

PROTOCOL #14A - Maternal Fetal Medicine, University of New Mexico

**LABETALOL TREATMENT OF SEVERE
HYPERTENSION IN PREGNANCY**

GENERAL

1. Labetalol is combined nonselective B and selective α -1 adrenergic receptor antagonist with intrinsic B₂ - agonist activity.
2. Range of dosage shows wide variability among patients: half of patients will respond to 60mg or less IV, but a third will require over 200mg to achieve the desired effect. There is little danger of reactive hypotension however.
3. Peak effect of IV labetalol is 5 mins; half life is 5 hours
4. P.O. labetalol 100mg B.I.D. may be titrated in increments of 100mg bid q 2-3 days to attain the required maintenance dose postpartum. Onset of action of po labetalol is 1-2 hours and peak action is at 2 hours; half life is 5 hours; it requires 3 days to reach steady state. It is absorbed only in the small intestine.
5. Infant effects such as hypotension, bradycardia, and hypoglycemia, seen with other beta blockers, are rare with labetalol. Changes in uterine activity or FHR have not been noted. Breast feeding is not contraindicated.
6. Watch for hypotension, bradycardia, ventricular dysrhythmias. Place in Trendelenburg position and give fluid.
7. For severe bradycardia give atropine 0.5mg. by rapid IVP.
8. Have Glucagon on hand. **UNRESPONSIVE HYPOTENSION AND BRADYCARDIA** may be reversed by Glucagon. Give 5 to 10mg IVP over 30 seconds.
9. Patients refractory or hypersensitive to labetalol need to be switched to nitroprusside.
10. Beta blockers need to be avoided in patients with congestive failure and asthma. Meticulous I&O's are essential in severe preeclampsics on labetalol as the combination of a negative inotrope and fluid overload may precipitate pulmonary edema in susceptible patients.
11. Beta blockers may blunt the signs of hypoglycemia in diabetics and careful glucose monitoring is mandatory: Check blood glucose q 1 hour (use heparin).
12. Beta blockers should not be used concomitantly with calcium channel blockers in pregnant patients, as the combination will effectively block all fetal stress response mechanisms.
13. Patients on MgSO₄, a calcium channel blocker, should not receive other calcium-channel blockers (eg. nifedipine) as the combination can result in refractory hypotension and respiratory depression with arterial oxygen desaturation.

PROCEDURE

1. Requirement: Preeclamptic or chronic hypertensive pregnant or postpartum patient with severe hypertension (defined as diastolic BP>110 persisting over 2 hours despite bedrest, sedation, hydration, and MgSO₄ therapy).
2. Arterial line preferred.
3. Keep patient in left lateral position at bedrest.
4. STRICT I&O's. Foley catheter recommendation
5. Target diastolic is 90-100mm Hg. Monitor BP q5min period of bolus administration.

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6. Give 5 mg IV bolus. If 5 mg not effective then double the dose every 10 min. (10 mg, 20 mg, 40 mg). Maximum bolus dose is 40 mg. Continue to give 40 mg boluses q 10 min. until one of the following occurs:
 - a. no change from initial diastolic BP despite 200 mg IV
 - b. target BP (90-100 mm Hg) not achieved after 300 mg IV

DO NOT EXCEED 300 MG IN 24 HOURS.

7. If one of the above occur labetalol is deemed to have failed and the use of nitroprusside is indicated. (See Nitroprusside protocol).
8. If patient is not in labor and responds to ≤ 40 mg, may then go directly to p.o labetalol 100mg q12h (see general information #4 above).
9. For all other patients who respond to labetalol (patients who require >40 mg IV or any pt. in labor), continue to monitor BP q20 min. If DBP rises out of target range (90-100), reinstitute labetalol bolus protocol beginning with the last effective dose. DO NOT EXCEED 300 MG IV IN 24 HOURS.
10. For patients on po labetalol not in labor whose DBP exceeds the target range, reinitiate labetalol bolus protocol beginning with 5 mg dose as in #6 above.

CONSULTATION: Twenty-Four hour consultation is available by calling the Maternal Fetal Medicine service at the University of New Mexico Hospital, 1-888-866-7257.