



## Early risk factors for cow's milk allergy in children in the first year of life

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### Background

Cow's milk allergy (CMA) is a key form of food allergy (FA). It was shown that the frequency of FA appears to have increased during the last 10–20 years, leading to the thought that FA may have different risk factors. Epigenetic regulations and environmental pre- and post-natal factors play a great role in contributing allergy. Understanding the risk factors pertaining to the development of FA may help to provide reasonable recommendations for prevention of the disease.

### Aims

The aim of the study is to assess impact of perinatal and environmental risk factors on the incidence of CMA in children in the first year of life.

### Methods

The study group consisted of 138 infants with CMA and 101 healthy infants without allergy. CMA was confirmed by an elimination test and oral food challenge. To assess infant, parental and environmental risk factors we used validated questionnaire survey.

### Results

The incidence of CMA was three times higher in infants with positive family history towards allergy (aOR=3.894; 95%CI 2.11-7.17;  $p<0.001$ ). An analysis revealed that mothers of children with CMA were four-fold more frequently university educated than mothers of children without allergy (aOR=2.887; 95%CI 1.58-5.25;  $p<0,0001$ ). The age of children's mothers from the study group was significantly higher than the age of mothers from the control group. Children from the study group were significantly shorter breastfed than children from the control group. The risk of CMA was three-fold lower in children who had pets at home (aOR=0.266; 95%CI 0.13-0.53;  $p=0.0002$ ).



## Conclusions

Positive family history of allergy and mother's education increase the risk of CMA in children in the first year of life, while having pets at home and longer period of breastfeeding decrease the risk.

Conflict of interest – does not exist