Metoprolol tartrate Intravenous for Adults

Who can administer

May be administered by registered competent doctor or nurse/midwife (doctor present)

Available preparations

Betaloc 5mg per 5ml ampoule

Reconstitution

Already in solution

Draw up using a 5micron filter needle

Infusion fluids

Sodium chloride 0.9% or Glucose 5% (ref 1)

Methods of intravenous administration

Slow intravenous injection (preferred)

- Administer at a rate of 1 to 2mg per minute
- If necessary, may be diluted with Sodium chloride 0.9% or Glucose 5% [ref 1]

Intermittent intravenous infusion (unlicensed)

- Dilute 20mg to 50ml infusion fluid
- Suggested starting rate 40micrograms/kg/hour (=7ml/hour for a 70kg patient)
- Titrate dose according to response, usually up to 100 micrograms/kg/hour [ref 1]

Dose in adults

The dose must always be adjusted to the individual requirements of the patient. The following are guidelines:

Cardiac arrhythmias

- Initially, up to 5mg at rate of 1 to 2mg per minute, repeated after five minutes if necessary. A total dose of 10 to 15mg generally proves sufficient
- Due to risk of pronounced drop in blood pressure, special care should be taken if systolic blood

pressure is less than 100mmHg

During Anaesthesia

- Give 2 to 4mg injected slowly at induction to prevent (or during, to control) arrhythmias during anaesthesia
- Further doses of 2mg may be given as required to a maximum overall dose of 10mg

Early intervention within 12 hours of Myocardial Infarction

- Give 5mg **intravenously** every two minutes to a max of 15mg as determined by blood pressure and heart rate
- The second and third iv dose should not be given if the systolic blood pressure is <90mmHg, the heart rate <40 bpm and the P-Q time is > 0.26 seconds, or if any aggravation of dyspnoea or cold sweating
- Oral therapy should commence 15 minutes after last injection with 50mg **orally** every six hours for forty-eight hours
- Patients who fail to tolerate the full **intravenous** dose should be given half the suggested **oral** dose

Hypertension in patients unable to take oral medication (ref 2)

- A range of oral/IV conversion ratios has been found from 2.5:1 to 5:1
- Patient variability may exist and a specific ratio may not apply to all patients, especially if co-morbid conditions are present.
- The estimated equivalent IV total daily dose should be divided into four equal doses.
- For example if a patient is receiving a chronic oral dose of 25mg bd, (total daily dose of 50mg) - this would translate to 2.5 to 5mg every six hours by intravenous injection
- Recognising that patients receiving larger chronic oral doses should not be automatically converted to a large IV dose, consideration should be given to further reducing the initial IV dose and basing subsequent doses on the clinical response
- Avoid abrupt withdrawal

Liver impairment

- Depending on severity, a reduction in dosage may be required (rarely needed)

Monitoring

- Monitor ECG, heart rate and blood pressure closely

Storage

- Store below 25^{0}C

References

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1: Medusa. Injectable medicines guide- downloaded 30/01/2025

2: UptoDate metoprolol drug information - downloaded 30/01/2025

Therapeutic classification

Beta-adrenoceptor blocking drugs

BNF
Blood pressure conditions