

Asthma increases risk of complications during pregnancy and delivery

Hypothesis/research issue

Asthma is a common disease caused by chronic airway inflammation with symptoms such as coughing and breathlessness, affecting 8-10 % of women of childbearing age in Sweden.

It has been previously shown that asthma is associated with several adverse pregnancy and perinatal outcomes. Familial factors may confound these associations.

Our objective was to examine the role of measured and unmeasured confounding by conducting a study that compared differentially exposed cousins and siblings from the same families.

Study design including registers used

By using the Swedish Medical Birth Register we were able to identify over 1 million births between 2001 and 2013. Data on physician-diagnosed asthma was gathered from the Medical Birth Register, the Swedish National Patient Register and the Swedish Prescribed Drugs Register.

In a first step, logistic and linear regression estimated the associations between maternal asthma and several outcomes in the whole population. In a second step, conditional logistic and linear regression, conditioning on differently exposed cousins and siblings, was used to determine the impact of shared genes and environment.

Results

In our study, 10.1% of the population had asthma and asthma was associated with, among other things, increased risks for preeclampsia, emergency caesarean section and having a child small for gestational age. In the cousin and sibling analyses, the associations with adverse outcomes remained.

The results suggest that, because associations between maternal asthma and adverse pregnancy and delivery outcomes remain when adjusting for unmeasured familial factors, the asthma disease itself continues to be an important clinical target.

[http://www.jaci-inpractice.org/article/S2213-2198\(17\)30561-5/abstract](http://www.jaci-inpractice.org/article/S2213-2198(17)30561-5/abstract)