Paediatrics

Maternal asthma associated with atopic dermatitis in offspring

A history of maternal asthma was significantly associated with the development of atopic dermatitis, as well as asthma and wheeze, in children, a cohort study from the USA has found.

Data were analysed from a longitudinal prebirth cohort of mother-child pairs. A total of 1,410 women were recruited from obstetric clinics between 2009 and 2014 and completed questionnaires on their medical history, including history of asthma and allergic rhinitis, at enrolment. Their children's medical records were subsequently reviewed at age four and age eight.

Of the 1,410 originally recruited, full data were available for analysis on 1,261 mother-child pairs.

Hazard ratios (HR) were adjusted for prenatal confounders such as the child's race/ethnicity, sex, firstborn, gestational smoking and prepregnancy BMI.

Maternal history of asthma was significantly associated with the following increased risks in the child:

- 77% greater risk of asthma; HR 1.77 (95% CI: 1.30-2.40; P = 0.0003)
- 65% greater risk of wheeze; HR 1.65 (95% CI: 1.24-2.19; P = 0.0006)
- 45% greater risk of atopic dermatitis; HR 1.45 (95% CI: 1.13-1.86; P = 0.0037)

There was no significant increased risk of allergic rhinitis or food allergies in this group when compared with children whose mothers had no history of asthma. A maternal history of allergic rhinitis was not associated with any increased risk of allergies in the children.

The study authors from the University of Colorado comment: 'It is widely accepted that the predisposition to atopy is passed on from parents to the child. It is unclear whether the disease seen in the mother is associated specifically with the same disease in the offspring or with other allergic diseases.

'Maternal history of asthma is considered a risk factor for the development of asthma and wheeze in the offspring. Our finding of an association between maternal history of asthma and offspring atopic dermatitis appears to be novel.'

Further research is required to clarify the association between maternal asthma and offspring atopic dermatitis, they add.

DR PETER SAUL

Venter C, Palumbo MP, Sauder KA et al. Incidence and timing of offspring asthma, wheeze, allergic rhinitis, atopic dermatitis, and food allergy and association with maternal history of asthma and allergic rhinitis. *World Allergy Organ J* 2021;14:100526