Labetalol Intravenous for Adults

Who can administer

Administration RESTRICTED - see Appendix 1

Important information

- Should always be administered while patient is in the supine or left lateral position
- Raising the patient into the upright position **within three hours** of intravenous labetalol administration should be avoided, since excessive postural hypotension may occur
- Q pulse document -'WAC Group Guideline and Pathway on the Management of Hypertensive Disorders in Pregnancy'(CLN-LW-0032) should be consulted for most up to date information on the use of labetalol in this indication [ref 1]
- For Y-site compatibility see below

Available preparations

Trandate 100mg per 20ml ampoule

Labetalol 100mg per 20ml ampoule

Reconstitution

Already in solution

Draw up using a 5 micron filter needle

Infusion fluids

Glucose 5% (or see further information)

Methods of intravenous administration

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

- Dilute 200mg (40ml) injection solution with 160ml infusion fluid (1mg per ml)
- Ideally administer via central line. If essential, can be given via a large peripheral vein [ref 4]
- **Fluid restriction:** use undiluted [ref 2,3] via central line [ref 2] - unlicensed, anecdotal evidence base

Bolus intravenous injection (emergency situations such as hypertensive encephalopathy)

- Administer each 50mg over at least one minute (over five minutes if used in severe hypertension in pregnancy [ref 1])
- May be repeated every five minutes to a usual maximum total dose of 200mg (may be repeated at 10 minute intervals if used in severe hypertension in pregnancy [ref 1])
- Administer via central line or large peripheral vein [ref 4]

Dose in adults

Hypertension of pregnancy

- Commence an intravenous infusion at a rate of 20mg per hour
- This dose may be doubled every thirty minutes until a satisfactory reduction in blood pressure has been obtained or a dose of 160mg per hour is reached
- Occasionally higher doses may be necessary

Hypertensive episodes following acute myocardial infarction

- Commence an intravenous infusion at 15mg per hour
- Gradually increase to a maximum of 120mg per hour, depending on blood pressure control

In hypertension due to other causes

- Commence an intravenous infusion at about 2mg per **minute**, until a satisfactory response is obtained
- The infusion should then be stopped
- The effective dose is usually in the range of 50 to 200mg, depending on the severity of the hypertension
- For most patients it is unnecessary to administer more than 200mg, but larger doses may be required, especially in patients with phaechromocytoma

Acute Stroke

- See Local guidelines - *Acute Stroke Thrombolysis and thrombectomy Integrated Care Pathway*

Monitoring

- Monitor blood pressure, heart rate and respiratory function throughout the infusion
- Monitor LFTs as severe hepatocellular damage has been reported
- Monitor infusion site every 30 minutes [ref 3]

Further information

- Labetalol may also be diluted in glucose infusion fluids containing sodium chloride e.g. Sodium chloride 0.18%/Glucose 4%, or in Sodium chloride 0.9% [ref 4]

Storage

Store below 25^{0}C

References

SPC March 2023

1'WAC Group Guideline and Pathway on the Management of Hypertensive Disorders in Pregnancy - Drug Treatment guidelines for severe hypertension in pregnancy"(CLN-LW-0032) Q-Pulse document

2. "Critical Care Group: Minimum infusion volumes for fluid restricted critically ill patients: 4th edition 2012 UKCPA

3. Injectable Drugs Guide accessed via Medicinescomplete 07/03/2024

4: Medusa IV guides, downloaded 07/03/2024

5. BNF accessed online 07/03/2024

Therapeutic classification

Beta adrenoreceptor blocking agent with alpha blocking activity

BNF
Cardiovascular
Blood pressure conditions