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“Risk factors and prevalence of hypertension in school-age children and adolescents with intellectual disabilities in the Podkarpacie province”

SUMMARY

Hypertension is a serious health problem both in Poland and around the world. A phenomenon that raises concerns is significant increase in the prevalence of hypertension in younger and younger individuals, including children and adolescents. It has been proved that high blood pressure diagnosed in childhood persists also in adulthood. Therefore, early diagnosis and treatment of hypertension is extremely important due to its serious health and social consequences. Control of blood pressure and the identification of risk factors is especially important in people with intellectual disabilities, as they are more vulnerable to various types of health problems than intellectually non-disabled people. However, the scarcity of domestic and foreign literature data on the incidence of hypertension among children and adolescents with intellectual disabilities is noticeable. Therefore, it is important to assess the prevalence of hypertension and determine the factors influencing its development in this population. Early identification of these factors allows to implement preventive actions by modification of lifestyle, which in turn may lead to a reduction in the incidence of hypertension or reduction of its impact.

The aim of the study was to answer the following issues:

1. Are there differences in the incidence of hypertension among children and adolescents with intellectual disabilities and their peers without mental disabilities?
2. What are selected biological, socio-economic and lifestyle factors associated with an increased risk of hypertension among children and adolescents with intellectual disabilities?

The study included 588 intellectually disabled students aged from 7 up to 18 attending special education institutions in the Podkarpacie province. The control group consisted of 588 students (matching the test group in terms of age and gender) without mental disabilities

attending randomly selected elementary schools, middle schools and high schools in the Podkarpackie province.

Blood pressure was measured according to ESH recommendations. Anthropometric measurements were performed three times (body height, waist circumference, body weight). Physical activity of children was assessed by means of Physical Activity Questionnaire - Children (PAQ-C), while physical activity of adolescents was assessed with Physical Activity Questionnaire - Adolescent (PAQ-A). Diet was assessed by means of the interview about the food intake from last 24 hours. The author's questionnaire designed on the basis on the literature of the subject was also used in the study.

Statistical analysis was conducted by means of Statistica 10.1 PL.

Hypertension was diagnosed in 7% of children and adolescents from the control group and in 56.3% of children and adolescents with intellectual disabilities. The risk of hypertension expressed as odds ratio was more than 17-fold higher among the children and adolescents with intellectual disabilities.

The factors that influenced the incidence of hypertension in the test group in a statistically significant way were: the age of the respondents, the level of intellectual disability, distribution of body fat, BMI, type of delivery, the way of feeding the baby in the neonatal period, duration of breastfeeding and weight of parents.

Significant correlation was also found between the incidence of hypertension in children and adolescents with intellectual disabilities and father's level of education, family size and material status of the family.

The level of physical activity, the frequency of fruit and vegetable consumption and the amount of salt intake also affected the incidence of high blood pressure among children and adolescents with intellectual disabilities.

The results obtained allowed to draw the following conclusions:

1. Hypertension is significantly more common among children and adolescents with intellectual disabilities than among their peers with normal intellectual capacity. Children and adolescents with a greater degree of intellectual disability are at greater risk of hypertension.

2. Overweight and obesity, abdominal obesity, older age, as well as excessive body weight in parents were the main biological factors predisposing to a significantly higher prevalence of hypertension in children and adolescents with intellectual disabilities.

3. Low level of father's education, poor financial situation and large family were statistically significant socioeconomic risk factors for high blood pressure in children and adolescents with intellectual disabilities.

4. Factors significantly associated with lifestyles that predisposed to hypertension in children and adolescents with intellectual disabilities were excessive intake of salt, rare consumption of fruit and vegetables and low level of physical activity.