

“EFFICACY OF NIFEDIPINE VERSUS PROGESTERONE FOR MAINTENANCE TOCOLYSIS OF PRETERM LABOR: A META-ANALYSIS”

Cosmina Umpa-Macawadib, MD
Lucia Tiangco, MD

Section Perinatology, Philippine Children Medical Center

INTRODUCTION:

Prematurity is the most common underlying cause of perinatal and infant morbidity and mortality. Preterm birth complications are the leading cause of death among children under 5 years of age, and it was responsible for nearly 1 million deaths in 2015. Three-quarters of these deaths were preventable with current, cost-effective interventions using tocolytic agents.²

OBJECTIVES

To evaluate the efficacy of nifedipine versus progesterone as maintenance tocolytics among women after arrested preterm labor and their perinatal outcomes

METHODS:

Maternal outcomes, primarily included latency period and secondary outcome is delivery at >37 weeks. Fetal outcome primarily included gestational age at delivery and secondary outcome is neonatal ICU admission, were gathered and recorded. Continuous data were summarized using standardized mean difference, while odds ratio was used for categorical data.

Keywords:

Meta-Analysis; Nifedipine; Preterm Labor; Tocolytics; Progesterone

RESULTS:

A total of 14 trials, involving 1440 pregnant women in preterm labor, were analyzed. Two trials compared nifedipine with progesterone, while 6 trials compared oral nifedipine with placebo. The last 6 trials compared progesterone with placebo. Progesterone significantly increased latency period (SMD=0.66, $p=0.02$) and age-of-gestation at delivery (SMD=0.75, $p=0.0002$) compared to placebo. Progesterone also significantly increased the chances of delivery beyond 37 weeks AOG (OR=6.56, $p=0.02$) and decreased the chances of NICU admission (OR=2.75, $p=0.0$

CONCLUSION:

Progesterone can significantly prolong latency period, increase age-of-gestation at delivery, increase delivery >37 weeks, and decrease the neonatal ICU admissions.

RECOMMENDATION:

More trials with large population sizes are needed for better assessment of the efficacy of nifedipine versus progesterone as a maintenance tocolytic agent.