

MWLCEMS SYSTEM
Continuing Education Packet
Labetalol

Generic Name: Labetalol hydrochloride

Trade Name: Normodyne, Trandate

Class: Alpha and Beta Blocker

Mechanism of Action:

Labetalol is an adrenergic receptor blocking agent that has both nonselective beta-adrenergic and selective alpha₁ adrenergic receptor blocking actions.

As a nonselective beta blocking agent it slows sinoatrial (SA) discharge, AV conduction and lessens ventricular inotropy (force of muscle contraction).

It also causes alpha blockade effects which result in vasodilatation and a diminishment in peripheral resistance.

Indications:

Hypertensive emergencies, especially in hypertension-induced neurologic emergencies with resultant increased intracranial pressure (intracranial hemorrhage, traumatic brain injury).

Contraindications:

- ⇒ Bronchial asthma,
- ⇒ Bradycardia,
- ⇒ Hypotension
- ⇒ Heart blocks beyond first degree
- ⇒ CHF
- ⇒ Cardiogenic shock
- ⇒ Hypersensitivity to beta blockers

Side Effects:

- ⇒ Bradycardia
- ⇒ Orthostatic hypotension
- ⇒ Hypotension
- ⇒ Ventricular dysrhythmias
- ⇒ AV blocks
- ⇒ May precipitate CHF in susceptible patients
- ⇒ Bronchospasm
- ⇒ Nausea, vomiting, diarrhea
- ⇒ Fatigue, dizziness
- ⇒ Lethargy
- ⇒ Hypoglycemia without symptoms in type 1 DM

Dosage:

2mg/min drip to a maximum dose of 300mg

Drug Interactions:

Amiodarone: May enhance the bradycardic effect of Beta-Blockers. Possibly to the point of cardiac arrest. Amiodarone may increase the serum concentration of Beta-Blockers.

Increased hypotension with diuretics, other antihypertensives, nitroglycerin

Pharmacokinetics:

IV: Onset 5 minutes; peak 15 minute; duration 2 – 4 hours

Half-life 6-8 hr: metabolized by liver; excreted in urine; crosses placenta; excreted in breast milk

Special Considerations:

- ⇒ Monitor vital signs and cardiac rhythm closely
- ⇒ Use cautiously in diabetes mellitus, renal disease, liver disease, thyroid disease, COPD, Bronchospasm
- ⇒ Keep patient supine for 3 hours after IV administration

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Labetalol
Post Test

Name: _____
Date: _____
Department: _____

1. Labetalol is a:
A. Selective alpha 1 blocker
B. Non-selective beta blocker
C. Selective beta blocker
D. A & C
2. Labetalol causes alpha blockade effects which result in _____ and a _____ in peripheral vascular resistance.
3. Labetalol increases the force of myocardial muscle contraction
A. True
B. False
4. Labetalol _____ sinoatrial (SA) discharge and AV conduction.
5. Amiodarone may enhance the bradycardic effect of Labetalol, possibly to the point of cardiac arrest.
A. True
B. False
6. The normal drip rate for a Labetalol drip is _____ to a max dose of _____.
7. Labetalol may mask the signs of hypoglycemia.
A. True
B. False
8. List 4 possible side effects of Labetalol.
A. _____
B. _____
C. _____
D. _____

9. Labetalol should be used cautiously in a patient with diabetes mellitus, renal disease, liver disease, thyroid disease, COPD and Bronchospasm.
- A. True
 - B. False
10. A patient on Labetalol must be on a cardiac monitor at all times.
- A. True
 - B. False