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## Labetolol Induction In Maternal Bradycardia And Fetal Bradycardia.

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### ABSTRACT

Labetolol induction in maternal bradycardia and fetal bradycardia, we report a case of mild gestational hypertension and discuss the antenatal treatment and diagnosis

**Keywords:** bradycardia, gestational hypertension, Labetolol.

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## INTRODUCTION

Severe hypertensive disease arising in pregnancy remains a major cause of maternal and perinatal morbidity and mortality. The place of hypotensive therapy in the control of hypertensive disorders in pregnancy has in the past been difficult to assess. This was largely due to the reluctance of obstetricians to use antihypertensive drugs because of concern about their effects on the fetus. It is now accepted that the control of hypertension with antihypertensive agents is of unequivocal value in terms of fetal survival.

Where hypertension arises in pregnancy and where the fetus is immature, it is possible with treatment to allow the pregnancy to continue by preventing hypertensive sequelae in the mother. Fetal maturity is increased and fetal loss from prematurity because of premature induction of labour for maternal reasons is therefore reduced.

Caution should be exercised, however, in the use of antihypertensive drugs because of the risk of reduced placental perfusion. In the past many antihypertensive drugs have been used and side-effects from these drugs have been noted in both mother and fetus, making them undesirable for use in pregnancy.

The purpose of this study was to evaluate the effectiveness of labetalol, in patients with mild gestational hypertensive disease in pregnancy. The investigation includes those patients with mild gestational hypertensive disease in pregnancy

## CASE REPORT

21YRS case of primi with LMP-26/11/14 EDD-3/9/15, Spontaneous conception, regular menstrual cycle, married since 11 months, non consanguineous marriage, nil significant in first trimester history anomaly scan done normal, book and immunised case, she had more than 3 records of diastolic blood pressure 90 mmHg with 6 hrs apart she was diagnosed a case of mild gestational hypertension at 28 weeks of pregnancy, she was evaluated renal function test including urea, creatinine, 24 hrs urine protein was normal liver function test, sugars, end organs are normal, after the course of steroids with glucose monitoring she continuing her pregnancy, she was regularly followed up, interval growth scan was normal at 36 weeks and 5 days completed weeks, patient blood pressure was gone to 140/100 mmHg tablet labetalol 100 mg was given within half hourly she complains of loss of fetal movements, patient was developed maternal and fetal bradycardia patient was taken up for emergency lower segment caesarean section and non-reassuring Non – stress test patient was delivered by lower segment caesarean section alive, male baby, late pre term, 2.7 kg delivered, post operatively her blood pressure under control within 48 hrs after delivery postoperatively pulse rate was also normal patient got discharged on post operative day 7

## DISCUSSION

Labetalol effectively reduced BP in those women with severe hypertension complicating pregnancy. This response occurred in the supine position but there was some enhancement in the standing position, the latter probably because of the alpha-adenoreceptor blocking effect of the drug. Some antihypertensive drugs are largely dependent on posture for their effect, and because patients with hypertension in pregnancy are confined to bed in the early stages of treatment, their usefulness in this situation is reduced.

Fetal bradycardia was not a problem and the drug was free from side-effects. The patient with diabetes and underlying renal disease required the largest dose in the series for adequate control of BP. Labetalol was administered for 4 weeks from week 27 of pregnancy, the maternal diabetes remained under control and the fetus (1250 g) survived.

The finding of premature lung maturation in those infants whose mothers were treated with labetalol warrants further consideration. A major problem in the treatment of severe hypertension in pregnancy has in the past been the high neonatal loss from hyaline membrane disease complicating prematurity. It may be that the premature lung maturation was due to a stress phenomenon of the hypertension on the fetus or the result of fetal hypoxia. However, it is possibly attributable to the labetalol.

Reserpine may cause maternal depression and increase the susceptibility of patients with hypertension to convulsions. The fetus suffers nasal congestion, lethargy, increased secretions in the respiratory tract and an increased tendency to hypothermia. Methyldopa can cause excessive lethargy in the mother and may have an adverse effect on the developing neural mechanisms of the fetus. A positive Coomb's titre may occur in the mother and it causes a reduction in cardiac output and sodium retention, both undesirable in pregnancy. Bethanidine and guanethidine cause troublesome postural hypotension and diarrhoea in the mother.

More recently, propranolol has been used. Fetal bradycardia and hypotension may occur and may aggravate fetal distress and mask the clinical diagnostic features of fetal hypoxia. It may increase neonatal hypoglycaemia. Myometrial irritability may be a problem and it may interfere with maternal bladder function in the puerperium.

### CONCLUSION

The use of labetalol in the treatment of severe hypertension arising in pregnancy are encouraging. The freedom from maternal and fetal side-effects, the efficient hypotensive action and consequent improved perinatal mortality in a condition usually accompanied by high fetal loss, indicate that labetalol is suitable for use during pregnancy. The added possibility that labetalol may precipitate early lung maturation in the fetus, an observation not recorded with other antihypertensive drugs, further supports its use in pregnancies complicated by hypertensive disease where the fetus is too immature to consider delivery.

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