

Psychosocial Importance of Educational Program for Bronchial Asthma

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Abstract

Investigation and correction of psychosocial disorders in patients with bronchial asthma, as psychosomatic pathology, is one of the major tasks for successful treatment. In this connection, the individual program was elaborated and investigations of its efficacy were carried out. Obtained data authentically demonstrate that knowledge, acquired during an educational program and practical skills of disease management makes available to reduce stress and emotional limitation, achieve well-being of asthmatic child, which in turn has the favorable influence on quality of life and social aspects.

Keywords: *bronchial asthma, individual educational program, psychosocial disorders, children*

Introduction

Paroxysmal nature of bronchial asthma with dangerous symptoms for life determines formation of emotional strain and psychological problems. On the one hand the disease course nature and on the other hand necessity of prolonged therapy affects emotional, physical and social aspects of patient's life. Thus, affects quality of daily life.

About 15% of children suffering from bronchial asthma are socially maladjusted and frequency of missed lessons as a result of mentioned pathology is high. Bronchial asthma in 74% of cases interferes with studying, 60,9% of patients had difficulty in interpersonal relations and 59,2% of patients reveals limited contacts in family [1,4,6]. There is evidence of reduced self-estimation and complicated relations with juveniles and coevals in children with bronchial asthma [2,3,5].

Child suffering from bronchial asthma is the subject of exaggerated ward in family, that's why in most cases the child appears isolated from usual social environment changing its psychological appearance.

Thus, bronchial asthma leads to serious outcomes related to significant limitations in physical, psychological and social aspects. It is noteworthy, that aforesaid limitations may become much more important than symptoms themselves.

The aim of present work was to investigate importance of psychosocial education in children with bronchial asthma and their parents within the area of educational program on the basis of asthma-school conditions.

Materials and Methods

Total of 50 children, with moderate persistent course of bronchial asthma, aged 10 to 16 years were involved in an educational program. The control group was formed with children who have not attended the educational course in asthma-school.

Formation of cohorts was randomized. There were no detected statistically reliable difference between control and basic groups according to age, sex, disease course, clinical-laboratory data and level of medical education.

An individual program was used for education of children and their parents. An individual educational program meant studying with each child and parent considering disease nature and form.

With the purpose of psycho-emotional state evaluation, the test "your sensation", prepared on the basis of recommendations of World's Health Organization was used.

Of the test complex, we used only two, available for children to evaluate. There was suggested one question

with five possible answers in order to determine the self-estimation of health in children. Answers were following: 1. Very bad; 2. Unsatisfactory; 3. Satisfactory; 4. Good; 5. Very good;

The stress gravity was determined according to following parameters: Strained relations with coevals and teachers; Irritability due to medicines and doctors' recommendations; Strained situation as a result of exaggerated warding and negative attitude of child towards disease; Limitations in everyday living (meal, physical activity etc.); Unperformed obligations due to physical and emotional strain;

Each chosen answer was evaluated in a following manner: I agree -1 point; more agree than disagree -2 point; more disagree than agree -3 point; and I disagree - 4 point;

According to questionnaire results each person was belonged to the High-level stress group (with 2 to 3 points); Moderate-level stress (with 1 to 2 points) and low-level stress (with point less than 1).

Psycho-emotional sphere was studied in both groups before educational program and 12 months later after completion of educational program.

Received data were analyzed statistically using the program SPSS\10.

Results and Discussion

According to received data has been revealed, that before starting of educational process, the frequency of health evaluation test answers "bad", "satisfactory" and "good" were nearly equal ($p < 0,27$), while answer "very bad" was never detected.

12 months later after completion of educational process in control and basic groups the statistically reliable difference ($p = 0,000$) was revealed. Two patients, from control group, health evaluated as "very bad". An answer "bad" was 15 times more in control group than in the basic group. Health evaluation as "good" was detected 11 times more in children from basic group compared to control group. Received data are presented in *Tab. 1*.

Total of 53 practically healthy children (aged 10 to 16 years) were tested as well to determine the self-estimation of health. The frequency of positive evaluations of health was much more high. It is remarkable that no one used the answer "bad" or "very bad".

The answer "very good" was not detected in children with bronchial asthma neither before educational

program nor one year later after completion of program, while 22,64% of healthy children fixed answer "very good", 49,06% of children answered that their health is "good" and 28,3% of healthy children decided that their health could be evaluated as "satisfactory".

On the bases of Rider's test, the moderate level of psycho-emotional stress was revealed in 88,0% of patients and the high level stress - in 12% of patients.

The moderate level stress was detected with high frequency in the control group (62,5%). In the mentioned group, the high level stress was revealed in 28,1% of cases. The low level stress was manifested in 3 cases. Received data are presented in *Tab. 2*.

One year later after completion of educational process, the difference between data of investigated groups was statistically significant ($p = 0,000$).

According to the received data it is obvious, that the low level stress is detected in most patients of basic group, while the high level stress is stated in half of patients from the control group.

Stress level was evaluated in practically healthy children as well (total of 53 children, aged 10 to 16 years).

Obtained data revealed, that the high level stress was manifested in 3,43% of cases. The low level stress was detected in most of cases, while the moderate stress - in 24,53% of cases.

It is remarkable, that 13,21% of practically healthy children unlike children suffering from bronchial asthma, did not reveal stress.

Effect of changes in psycho-emotional stress data on social aspects in the dynamic of educational process has been analyzed.

Using the dispersive analysis (criterion of ANOVA) and calculating F coefficient and its statistical reliability p , the reliability of differences in obtained data, before and 12 months later after completion of educational process has been determined.

It is stated, that data of psycho-emotional stress dynamics affect such social parameters as: improvement of interrelations between juveniles and parents ($p = 0,009$).

Along with that, the positive effect of reduced stress in children was detected ($p = 0,000$), manifested by improved relations between coevals.

The reliable correlation between data of healthy children's self-estimation "good" and decreased number

of missed lessons is obvious ($p=0,01$). Moreover, there is a correlation between reduced stress and improved academic progress ($p=0,023$).

The decreased level of stress and anxiety positively was reflected on frequency of urgent medical interventions ($p=0,031$). Medical interventions were decreased markedly.

Thus, it could be concluded that knowledge, acquired during an educational process, controlling of disease and elaboration of practical skills decrease emotional limitation, improves self-sensation, which in turn positively affects on quality of disease management and social aspects.

Stress level	Basic group (n=50)		Control group (n=32)		Total	F	p
	Absolute quantity	%	Absolute quantity	%			
Initial Data							
Low level stress	0	0	3	9,4	3/3,7%	0,316	0,011
Moderate level stress	44	88,0	20	62,5	64/78,3%		
High level stress	6	12,0	9	28,1	12/18,3%		
One Year Later							
Low level stress	45	90	4	12,5	49/59,8%	0,615	0,000
Moderate level stress	4	8,0	12	37,5	16/19,5%		
High level stress	1	2,0	16	50,0	17/20,7%		

Tab.1 *Self-estimation testing results of health in children with bronchial asthma (before and one year later after completion of an educational program).*

Stress level	Basic group (n=50)		Control group (n=32)		Total	F	p
	Absolute quantity	%	Absolute quantity	%			
Initial Data							
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Low level stress	45	90	4	12,5	49/59,8%	0,615	0,000
Moderate level stress	4	8,0	12	37,5	16/19,5%		
High level stress	1	2,0	16	50,0	17/20,7%		

Tab.2 *Psycho-emotional stress evaluation dynamics in children with bronchial asthma (before and one year later after completion of educational program).*

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Психо-социальное значение образовательной программы по бронхиальной астме

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РЕЗЮМЕ

Изучение и коррекция психо-социальных нарушений у детей с бронхиальной астмой - одна из основных задач в деле успешного ее лечения. Создана индивидуальная программа и проведено исследование ее эффективности. Полученные данные отчетливо свидетельствуют, что знания, полученные на фоне образовательной программы и практические навыки самоведения заболевания, делают возможным уменьшение стресса и эмоционального ограничения, улучшение самочувствия больного ребенка, что, в свою очередь, благотворно отражается на качестве жизни и социальных аспектах.

Ключевые слова: *бронхиальная астма, индивидуальная программа обучения, психо-социальные нарушения, дети*