

of Sakha (Yakutia) allowed achieving a high percentage of newborn screening, reducing time of inspection and early replacement therapy, prevention of disability of patients. At the beginning of screening for CH in the Republic of Sakha (Yakutia) attended only 15 of all districts, at this time, involved all the municipalities of the Republic. Coverage of neonatal screening from 42% in the first years of its introduction has increased up to 99.6%. In the period from 1996 to 2016, the frequency of CH was 1:4898, which is comparable to the literature data.

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ACTUAL TOPIC

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POLLINOSIS IN CHILDREN OF THE SAKHA REPUBLIC (YAKUTIA)

ABSTRACT

The article is devoted to an actual problem of modern pediatrics - the incidence of pollinosis in children living in the Far North. The aim of the study was to investigate the etiological factors of hay fever in the child population of the Sakha Republic (Yakutia) according to allergen testing of school children suffering from hay fever - 100 people at the National center of Medicine, Yakutsk. Considering the obtained data on the importance of sensitization among children and adolescents of Sakha (Yakutia) Republic it is necessary to introduce the calendar dusting of plants in the work of allergists and pediatricians.

Keywords: incidence, allergen testing, allergy, immunoglobulins, immunity, sensitization, prevention.

Hay fever – a reaction of an inflammatory character from the mucous membranes or skin as a result of increased sensitivity of the child's body to the pollen. The disease has a pronounced seasonality from April to September.

Difficulties in determining the accurate number of creating geographical differences in the pollen composition, a wrong interpretation of symptoms by patients or doctor error in diagnosis [1,2,7]. Hay fever is a common Allergy in children. Malta pollinosis identified U14,7% of children aged 5 to 8 years [2]. In Europe and the USA by hay fever suffers 20% of adolescents. From 1991 to 2000, the incidence of hay fever has

increased more than 2 times [3]. In the Republic of Belarus, according to official statistics, allergic diseases affect 10 to 15% of the population. Annually increase the incidence of allergic rhinitis: in 2002 of 102.3 cases per 100 thousand population; in 2003 112, 1 [3, 4, 5, 6]. However, health statistics, based on the appealability to curative preventive institutions do not correspond to true values of the incidence and prevalence of pollinosis among the population.

In the Republic Sakha (Yakutia) a study of etiological factors of pollinosis among the pediatric population has not been conducted, so this study is of scientific interest [1, 2, 3, 8, 9].

The purpose of the study: to study the etiological factors of hay fever (AR) in children population of the Republic of Sakha (Yakutia).

MATERIALS AND METHODS

The authors present the analysis of allergen testing of schoolchildren, patients with pollinosis living in the North of the Republic and 100 people at the National center of medicine of Yakutsk in the age from 4 years to 18 years. Of the 100 surveyed children 50% were girls and 50% boys. 32% of the surveyed children showed atopic dermatitis. We conducted allergen testing to value all children of the studied group. Allergic examination was conducted by prick test method to

standard pollen allergens (early-flowering - birch, alder, hazel, late-flowering-poplar, weed grasses - timofeevka, meadow grass, fire, sagebrush, regrass, dandelion, wheat grass) cereals (rye, oat, fescue). Severity of skin reactions was assessed (+, ++, --).

Statistical calculations are performed on the basis of applied programs «SAS» and «SPSS». Comparison of mean values was assessed by univariate dispersion analysis using T-student criterion to assess the equality of average F-Fisher criterion to assess the equality of variance. The relationship between parameters was assessed using the coefficients of the linear and rank correlation.

RESULTS OF THE STUDY:

Pupils showed a high sensitization to the pollen of plants, of which mugwort, birch and Prairie grass.

In children with pollinosis highest percentage of sensitization was observed on birch pollen (40%), then wormwood (32,1%) . Prevention of exacerbations of hay fever needed a hypoallergenic diet given cross-sensitization in patients with pollinosis. Below is a calendar dusting of plants of the Republic of Sakha (Yakutia), developed by the Ivanova O. N., Kardashevskiy V. E. in 2006 (Table 2).

Thus, in the period of dusting birch (May, June) the patient with a reaction to birch should not eat any stone fruit, honey, carrots. Patients with sensitization to Prairie grasses (fescue) should not be included in the diet of cereals in the period dusting of grass (July). Students with sensitization to weeds do not use seeds, vegetable oil, honey and halva in the period dustings of quinoa and sage (July, August). In the Republic of Sakha (Yakutia) range pollonaruwa plants and less time dusting in short, because of climate and geographical features of the far North.

Given the regional peculiarities of the Republic of Sakha (Yakutia) features of the spectrum pollonaruwa herbs necessary to implement regional programs taking into account the calendar dusting of plants of RS (I) for a dispensary observation of patients with pollinosis.

CONCLUSIONS:

1. According to the analysis of allergies there of the students are above sensitization to the pollen of plants, of which mugwort (32,1%), birch (49.8%) and meadow grass (20,5%).

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Table 1
The frequency of sensitization to pollen allergens from children and adolescents with pollen allergy (according to skin tests)

Plant	% positive reactions
Alder	10,2
Ambrosia	21,1
Quinoa	13,8
Poplar	10,9
Wormwood	32,1
Birch	49,8
Fescue	20,5
Ryegrass	16,9
Dandelion	25,1
Wheatgrass	28,1
Timothy	10,1
Bluegrass	10,6
Oats	8,2
Rye	7,9

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Table 2
The calendar dusting of plants of the Republic of Sakha (Yakutia)

Plants	Flowering time	
	the beginning	the end
<i>Trees</i>		
<i>Birch</i>		5–10 May
<i>Alder</i>	20–25 may	10–20 June
<i>Iva</i>	1–2 June	2–9 June
<i>Pine</i>	20–25 may	10 July
<i>Poplar (only in the South-Western districts)</i>	20–25 June	20–30 June
	10–15 June	
<i>Grass</i>		
<i>Timothy</i>	10–15 July	10–15 August
<i>Foxtail</i>	C 15 July	To late 15 August
<i>Bluegrass</i>	July	August
<i>Fescue</i>	Beginning of July	August
<i>Wheatgrass</i>	July	the end of July
<i>Dandelion</i>	20 may	1–25 June
<i>Weeds</i>		
<i>Wormwood</i>	July	August
<i>Quinoa</i>	July	August

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