RESPIRATORY FUNCTION IN CHILDREN LIVING IN RADIONUCLIDES CONTAMINATED AREA OF BELARUS

T. Rovbuts[1], N. Tomchik[1], S. Lalikau[1], P. Gutkowski[2]

[1]Grodno State Medical University, Belarus; [2]Military Medical Institute, Warsaw, Poland

Introduction: The aim of this work is an assessment of the respiratory status of children living in an area where radionuclides concentration is increased. 300,000 children and teenagers live in the the areas contaminated by radionuclides in Belarus. Health status analysis over the last 10 years clearly shows an increase of 25% in incidence of respiratory diseases. **Material and Methods:** 148 appearently healthy children were examined, 99 of whom live in the Homel region where the mean concentration of ^{137}Cs is 1 - 5 Ci/km^2 (Group H) and 49 from the Grodno region (Group G). The results of the physical examinations, questionnaire answers and spirometry were analysed. **Resullts:** .

TABLE. Comparison of children in Group H and Group G

	Age [yrs] mean ± SD	**VC [%pred.] mean ± SD**	**FEV1 [%pred.] mean ± SD**	**Tiffeneau [%] mean ± SD**	**Food Allergy*** **Frequency [%]**	**Eczema*** **Frequency [%]**
Group H	12,26 ±2,49	94,93 ±14,3	96,32 ±16,17	82,41 ±10,37	28,2	16,3
Group G	11,21 ±2,60	93,37 ±12,81	97,22 ±13,29	90,69 ±6,45	12,2	33,2
p	>0,05	>0,05	>0,05	<0,05	<0,05	<0,05

* questionnaire results

Conclusions: There is a significant increase in food allergy and eczema in the children living in the radionuclide contaminated area in comparison to those living in the non-contaminated areas of Belarus. The children living in the radionuclide contaminated areas have a lower Tiffeneau index compared to those living in the non-contaminated areas.