

MEG Demo (Staff App) - MEG Demo - MEG Staff app: Calcium supplementation

CALCIUM SUPPLEMENTATION

Indications for use

To treat hypocalcaemia and hyperkalaemia (prevention of arrhythmias).

Dose and Administration

Hypocalcaemic crisis with seizures, apnoea or tetany: calcium gluconate 2 ml/kg (=0.45 mmol/kg calcium) of 10% injection given slowly IV over 5 - 10 minutes.

Maintenance treatment of hypocalcaemia :

If corrected serum calcium level $> 1.6 \text{ mmol/L}$ no treatment is required (unless there are symptoms that can be attributed to hypocalcaemia).

If corrected serum calcium level $< 1.6 \text{ mmol/L}$ give 2.25 ml/kg per day of Calcium Gluconate 10% injection = 0.5 mmol/kg per day of calcium, preferably infused over 24 hours, adjusted according to response. Consider oral route as soon as possible due to risk of extravasation.

If persistent mild hypocalcaemia occurs consider oral supplements of calcium liquid. Dose is 0.25 mmol/kg = 0.5 ml/kg every six hours orally, adjusted according to response.

Hyperkalaemia:

Give Calcium Gluconate 10% 2 ml/kg (=0.45 mmol of calcium/kg) IV slowly over 5 - 10 minutes. **Watch for extravasation and arrhythmia**

NOTE: Check if baby is on Parenteral Nutrition as calcium is usually included in PN order and calcium level can be corrected as PN is infused.

Presentation

Calcium gluconate 10% is available in 10 ml plastic ampoules containing 0.225 mmol (9 mg) of elemental calcium per 1ml.

Calcium oral liquid contains 20 mg of elemental calcium in 1 ml which is equivalent to 0.5 mmol of calcium in 1 ml.

Preparation

Dilute each 1 ml of Calcium Gluconate 10% injection (=0.225 mmol) up to 5 ml with glucose 5% or sodium chloride 0.9%. Final concentration is 0.045 mmol/ml.

Monitoring

- Rapid IV administration can cause bradycardia and arrhythmias. Monitor ECG.
- Stop infusion if heart rate is less than 100 beats per minute.
- Monitor IV site for signs of infiltration.
- Observe IV tubing for precipitates.
- Check calcium levels.

Side Effects

- Bradycardia and arrhythmias.
- Severe tissue necrosis with extravasation - check IV site prior to administration.
- Gastric irritation and diarrhoea with oral administration.

Incompatibilities

Blood products, parenteral nutrition, amphotericin B.

Never add calcium to any solution containing bicarbonate, sulphate or phosphate as precipitation can occur.

Storage

Opened ampoules should be discarded immediately after opening.

Discard reconstituted solution after 24 hours.

Store oral liquid at room temperature.