Pancuronium Intravenous for Adults

Who can administer

Administration RESTRICTED - see Appendix 1

Important information

- To be used by anaesthetists only
- **Anaphylactic** reactions have been documented, as has cross-reactivity with other neuromuscular-blocking agents
- Dose **obese** patients based on Ideal Body Weight (Patient is obese if actual body weight is 20% or more above ideal body weight or BMI > 30) (ref 1,4)
- See under 'Dose' for adjustments required in **renal or hepatic** impairment

Available preparations

Pancuronium bromide 4mg per 2mL ampoule

Reconstitution

Already in solution

Draw up using a 5 micron filter needle

Methods of intravenous administration

Bolus intravenous injection

- Administer required dose over a few seconds (ref 2)
- Doses as below

Dose in adults

Intubation

- **Initial dose**: 50 to 80 microgram/kg (intubation accomplished within 150-120 seconds), or 80 to 100 micrograms/kg (intubation accomplished within 120-90 seconds)
- **Incremental doses** of 10 to 20 microgram/kg may be needed
- **Reduce initial** dose to 20 to 60 microgram/kg in patients who have recently received **suxamethonium**
- See under 'Further information' for use in **ICU**

Obesity

- To avoid excessive dosage in obese patients, dose should be calculated on the basis of Ideal Body Weight (IBW)- see further information (ref 1)
- In obese patients, doses based on a mg/kg of actual body weight may lead to overdose

Renal impairment

- Prolonged elimination likely as pancuronium is predominantly cleared by the kidneys

- Patients with chronic renal failure may require a larger initial dose of pancuronium. A 45% increase in dose requirement has been reported in patients with end-stage renal failure (this is because of an increased volume of distribution) [ref 3]
- Recovery from neuromuscular blockade may be prolonged

Hepatic disease or biliary tract disease

- The duration of action may be prolonged. Also, resistance to neuromuscular blockade may occur because of the increased volume of distribution of the drug
- In such conditions, the drug has a slower onset, and coupled with increased dosage requirements, there may be a prolongation of blockade and recovery time in these patients

Further information

- Not used for maintenance in ICU, however doses of 60 microgram/kg up to every 60 to 90 minutes, or even less frequently, are usually adequate [ref 2]
- Licensed for administration by bolus intravenous injection only. However, it may be diluted in Sodium chloride 0.9% or Glucose 5% and administered as an infusion if required (unlicensed) [also ref 2]
- Patient is obese if actual body weight is 20% or more above ideal body weight or BMI > 30 [ref 4]**Ideal body weight (IBW) calculations**
- Male 50kg + (2.3 x inches over 5 feet) or 50kg + (0.9 x cm over 152 cm)
- Female 45.5kg + (2.3 x inches over 5 feet) or 45.5kg + (0.9 x cm over 152 cm)

Storage

Store between 2 and 8^{0}C

References

SPC December 2020, SPC UK March 2021 (Hospira)

1: BNF 82

2: Injectable Medicines Administration Guide UCL Hospitals 3rd edition

3: Martindale - accessed online 08/11/2021

4: Sanford guide to antimicrobial therapy (information on obesity extrapolated from data on antimicrobials)- accessed online 16/11/2021

Therapeutic classification

Muscle relaxant