LABETALOL – INTRAVENOUS LABETALOL FOR MANAGEMENT OF SEVERE / URGENT HYPERTENSION

Action:
Labetalol HCl is an adrenergic receptor blocking agent that possesses blocking activities for both nonselective, competitive beta-adrenergic receptors and selective, competitive alpha(1)-adrenergic receptors in a single substance. It causes a dose related fall in blood pressure without reflex tachycardia and without significant reduction in heart rate.

Intravenous half-life 5.5 hrs.

Use:
For the urgent treatment of severe hypertension:

Obstetric: Pregnancy or post-partum for severe hypertension ≥170 mmHg systolic or ≥110 mmHg diastolic.
Non-obstetric: hypertension associated with end-organ derangement ie cardiac or cerebrovascular dysfunction, malignant hypertension, patients unable to tolerate oral therapy.

Aim to lower BP by 10-20 mm Hg over 20-40 minutes

Presentation:
100mg/20 ml vial ie 5mg/ml.

Dosage and Administration:
To be administered by IV injection, NOT IMI. For administration by medical staff only.
Give fluid preload of IV 250ml Normal Saline immediately prior to use.
Monitor the fetal heart rate by continuous CTG.
Co-administration of oral antihypertensive therapy is recommended.
Do not mix labetolol with 5% sodium bicarbonate or any other drugs.
This medicine requires patient consent and a TGA approval form (kept in ACC) completed prior to use.

Commence treatment with IV bolus.
Commence with a slow IV bolus of 20 mg labetalol (4ml, 5mg/ml)) administered over a 2 minute period.

Record HR and BP every 5 minutes until stable ≤ 155/95 mm Hg for 15 minutes.
Repeat intravenous labetalol bolus of 20mg every 10 minutes as necessary to a maximum of 4 doses (ie 80mg = 16 ml of 5mg/ml)

The maximal effect usually occurs within 5 minutes of each injection.
Once BP has stabilized monitor BP hourly for 4 hours then return to usual preeclampsia regimen.

Continuous infusion:
If BP is not adequately controlled after 4 bolus doses, a continuous labetalol infusion may be required.

Women requiring a continuous infusion should be cared for in Acute Care or Labour ward.
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Reconstitution for Intravenous infusion:

Remove 40mls of N/S from a 100ml bag of N/S and add 200mg ie 40mls labetalol to the remaining 60 mls in the bag ie 2mg/ml.

Commence infusion at 10 ml/hr (20mg/hr) via an infusion pump. Titrate to target BP by doubling or halving the infusion every 30 mins to a maximum of 80ml/hr (160 mg/hr).

Record BP and HR every 15 minutes until blood pressure stabilizes then record hourly.

If BP decreases precipitously, halve the infusion rate or cease depending on severity.

Discontinue by weaning over 1-2 hrs when BP consistently <155/95 mm Hg.

Adverse Effects:
- Bradycardia: cease if PR <60.
- Hypotension: cease if BP<130 systolic
- Fetal bradycardia

Contraindications/precautions:
Bronchial asthma or chronic obstructive pulmonary disease, cardiogenic shock, conditions associated with severe and prolonged hypotension, postural hypotension, hypersensitivity to labetalol, overt cardiac failure, second and third degree AV block, severe sinus bradycardia

Related Policies:
Management of severe hypertension