Ljiljana ISAKOVIĆ
Vesna MILANOVIĆ
Vesna BOJIĆ
Ljiljana MILOJKOVIĆ

SPECIAL HOSPITAL FOR PREVENTION, THERAPY AND REHABILITATION OF NONSPECIFIC PULMONARY DISEASES "SOKOBANJA", SOKOBANJA, SERBIA AND MONTENEGRO

Significance of both clinical finding and degree of obstruction on life quality of patients with bronchial asthma

KEYWORDS: Asthma; Quality of Life; Airway Obstruction; Signs and Symptoms

INTRODUCTION

Asthma Quality of Life Questionaire (AQLQ), makes possible the evaluation of the clinical finding and the significance of the degree of respiratory obstruction on the life quality of the patients with bronchial asthma (1-5).

PATIENTS AND METHODS

The examined group consisted of 100 patients, 66 women (66.0%) and 34 men (34,0%); the average age was 43.92±12.25 years. They were hospitalized in our hospital for the period of 2 to 3 weeks. The interpreting of the auscultator finding of the lung is based on the knowledge of the respiratory airways, static pressure in the lung, and on morphological changes in both airways and lung parenchyma. Because of that the auscultation represents the most important part of physical examination of the lung.
The airway obstruction in the respiratory tract presented in asthma manifests by characteristic respiratory phenomena: decreased respiratory murmurs, extended expiration and increased pathologic murmurs of the lung. We studied the influence of the obstruction in the respiratory airways on life quality of our patients by using the auscultator finding.
All patients were divided into four groups, in relation to the presence of pathologic murmurs of the lung: group I (18 patients): no pathologic murmurs; group II (41 patients): high-tone (sound) wheezing; group III (6 patients): low-tone (sound) wheezing; IV group (35 patients): polyphonous wheezing.

RESULTS AND DISCUSSION

Twenty-five patients (71.4%) from the group IV had respiratory weaken murmur, but 10 patients (28.6%) had extended expiration. The presence of pathologic murmurs of the lung had the influence on regions of limited activity, symptoms, exposition to exogenic factors, as well as on total life quality of the examined patients. The patients from group had the highest values of all scores from AQLQ (Table 1).

Table 1. Score of AQLQ in relation to asculator finding

	Pathologic murmurs of the lung				F	P
	No	High-tone Wheezing	Low-tone Wheezing	Poliphonous Wheezing		
Total	3.927	3.737	3.525	3.229	4.127	0.085
Symptoms of disease	3.871	3.660	3.377	3.106	4.587	0.0048
Exposition to exogene factors	3.556	34.817	3.583	3.150	0.797	0.4984
Emotional state	4.067	3,834	3.500	3.251	2.769	0.0459
Limited activity	4.212	3.965	3.637	3.494	3.568	0.0169

In contrast, the patients with pathologic murmurs of the lung (group IV) had the lowest values. The presence of pathologic murmurs had the highest influence on symptoms of the disease. Namely, the highest difference in the scores of individual regions of AQLQ was in above-mentioned region. By using univariate analisys of variance we showed that, except in the region of exposure to exogenic factors, there was statistical significant difference between all scores from AQLQ in relation to groups of the patients.
On the basis of degree of obstruction the patients were divided into three groups: group I: (22 patients) <60% of predicted standard; group II: (31 patients) of 60% to 80% predicted standard; group III: (47 patients)>80% of predicted standard.
According to international consensus and having in mind clinical picture, anamnesis data and the degree of obstruction patients' groups correspond to severe (group I), medium (group II) and easy (group III) asthma.
First group of patients with severe asthma had the worst, group II with medium asthma had slightly better, and the group with easy asthma had the best life quality. It means that the life quality was in direct dependence of the degree of obstruction of airways, measured by parameter FEV1% of the predicted standard (Table 2).

Table 2. Scores of AQLQ in relation to the degree of obstruction measured by FEV1% of predicted standard for the whole group (n=100) (6-10)

	Degree of obstruction (FEV1% of standard)			F	P
	< 60%	60-80%	60-80%		
Total	3.071	3.551	3.838	7.651	0.0009
Symptoms of disease	2.909	3.308	3.809	7.992	0.0006
Expotion to exogene factors	2.943	3.484	3.527	2.220	0.1141
Emotional state	3.091	3.645	3.919	4.229	0.0173
Limited activity	3.335	3.763	4.095	6.442	0.0024

By using method of univariate analysis of variance, statistically significant difference was obtained between all scores of AQLQ in relation to groups of patients, except scores exposed to exogenic factors. Especially high significance was inside symptoms and limited activity.

CONCLUSION

The obtained results show that the presence of pathologic murmurs in the lung, as well as the degree of obstruction in the airways, measured with FEV1& parameters, have influenced the life quality of patients with bronchial asthma.

REFERENCES

1. Elizabeth F, Juniper EF, Gordon H, Guyatt GH, Penelope J, Ferrie PJ et al. Measuring Quality of Life in Asthma. Department of Clinical Epidemiology and Department of Medicine. Hamilton, Ontario, Canada: Mc Master University Medical Centre; 1998. p. 161-70.

2. Spilker B, editor. Quality of life and pharmacoeconomics in clinical trials. Philadelphia: Lippincott-Raven; 1996.

3. National Heart, Lung, and Blood Institute, National Institutes of Health International Consensus Keport on Diagnosis and Management of Asthma. NIH pub no 92-3091. Bethesda (MD): U.S. Department of Health and Human Services; 1992.

Address correspondence to:
Dr. Ljiljana Isaković, Special Hospital for Prevention, Therapy and Rehabilition of Nonspecific Pulmonary Diseases Sokobanja, 18230 Sokobanja, Serbia and Montenegro

The manuscript was received: 15. 02. 2004.
Provisionaly accepted: 15.03.2004.
Accepted for publication: 23.03.2004.

4. National Heart Lung and Blood Institute, National Institutes of Health. Global Strategy for Asthma Management med. Prevention. NHLBI-WHO Workshop Report. NIH pub no 95-3659. Bethesda (MD): US. Department of Health and Human Services; 1995.

5. Đordević D. Bronhijalna astma: Interna medicina. In: Ljubomir Hadži Pešić et al, editors. Niš: Prosveta; 1996. p. 14-9.

6. Kaptein AA. Assessing quality of life in respiratory disorders: chronic nonspecific lung disease. Monaldi Arch Chest Dis 1997;52(6):521-4.

7. Mc Sweeny JA, Grant J, Heatoy RK et al. Life quality of patients withchronic obstructive pulmonary disease. Arch Intern Med 1982;142:473-8.

8. Kaplan RM. Quality of life measurement. In: Karloy P, editor. Measurement strategies in health psychology. New York: John Wiley; 1985.

9. Calverley PMA. Physiological determinants of quality of life: Dept of Pulmonary and Rehabilitation Medicine. Liverpool: The University of Liverpool, Aintree NHS Trust, Fazakerley Hospital; 1997.

10. Juniper EF, Guyatt GH, Ferrie PJ, Griffith LE. Measuring Quality of Life in Asthma. Am Rev Respir Dis 1993; 147:832-38.