Abstract

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Title: The effect of the diseases in infancy on the prevelance of allergies in children

Diploma work

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Background: To find out if diseases in infancy are protective or risk factors for prevelance of allergy. We interested mainly in infectious diseases. We compared our results with so called Hygiene hypothesis, which claims that contact with microbes in early childhood boosts immature immune system due to activation of T_{reg} lymphocytes.

Methods: We sent 2793 questionnaires to 69 elementary schools all over the Czech republic. 1697 of them returned to us. We defined two groups of respondents allergics and non-allergics. For categorization we used specific criterions. According to these criterions 420 respondents were named as allergic and 774 respondents as non-alergic. For better identification if concrete disease played role as protective or risk factor for development of allergy, we chose another specific criterions.

Results: We didn't prove any statistical significance between diseases in infancy and the later prevelance of allergies except for bronchitis. According to our results bronchitis in first year of life played role as risk factor for development of allergic symptoms after first year of life. Respondents, who suffered from concrete disease in the first year of life, also had symptoms of allergy in the same year more often than respondents, who didn't suffer from this disease. This rule was valid in majority of diseases. It could be due to damaged immune mechanisms in respondents with allergic symptoms. Allergic respondents had higher prevelance of almost all illnesses from birth to the twelfth year of life.

Conclusions: Our results didn’t confirm suppositions of the Hygiene hypothesis. We didn't find any statistically significant protective effect of the diseases in infancy on the prevelance of allergies in children. Our results show that bronchitis should be a risk factor for development of allergy.