LABETalol

Classification

Selective alpha- and non-selected beta-adrenergic blocker

Indications

CCP: Severe hypertension or hypertensive crisis

Contraindications

- Bronchospastic airway disease
- Obvious congestive heart failure
- Second- or third-degree heart block
- Cardiogenic shock
- Severe bradycardia
- Other conditions associated with severe and prolonged hypotension
- Known hypersensitivity to labetalol or any ingredient in the formulation

Adult dosages

CCP: Severe hypertension or hypertensive crisis

- Initial goal of IV therapy is to reduce mean arterial BP by no more than 25% within minutes to 1 hour, followed by further reduction *if stable* toward 160/100 to 110 mm Hg within the next 2–6 hours, avoiding excessive declines in pressure that could precipitate renal, cerebral, or coronary insufficiency. If this BP is well tolerated and the patient is clinically stable, further gradual reductions toward normal can be implemented in the next 24–48 hours.
- Intravenous bolus dosing:
  - 20-80 mg slow IV push
  - Higher initial doses (1-2 mg/kg) are available, but 20 mg is recommended to minimize adverse events and risks associated with a rapid fall in blood pressure.
  - Additional doses can be given (20-80 mg) at 10 minute intervals until the desired supine blood pressure is reached, or to a total cumulative dose of 300 mg
- Intravenous infusion dosing:
  - 0.5-2 mg/min via continuous infusion. Adjust the flow rate based on blood pressure response.
  - Progressive, incremental IV infusion regimen (i.e., infusing 20, 40, 80, and 160 mg/hour for 1 hour at each dose level, or until the desired BP is achieved) has been used, and may result in more gradual BP reduction, minimizing adverse effects compared with repeated IV injections of the drug. Controlled comparisons of various IV administration methods are not available.
  - Maximum cumulative dose of 300 mg
- Adjust dosage according to the severity of hypertension and the patient's supine BP response and tolerance
- Patients with aortic dissection should have systolic pressure reduced to <100 mm Hg if tolerated

Pediatric Considerations And Dosing

Follow weight-based dosing

Mechanism Of Action

Competitively blocks adrenergic stimulation of β-receptors within the myocardium (β_1-receptors) and within bronchial and vascular

smooth muscle (β_2-receptors) and α_1-receptors within vascular smooth muscle.

Pharmocokinetics

- Onset
  - Following slow, direct IV injection, hypotensive effect is apparent within 2–5 minutes and usually maximal within 5–15 minutes
- Duration
  - Following slow, direct IV injection, the hypotensive effect generally persists for about 2–4 hours, although a longer duration of effect (i.e., up to 24 hours) has been reported in some patients

Adverse Effects

- Symptomatic orthostatic hypotension
- Dizziness or light headedness
- Fatigue
- Nausea or dyspepsia

Overdose

Management of overdose is consistent with the management of beta blocker toxicity. See CPG J07: Beta Blockers for additional information.

Warning And Precautions

Use of LABETalol carries the risk of precipitating congestive heart failure. LABETalol may be used cautiously in patients with well-compensated heart failure (i.e., those whose heart failure is controlled with cardiac glycosides or diuretics).