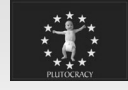





Risk factors and allergy development in followed-up children

Ciznar, P., Palkovicova, L., Rausova, K., Patayova, H., Reichrtova, E., Stoian I., Desager, K.

„Placental Uptake and Transfer of Environmental Chemicals Relating to Allergy in Childhood Years“



Workpackage (WP) 5 working group

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Objectives

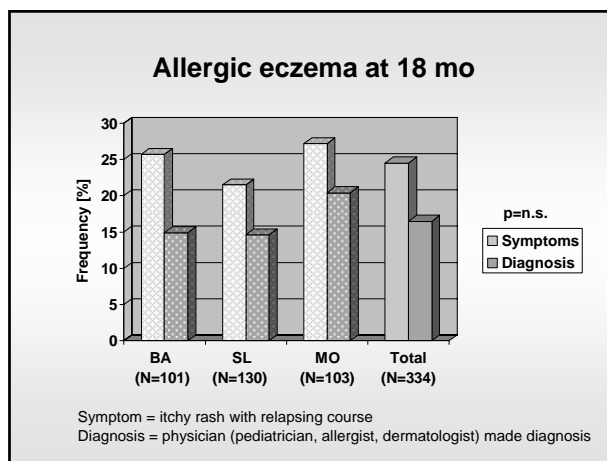
- to investigate the relationship between postnatal risk factors and allergy development in the first 18 month of life.
- to correlate the health status of the children with the results obtained from the preceding workpackages

Methods

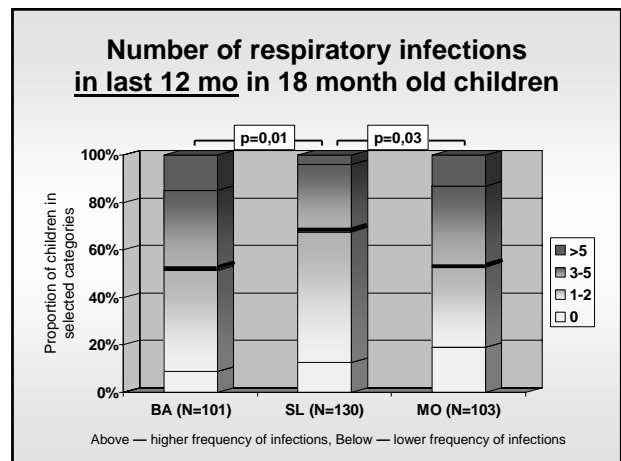
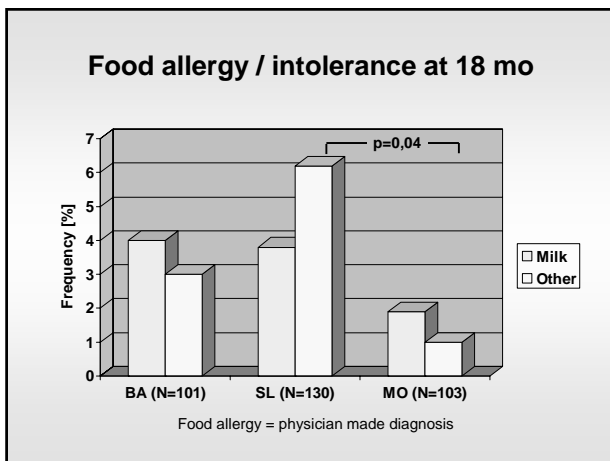
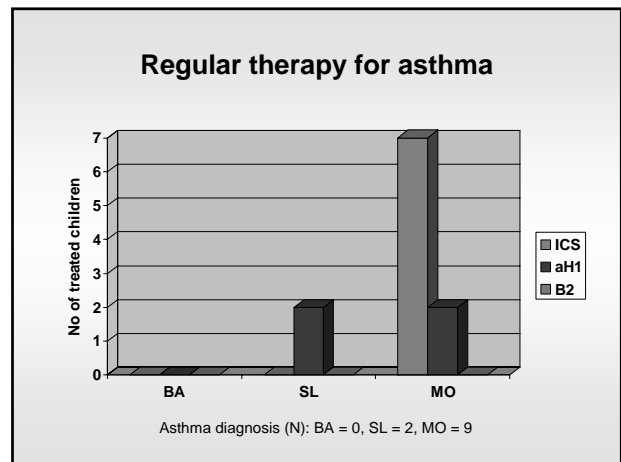
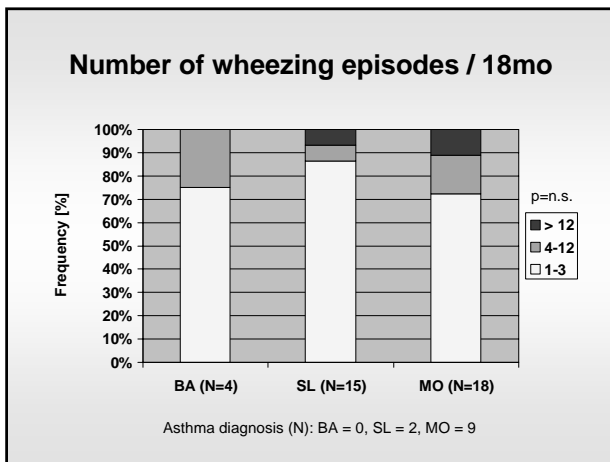
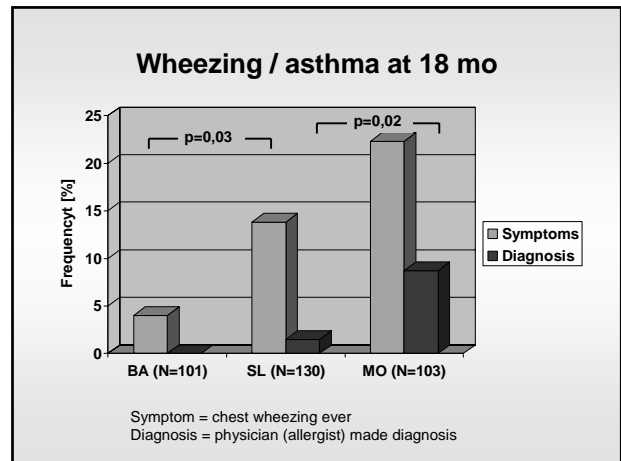
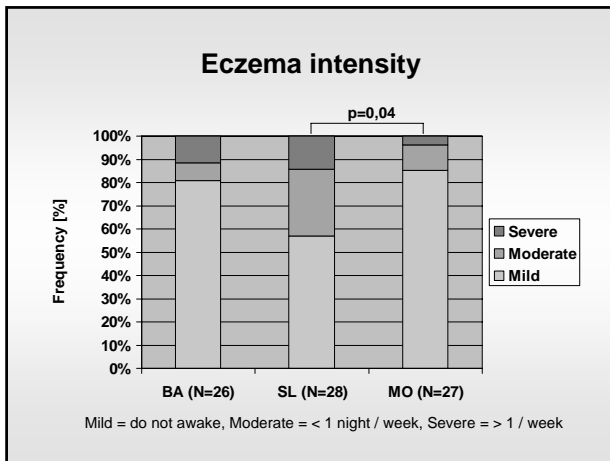
- Birth cohort study (Bratislava, Stara Lubovna, Mo)
- Questionnaire at 18th mo of the child's age
 - general health
 - allergy symptoms
 - postnatal exposures
- Clinical examination by regional allergist / pediatrician and peripheral blood sampling for allergen specific IgE determination
- Data entry into Epilinfo (version 6) and analysis by statistical methods

Variables

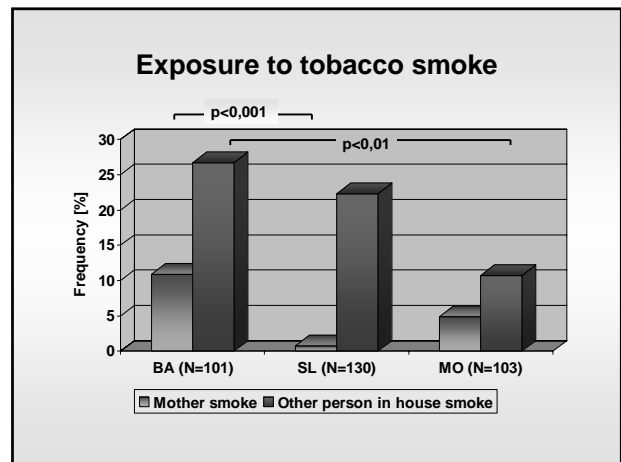
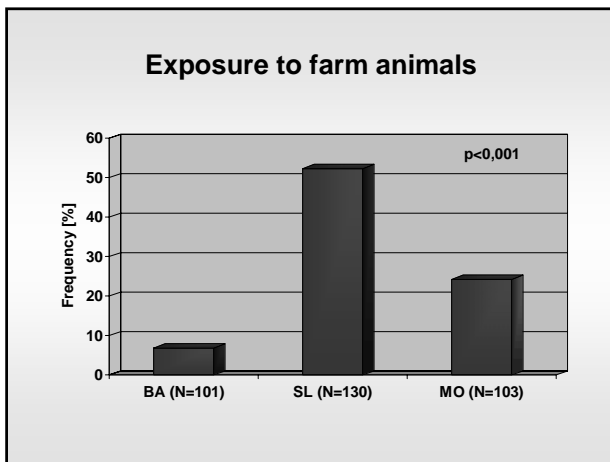
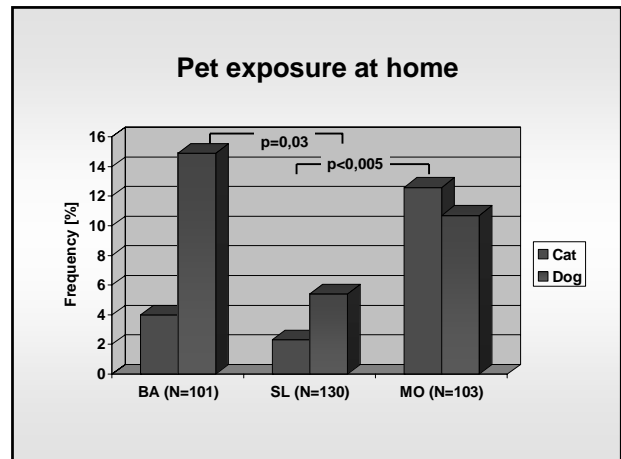
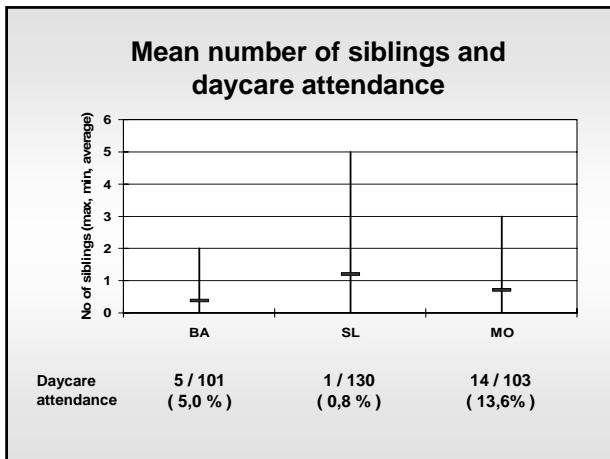
- Outcomes: allergy symptoms**
 - Eczema (symptoms, diagnosis)
 - Wheezing (symptoms, asthma dg)
 - Food allergy
- Risk / protective factors:**
 - Tobacco smoke exposure
 - Pets at home
 - Respiratory infection frequency
 - Number of siblings
 - Daycare attendance
 - Farm animal exposure



CHILD HEALTH AND THE ENVIRONMENT: RESULTS FROM EU FRAMEWORK 5



CHILD HEALTH AND THE ENVIRONMENT: RESULTS FROM EU FRAMEWORK 5



Predictors of eczema in 18 month old children

	Eczema + (N=55)		Eczema - (N=273)		p-value
	N	%	N	%	
Cat at home	3	7,9	16	7,5	n.s.
Dog at home	5	13,2	27	12,6	n.s.
Farming	15	27,3	84	30,8	n.s.
> 2 siblings	1	1,9	13	4,9	n.s.
Daycare attendance	2	9,1	17	13,9	n.s.
Respiratory infections > 5	6	10,9	27	10,1	n.s.
Mother smoke	4	9,8	13	5,9	n.s.
Other family member smoke	8	14,4	56	20,7	n.s.
Mother atopy	14	43,8	56	42,4	n.s.

Infant eczema by mother atopy

region	Mother atopy positive			Mother atopy negative			p
	infant number	eczema + infants (N)	%	infant number	eczema + infants (N)	%	
BA	27	4	14,8	31	6	19,4	n.s.
SL	10	4	40	45	8	17,8	n.s.
MO	34	6	17,4	19	4	21,1	n.s.

CHILD HEALTH AND THE ENVIRONMENT: RESULTS FROM EU FRAMEWORK 5

Predictors of wheezing in 18 month old children

	Wheezing + N=45		Wheezing - (N=287)		p-value
	N	%	N	%	
Cat at home	1	3,8	19	8,3	n.s.
Dog at home	4	15,4	29	12,7	n.s.
Farming	9	20,0	90	31,4	n.s.
> 2 siblings	2	4,5	12	4,3	n.s.
Daycare attendance	1	5,6	18	14,0	n.s.
Respiratory infections > 5	7	15,6	26	9,3	n.s.
Mother smoke	4	13,3	13	5,6	n.s.
Other family member smoke	12	26,7	54	18,9	n.s.
Mother atopy	16	59,3	54	39,1	0,05

Conclusions I.

- Symptoms of eczema in 18 month old children reported 24,5% of mothers
- Presentation of allergic (atopic) eczema was recognized by a physician (pediatrician, allergist, dermatologist) in 16,5% of 18 month old children
- No statistically significant differences among rural and urban regions of Belgium and Slovakia have been found

Conclusions II.

- Symptoms of wheezing and diagnosis of asthma were recognized more often in population of Belgium children (22,3% and 8,7%, respectively) comparing to Slovak children (4 -13,8% and 0 -1,5%, respectively)
- Frequency of milk allergy symptoms in children in the first 18 month report up to 4% of mothers irrespective of the region or country

Conclusions III.

- Children from urban regions have significantly more respiratory infections during the first 18 months than children from rural area
- Children from rural region are more influenced with environmental factors generally recognized as protective (farming, higher number of siblings)
- Children from urban areas and from Slovakia are more exposed to tobacco smoke

Conclusions IV.

- Neither predictor (risk / protective factors) was associated with eczema or food allergy presented in the first 18 month of life
- The only factor related to wheezing in the first 18 month was positive atopy status of the mother