

Tocolytic treatment and childhood allergic disorders: The Japan Environment and Children's Study

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July 8, 2021

Abstract

Background: This study aimed to evaluate differences in maternal characteristics and obstetric and childhood outcomes between term births according to the use of tocolytic treatment. **Methods:** This study analyzed the data of the participants enrolled in the Japan Environment and Children's Study between 2011 and 2014. Data of 63,409 women with singleton births after 37 weeks of gestation were analyzed. We compared maternal characteristics, obstetric outcomes, and childhood outcomes between term births with tocolytic treatment and those without tocolytic treatment. Multiple logistic regression was used to calculate adjusted odds ratios for childhood outcomes with significant between-group differences in the univariable analysis for term births with tocolytic agents, with term births without tocolytic agents as the reference group. **Results:** In term births with tocolytic agents, participants had significantly younger age, leaner body mass index, higher oxidative stress during pregnancy, shorter pregnancy period, lighter neonatal birth weight, lower incidence of gestational diabetes mellitus, higher incidence of preterm premature rupture of membrane, higher rates of cesarean section, lower incidence of meconium-stained amniotic fluid during pregnancy, and higher incidence of childhood allergic disorders. The incidence of childhood developmental disorders showed no significant between-group differences. The adjusted odds ratio for childhood allergic disorders in term births with tocolytic agents was 1.09 (95% confidence interval, 1.04-1.14). **Conclusions:** This study found no significant association between tocolytic treatment and the incidence of childhood developmental disorders in children with term births. However, tocolytic treatment showed an association with a slightly increased incidence of childhood allergic disorders.

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Running title: Tocolysis and childhood allergic disorders

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Word Count: 3156

Number of tables: 2

Number of figures: 1

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