Dantrolene Intravenous for adults

Who can administer

Administration RESTRICTED - see Appendix 1

Important information

- If using 20mg vial strength for a 70kg patient: a cumulative dose of 10mg/kg is needed this will amount to approximately **35 vials**
- Beware the risk of **extravasation**

Available preparations

Dantrium 20mg vial (pack includes a single use filter device)

Agilus 120mg vial

Reconstitution

Dantrium brand: 60ml per 20mg vial (**Water for injection ONLY)**

- 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

Agilus brand 20ml **per 120mg vial (Water for injection ONLY)**

- Vials should be shaken until the solution is clear (approximately one minute)

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])**
    - Administer 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

- **Initial dose: 2.5 mg/kg body weightÂ**
- As long as the main clinical symptoms of tachycardia, hypoventilation, sustained hyperacidity (pH and pCO2 monitoring required) and hyperthermia persist, **bolus injection should be repeated**
    - Suggested interval: repeat every 10 minutes [Agilus brand] Â
    - Other references suggest repeat doses of 1mg/kg every five minutes [ref 6]
- **In most cases, a total dose of 10 mg/kg body weight per 24 hours is sufficient**
- If a cumulative dose of 10mg/kg or above is considered, the diagnosis of malignant hyperthermia should be re-examined
- If doses >10mg/kg are required- contact National Poisons Information Service [ref 6]

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 E13050LPF)
    - These bags are to be stored beside and to be dispensed along with the Dantrolene injection (available to order from PASU)

Storage

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

References

Dantrium SPC 10th June 2022

Agilus SPC 29th May 2024

1: Martindale, accessed online 23/01/2025

2: Injectable medicines guide Medusa UK site downloaded 23/01/2025

3: UpToDate accessed online 23/01/2025

4: BNF accessed online 23/01/2025

5: Injectable Drugs guide- accessed via Medicinescomplete 23/01/2025

6: Toxbase- downloaded 17/04/2025

Therapeutic classification

Direct acting skeletal muscle relaxant