Dantrolene Intravenous for adults

Who can administer

Administration RESTRICTED - see Appendix 1

Important information

- For a 70kg patient, if a cumulative dose of 10mg/kg is needed this will amount to approximately **36 vials**
- Beware the risk of **extravasation**

Available preparations

Dantrium 20mg vial

Pack includes a single use filter device

Reconstitution

Water for injection ONLY

60ml per 20mg vial

- Vials should be shaken until the solution is clear
- Using the filter device provided, draw up the reconstituted solution into a syringe
- Use a new filter device for each vial
- Remove the filter device before attaching the syringe to an IV cannula or giving set

Infusion fluids

After reconstitution with Water for Injections, no further dilution permitted.

Methods of intravenous administration

Bolus intravenous injection

- **Management of malignant hyperthermia crisis (licensed [ref 2,4]), or neuroleptic malignant syndrome (unlicensed [ref 1,3])**
  - The required dose to be given as a bolus intravenous injection - see under 'Dose'
  - Bolus injections may be administered rapidly (over at least one minute)[ref 2]

Intermittent intravenous infusion - using an electronically controlled infusion device

- **Prophylaxis of Malignant hyperthermia crisis [ref 2,5](unlicensed)**
  - Add required dose to an appropriate-size empty sterile IV plastic bag for administration - supplied from pharmacy
  - The required dose is administered over 60 minutes, with the infusion commencing approximately 75 minutes before anticipated anaesthesia
  - See 'dose' for details

Dose in adults

Management of malignant hyperthermia crisis

- Dantrolene should be administered by repeated bolus injections, one after another, continuing until symptoms subside or the maximum cumulative dose of 10mg per kg has been reached
- The dose for each bolus injection is 1mg per kg
- If physiologic and metabolic abnormalities reappear after initial control, the regimen may be repeated
- An alternative regimen may be used [ref 4]
  - Initial dose: Give 2 to 3mg/kg, then 1mg/kg repeated if necessary; maximum 10mg/kg/course

Prophylaxis of malignant hyperthermia crisis (unlicensed use)[ref 1,2,5]

- Used for the prevention or attenuation of malignant hyperthermia crisis in adults thought to be at risk of developing this condition
- May be given orally or IV prior to surgery (oral dose differs from IV) [ref 1,5]
- IV dose: 2.5mg/kg may be given by intravenous infusion over 60 minutes commencing about 75 minutes before anticipated anaesthesia [ref 1,2,5]
- Further doses can be given during anaesthesia and surgery if signs of malignant hyperthermia develop

Management of neuroleptic malignant syndrome (unlicensed use)[ref 1,3]

- Give 1 to 2.5mg/kg initially
- If rapid resolution of hyperthermia and rigidity is observed, may follow with 1mg/kg every six hours up to a maximum cumulative dose of 10mg/kg/day, then switch to oral dosage

Further information

- Care must be taken to prevent extravasation of the intravenous solution into the surrounding tissues.
- **Order code numbers for empty bags are:**
  - 500ml bag (Baxter E3MC-3802)
  - These bags are to be stored beside and to be dispensed along with the Dantrolene injection

Storage

- Store below 25^{0}C
- Do not refrigerate or freeze

References

SPC 2nd August 2021

1: Martindale, accessed online 1st Dec 2021

2: Injectable medicines guide Medusa UK site downloaded 1st Dec 2021

3: UpToDate accessed online 1st Dec 2021

4: BNF accessed online 9th Dec 2021

5: Injectable Drugs guide- accessed via Medicinescomplete 9th Dec 2021

Therapeutic classification

Direct acting skeletal muscle relaxant