 2020. Accessed December 2020.

2) Calcium Gluconate, UKCPA Minimum Infusion Volumes, 4th Edition, December 2012. Accessed December 2020.

3) Calcium Gluconate, Medusa monographs, Last updated October 2020. Accessed December 2020.

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