CONCLUSIONS. Treatment with OVB was superior to FP and led to a better histologic response on upper endoscopy. Children who did not have asthma responded better to OVB. Suspending in Splenda or Neocate Duocal did not affect the treatment response to OVB.

REVIEWER COMMENTS. This pediatric study reveals that OVB, a therapeutic option for pediatric patients with EoE, is superior to FP in treatment response and patient adherence. This finding is particularly important for those patients without a concurrent asthma diagnosis. In this study, the authors also provide an alternative to Splenda for suspension without any concern for a lack of treatment response. However, this study is a retrospective chart review, so prospective studies are warranted.

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Asthma

RISK FACTORS

Beta-2 Receptor Agonist Exposure in the Uterus Associated With Subsequent Risk of Childhood Asthma


PURPOSE OF THE STUDY. Several studies have revealed that the continuous use of long-acting β2-agonist is a potential risk for patients with asthma, but none have revealed the potential effect of in utero exposure on the subsequent risk of childhood wheeze and asthma. The authors of this study examined the association between intrauterine exposure to β-2 receptor agonist (B2RA) and asthma in offspring.

STUDY POPULATION. Data were obtained from a hospital-based cohort study in Tokyo, Japan, from 2003 to 2005. Researchers initially interviewed 1701 pregnant women, and 1550 infants were enrolled and followed up with during childhood and adolescence.

METHODS. Mothers were enrolled before 16 weeks’ gestation. A baseline survey and medical records were used to obtain pre- and postnatal information. Outcomes were based on a survey conducted when the children were 5 years of age. Researchers included 1158 cases in the analyses. Information on in-hospital intravenous B2RA use was retrieved from medical records then grouped into categories of low and high exposure on the basis of days of use. Outcome variables were current wheeze (“Has your child had wheezing or whistling in the chest in the past 12 months?”), current asthma (“Has your child been diagnosed with asthma by a doctor in the past 12 months?”), and ever having asthma (“Has your child ever had asthma?”).

RESULTS. Of 1158 children, 1052 (91%) had complete data, and 94 (8.1%) had been exposed to B2RA in utero. Of the 1158 children, 191 (16.5%) had current wheeze, 111 (9.6%) had current asthma, and 168 (14.5%) had ever had asthma. In the exposed group, the prevalence of current wheeze was 20%, the prevalence of current asthma was 14%, and the prevalence of ever having asthma was 18.8% compared with the nonexposed group, with rates of 15.9%, 8.6%, and 13.4%, respectively. There was an increased risk of current asthma in children who were exposed to B2RA in utero, with an odds ratio of 2.04 (95% confidence interval 1.02–4.05). Exposure was associated with a dose-dependent increased risk of current asthma and higher odds of recurrent wheeze and ever having asthma at 5 years old.

CONCLUSIONS. The authors of this study report an association between B2RA exposure in utero and the subsequent risk of asthmatic disorder at 5 years of age. The association was dose dependent in both the cumulative dose and duration of administration.

REVIEWER COMMENTS. Asthma is 1 of the most common chronic diseases of childhood. There are many previously identified risk factors for childhood asthma, but limited data exist on in utero medication exposure and the subsequent risk of childhood asthma. The authors of this study suggest a risk of asthma in infants who are exposed to B2RA in utero. This study had several limitations, including a small sample size and the use of self-reported questionnaires, but the authors pose an interesting observation for which additional studies are needed to further elucidate the mechanisms and influences of short-term B2RA use. The future potential risk of asthmatic disorders should be taken into consideration when B2RA is used as a tocolytic agent in pregnant women.

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Fetal and Infant Growth Patterns and Risk of Lower Lung Function and Asthma

den Dekker HT, Jaddoe VWV, Reiss IK, de Jongste JC, Duijts L. Am J Respir Crit Care Med. 2018;197(2):183–192

PURPOSE OF THE STUDY. Low birth weight has been associated with increased risk of asthma symptoms. The purpose of this study was to identify any specific periods of fetal or infant growth that correlated with respiratory morbidity.

STUDY POPULATION. This study was part of a population-based, prospective cohort study (generation-R study) done in
Beta-2 Receptor Agonist Exposure in the Uterus Associated With Subsequent Risk of Childhood Asthma

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