

Neonatal Bradycardia On Maternal Labetalol Usage In Pre-Eclampsia

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Abstract- Normal HR in a neonate is 110-160 bpm lower cut-off range is 107bpm (5th centile), physiologically bradycardia is seen during sleep and HR can go upto 60-80bpm². Risk factors for congenital bradycardia are SLE in mother, lyme's disease in mother, maternal intake of drugs(placental transfer of anaesthetics & anti-hypertensive drugs-labetalol) structural and conduction anomalies in neonate, sinus bradycardia³

Index Terms- Congenital bradycardia, PIH-pregnancy induced hypertension, atropine, orscprenaline, Heart block, anti-hypertensive drugs like labetalol, nifedipine

I. BACKGROUND & OBJECTIVES

In Pregnancy induced hypertension most commonly beta Lantagonists are used as anti- hypertensives to minimize the neonatal morbidity and mortality
Beta blockers are widely used in treatment of hypertensive disorders of pregnancy¹

LABETALOL a combined beta and alpha adrenergic blocker has been recorded as a safer on fetus with safe side effects & without any adverse effects on neonatal apgar score and hypoglycemia
Here we are reporting risk of neonatal bradycardia associated with maternal exposure to the labetalol

II. CASE REPORT

G3/P1/L1/A1/D0 38yr old female at 38wks of gestational age was referred from CHC in view of PIH for safe institutional delivery. Mother has been diagnosed with PIH on 10days prior to delivery in CHC and is advised Nifedipine. On the day of delivery at tertiary centre GMC ONGOLE labetalol is prescribed one day before onset of labour pains and stopped nifedipine. On NST examination fetal bradycardia is noted, immediately Mother has been posted for Emergency LSCS in view of fetal bradycardia. She delivered a single, alive, Male child with birth weight of 2.1kgs, cried immediately after birth, apgar score at 1min and 5mins are 8 and 10 respectively. Baby is admitted in NICU in view of respiratory distress & bradycardia

S.No	DRUGS	Duration
1	Nifedipine 5mg	7days
2	Labetalol10mg	1 day

ECG showed complete 3rd degree heart block managed with IV atropine 0.02mg/kg/dose, IV immunoglobulins 5ml/kg, IV fluids, Antibiotics-piptaz, Tablet orscprenile is given as 0.25mg/kg/dose QID even after atropine and orcseprenaline heart rate is not improving and baby has increased respiratory distress and detoriated and conncted to mechanical ventilator & finally baby has expired at 24hrs of life

Infants born to mother exposed to labetalol and beta blockers around the time of delivery are at high risk for neonatal bradycardia.



MAIN OUTCOME

Maternal usage of labetalol causes fetal bradycardia and neonatal death

III. CONCLUSION

Even though labetalol is a safe in managing maternal hypertension it is causing fetal bradycardia and newborn bradycardia . The judicious usage of labetalol is recommended

IV. RECOMMENDATION

This study adds that LABETALOL has elevated risk for neonatal bradycardia even given during late pregnancy

Labetalol can cross the placenta, may causes physiological changes in neonates who are exposed in-utero to labetalol Our study supports increased surveillance of infants and routine monitoring which includes glucose monitoring and heart rate so that condition can be promptly recognized and treated

REFERENCES

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