The prevalence of asthma symptoms among adolescents in Samarkand region of Uzbekistan

The heightened interest in bronchial asthma (BA) in adolescents is characterized by a high incidence of this disease and the other specific features of its course in adolescence. 4037 adolescents have been studied. The average age of adolescents was 15.3 years. In order to identify asthma patients the examination was carried out, which included a questionnaire survey of ERS, examination of allergist-pulmonologist, a study of lung ventilation function on the unit “SPIROSIFT SP-5000” (Fukuda DENSNI, Japan) with automatic processing parameters, and conducting provocative and bronchodilatation tests.

On the basis of questionnaire data analysis a group of individuals who have an obstruction syndrome in the past 12 months was formed. Symptoms of daytime and nighttime asthma were determined on the basis of wheeze, spastic cough, a feeling of heaviness in the chest, feelings of dyspnea. According to our data, there were 388 of such persons, representing 9.6% of all respondents. Girls accounted for 59.1% (229 persons), boys 40.9% (159 people). Among all examined population 40 persons were followed up in hospitals of Samarkand region. For the first time asthma diagnosis has been made in 344 examined adolescents. The received data indicate that in the majority of adolescents of both sexes asthma diagnosis has not been established in time, respectively, curative and preventive measures were not carried out.

Keywords: Adolescents, prevalence, asthma.

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Introduction

Nowadays, the share of adolescents suffering from bronchial asthma (BA) is up to 36-40% of all children with this disease, of which two-thirds of patients are the boys (Carvajal-Uruena, Garcia-Marcos et al., 2005; Yan, Ou et al., 2005). It was noted that from 30 to 70% of children having asthma symptoms showed significant improvement or complete disappearance of its symptoms in adolescence, which is mostly due to age features of synthesis of IgE-antibodies. It is known that the diagnosis of intermittent asthma and persistent asthma in a mild form presents certain difficulties in view of the long asymptomatic period with no changes of objective indexes, including the function of external breathing. In this regard, despite the presence of national and international consensus documents regulating the issues of diagnosis and treatment of asthma, early detection of this disease is still a difficult problem (Ubaidullayev, 2002-2003; Chuchalin, 2001; Masoli, Fabian et al).

Accumulated issues have created the basis for carrying out the research on comprehensive epidemiological study of the prevalence of asthma in adolescence among the population of Samarkand region of Uzbekistan.

Materials and methods

4037 adolescents of Samarkand region have been examined. The average age of adolescents was 15.3 years old. In order to reveal patients with BA, the examination including a survey of specialized questionnaire was made by ERS researchers and
recommended for the epidemiological screening of asthma, a visit to an allergist, pulmonologist, and a study of ventilatory lung function on the unit “SPIROSIFT” SP-5000 with automatic processing parameters (FUKUDA DENSHI, Japan) with an provocative and bronchodilatation tests was carried out.

Results

We performed an epidemiological study using a standardized questionnaire making it possible to select a group of people with symptoms of asthma. Based on the analyses of questionnaire data, a group of individuals who had an obstruction syndrome in the past 12 months was formed. Symptoms of daytime and nighttime asthma were determined on the basis of wheeze, spastic cough, a feeling of heaviness in the chest, and feeling of dyspnea. According to our data, there were 388 of such persons, representing 9.6% of all respondents. Girls accounted for 59.1% (229 persons), boys 40.9% (159 people). Characteristics of patients with asthma by age and sex are shown in table 1.

<table>
<thead>
<tr>
<th>Sex</th>
<th>Age periods</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>adolescents</td>
<td>younger</td>
</tr>
<tr>
<td>Boys</td>
<td>116 - (72.9%)</td>
<td>43 - (27.1%)</td>
</tr>
<tr>
<td>Girls</td>
<td>171 - (74.7%)</td>
<td>58 - (25.3%)</td>
</tr>
<tr>
<td>Total</td>
<td>287 - (74%)</td>
<td>101 - (26%)</td>
</tr>
</tbody>
</table>

As it can be seen from the table, cases of BA among the girls living in the studied region occurred more often than among the boys of adolescent age. At the youthful age there were also a less number of boys than adolescent girls.

In the studied region, the prevalence of BA is at a higher level. The index of prevalence of asthma among adolescents is 9.6%). By analyzing the results of questionnaires to persons suffering from asthma, it may be noted that the majority of adolescents suffering from asthma have been identified for the first time and only a small portion of young people were followed up in hospitals for the disease. Among all studied population 40 persons were followed up in hospitals of Samarkand region. BA diagnosis was first made in 344 examined adolescents.

Epidemiological studies of adolescents in different regions showed a high prevalence of asthma and its symptoms. Our data suggest that in the majority of adolescents of both sexes diagnosis of asthma has not been timely established, respectively, curative and preventive measures were not carried out. It should be noted that on the one hand, teenagers is a vulnerable group, due to the instability of homeostasis, inadequate adaptation mechanisms at this age, and on the other hand, it is the contingent that rarely visit medical institutions. In this regard, accumulating complex problems among adolescents in all areas require special attention, being an important area of modern health care. Understanding of general trends in adolescent health is the key to the selection of diagnostic and therapeutic interventions in this age group. Health policy in this age group will be comprehensive, combining the elements of public health and will be focused on improvement of health and complex treatment of diseases peculiar to young people.

Conclusion

The results of screening studies indicate a significant increase in the occurrence of asthma as compared with the official statistics of the prevalence of asthma among adolescents in Samarkand region.
References


