Hydromorphone Intravenous for Adults

Who can administer

Administration RESTRICTED - see Appendix 1

Important information

- In GUH, hydromorphone is usually given by the subcutaneous route at ward level
- In GUH, it is generally in **Critical Care** areas that it is given by the intravenous route
- More POTENT than morphine. 1.5mg of intravenous hydromorphone is approximately equivalent to 10mg of intravenous morphine [ref 1]
- Stored in CD press, MDA regulations apply (storage and recording requirements)
- For Y-site compatibility see below

Available preparations

Hydromorphone 20mg in 1mL ampoule
Hydromorphone 50ml in 1mL ampoule

Reconstitution

Already in solution

Draw up using a 5 micron filter needle

Dilute further before administration

Infusion fluids

Sodium Chloride 0.9% or Glucose 5%

Methods of intravenous administration

Slow intravenous injection

- Dilute to a convenient volume: suggest draw up 1mL (20mg) and dilute with 19mL Sodium chloride 0.9% to produce a 1mg in 1mL injection solution [ref 3]
- Administer required dose over 2 to 3 minutes

Continuous intravenous infusion (administer using an electronically controlled infusion device)

- Using the 20mg in 1mL ampoule, add 1mL (20mg) to 39mLs of infusion fluid [ref 2]
- This give a concentration of 20mg in 40mLs (0.5mg in 1mL)

Dose in adults

Intravenous injection

- Give 1 to 1.5mg every 3 to 4 hours

Intravenous infusion [ref 4]

- **Initial infusion rate:** 0.5mg to 2mg/hour
- Adjust according to patients' individual response
- **Usual dose range:** 0.25mg to 2mg/hour

Monitoring

Monitor respiratory rate and blood pressure

Further information

- Hydromorphone is CONTRAINDICATED in patients who are receiving, or have received within 2 weeks MAOIs

Storage

- Store below 25^{0}C

References

SPCs March 2020 (20mg and 50mg)

1.Uptodate: Approximate dose conversions for commonly used opioids. Accessed online 01/2/2022

2.Medusa: Injectable Medicines Guide. Accessed online 01/2/2022

3:Local expert opinion- to facilitate slow administration of very small volumes

4:Local expert opinion, Prof. P. Neligan, email correspondence 17/05/2022

Therapeutic classification

Opioid analgesic