

PSYCHOLOGICAL CHANGES IN PATIENTS WITH COPD

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ABSTRACT

Introduction. Chronic somatopathies are usually progressive and may result in substantial psychological changes. Chronic obstructive pulmonary disease (COPD) ranks very high as a reason for physical disability in the world.

Aim. This study aimed at estimating mood, mental activity, efficiency, and tonus of the vegetative nervous system of patients with COPD.

Materials and methods. Colour Luscher's test was used to survey 62 patients with COPD of mild and moderate degree, including 38 men and 24 women of the median age: 48 ± 2.1 . The control group, also tested, consisted of 56 essentially healthy people, comparable with regards to age and sex to the researched group.

Colour Luscher's test was applied to study psychological and social characteristics, as well as the level of the «simpaticus» scale of the vegetative nervous system in patients with chronic obstructive pulmonary disease. Decreased functional ability, increased uneasiness, and a high level of the «simpaticus» scale of the vegetative nervous system did not correlate with the gender of the patients with chronic obstructive pulmonary disease. Psychological and social characteristics of the patients with chronic obstructive pulmonary disease are provided and discussed considering their gender.

Conclusions. Irrespective of sex, COPD patients manifest a high tonus of sympathetic department of the vegetative nervous system, reduced efficiency, and increased anxiety.

In male patients, striving for recognition, impressionability and sensitivity, lead to marked nervous pressure in connection with their attempt for self-esteem.

In female patients, reduction in the factors of: instability of choice, emotional indifference, and pessimism, is marked.

Key words: Chronic obstructive pulmonary disease, Luscher's test, psychological and social characteristics, tonus of the vegetative nervous system.

INTRODUCTION

A continuous increase in the number of chronic obstructive pulmonary disease (COPD) cases both in our country, and abroad, has led to developing an attitude towards this disease as to a major medical, biological and social problem of modern public health services [1, 2, 4, 8, 13]. According to the statistical data, out of the total number of 600 million patients with COPD in the world, 8 million die annually. In the general structure of mortality, this pathology occupies the 5th position in the world, the 4th in the USA, preceded only by heart attack, cancer and insult. Attention must be paid to the fact that COPD occupies one of the first places among the reasons for physical disability in the world [1, 3, 5, 19].

Recently, the interest of clinical physicians to research patients' mental conditions has essentially focused on somatic diseases [3, 6, 11, 12, 14, 16]. The reason is that personality features and emotional stress significantly influence the aetiology and course of chronic diseases. Interest in studying the quality of life of COPD patients has increased considerably [12, 14, 15, 16, 19]. It is believed that this disease is accompanied by respiratory discomfort whose emotional importance exceeds the painful syndrome as such. It is known that chronic diseases which tend to be progressive and are characterised by aggravation, are stressors and may lead to essential restrictions within all spheres of the person's normal existence [13, 17, 18, 20]. In turn, these restrictions can appear to be the symptoms of the disease which are more important for the patient. For this reason it is important to determine in what ways and in what aspects diseases influence patients' lives.

AIM

To estimate mood, mental activity, efficiency, and vegetative tonus of patients with chronic obstructive pulmonary disease by means of colour Luscher's test.

MATERIALS AND METHODS

Colour Luscher's test was used to survey 62 patients with COPD of mild and moderate degree, 38 men and 24 women of the median age: 48 ± 2.1 . The control group, also tested, consisted of 56 essentially healthy people, comparable with regards to age and sex to the researched group.

RESULTS AND DISCUSSION

A computer version of Luscher's method has allowed us to express in figures the factor of instability of choice, the factor of deviation from norms, the factor of anxiety,

the factor of activity, and the factor of efficiency. Besides, we received verbal descriptions of such psycho-social characteristics, as: the evaluation of the person's existing situation, sources of stress, important qualities, desired objectives, urgency of a problem. Each of these characteristics had a generalizing value. Frequency with which each of these conclusions occurred has been presented in percentage both for the control group and COPD patients, which has allowed us to apply a nonparametric method of statistical processing of the received data. The study results are presented in the following tables.

Tab. 1. Psychological and social characteristics and the parameters of the tonus of the vegetative nervous system (men)

Parameters	Parameters of the vegetative nervous system in standard units (M±m)	
	Control	Patients
The factor of instability of choice	18.8±2.6	20.24±2.1
The factor of deviation from norms	49.9±2.6	78.26±2.2
The factor of anxiety	24.2±2.3	51.66±3.1
The factor of activity	43.7±2.1	44.99±2.7
The factor of efficiency	64.1±2.3	31.86±3.2
Parameters of the tonus of the vegetative nervous system		
Sympaticus	0.35±0.04	0.72±0.01
Parasympaticus	-0.56±0.01	-0.41±0.01

In the group of COPD males in comparison with the control group ($T = 2.4$; $p < 0.02$), the level of the "sympaticus" scale is increased.

In COPD patients in comparison with the control group ($T = 3.8$; $p < 0.001$), the level of «the factor of anxiety» is increased, whereas the level of «the factor of efficiency» ($T = 2.6$; $p < 0.01$) is reduced. Within «Existing situation», in the COPD group in comparison with the control group, the level of the scale «uneasiness and restraint» is increased ($\chi^2 = 6.4$; $p < 0.01$), similar to the level of the scale «impressionability and sensitivity», which is also increased ($\chi^2 = 4.6$; $p < 0.05$). Within «Sources of stress», in the male COPD group in comparison with the control group, the levels of the scales: «nervous – somatic infringements» and «pressure because of the latent excitation» are increased ($\chi^2 = 9.6$; $p < 0.01$). Within «Basic qualities», in the COPD group in comparison with the control group, the level of the scale «receives less than deserves» is increased ($\chi^2 = 6.2$; $p < 0.02$). Within «Urgency of a problem», in the COPD group in comparison with the control group, the level of the scale «a nervous overstrain in connection with attempt of self-esteem» is increased ($\chi^2 = 5.1$; $p < 0.05$).

Tab. 2. Psychological and social characteristics and the parameters of the tonus of the vegetative nervous system (women)

Parameters	Parameters of the vegetative nervous system in standard units (M±m)	
	Control	Patients
The factor of instability of choice	19.9±2.6	30.14±2.2
The factor of deviation from norms	46.7±2.1	74.37±3.1
The factor of anxiety	24.2±2.3	52.49±2.3
The factor of activity	47.2±3.1	43.33±2.7
The factor of efficiency	66.3±2.7	44.82±3.1
Parameters of the tonus of the vegetative nervous system		
Simpaticus	0.36±0.04	1.22±0.01
Parasimpaticus	-0.46±0.01	-0.43±0.01

In the COPD females in comparison with the control group ($T = 3.5$; $p < 0.02$), the level of the “simpaticus” scale is increased. In COPD females in comparison with the control group, the level of the scale «instability of choice» is increased ($T = 2.6$; $p < 0.01$), which means that they manifest emotional instability and decreased attention-switching skill. The level of the scale «the factor of anxiety» is increased ($T = 2.1$; $p < 0.01$), and the level of the scale «the factor of efficiency» is reduced ($T = 2.5$, $p < 0.001$). Within «Existing situation», in the COPD group in comparison with the control group, the level of the scale «active, lasts to all new» is increased ($\chi^2 = 6.6$; $p < 0.01$). Within «Sources of stress» in the COPD females in comparison with the control group, the levels of the scales: «excessive nervous pressure» and «disturbing pessimism» are increased ($\chi^2 = 8.6$; $p < 0.01$). Within «Important qualities», in the COPD group in comparison with the control group, the level of the scale «emotionally indifferent, avoids conflicts» is increased ($\chi^2 = 4.5$; $p < 0.02$). Within «Urgency of a problem», in the COPD group in comparison with the control group, the level of the scale «excitability, unpredictability in connection with an exhaustion of vital energy» is increased ($\chi^2 = 5.8$; $p < 0.05$).

CONCLUSIONS

1. Irrespective of sex, COPD patients manifest a high tonus of the sympathetic department of the vegetative nervous system, reduced factor of efficiency, and increased factor of anxiety.
2. In male patients, striving for recognition, impressionability and sensitivity, lead to marked nervous pressure in connection with their attempt for self-esteem.
3. In female patients, reduction in the factors of: instability of choice, emotional indifference, and pessimism, is marked.

It is obvious that the provided psychological and social characteristics will help to select more appropriate methods of psychotherapy aimed at improving the quality of life of COPD patients.

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