FEATURES OF PSYCHO-EMOTIONAL SPHERE OF PATIENTS WITH STRESS-ASSOCIATED ARTERIAL HYPERTENSION

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Key words: hypertension, stress, psycho-emotional sphere.

Abstracts.

The aim of this study is to examine the association between symptoms of stress-tension, depression and anxiety and hypertension status. In the study were used next questionnaires "Determination of nervous and mental strain" (by T. Nemchin, 1988), the scale of PSM-25 (by Lemyr-Tessier-Fillion, 1983), Method for determining stress-tolerance and social adaptation (by Holmes and Rage, 1995) Boston stress-endurance test, and evaluation of stress (by Kouhen, 1995), Beck depression scale (BDI), self-test hypochondria (by Wilson test), "exhaustion of vitality" (by Appels) and scales of anxiety (by Spielberger).

The study of changes in the level of psycho-emotional men with hypertension proven correlation with the degree of hypertension severity of mental disorders.

This result proves, that successful treatment of hypertension impossible without psychotherapy and / or use of psychopharmacological agents.

Introduction.

The role of stress in the increase of blood pressure (BP) it is set yet at the beginning of past century, today again actively comes into question and is studied due to the last achievements of physiology, biochemistry and genetics [1, 3]. It is found out co-operation of vegetative nervous system and mediators system
neuromechanisms of adjusting of BP-encreasing at stress. For this reason the syndrome of stress-association is both the base-line state which a hypetension develops on and element of link of pathogeny of disease [2].

Treatment of arterial hypertension is impossible without correction of the state of mental and emotional sphere, and the correct selection of methods of psychological influence needs the research of this specifity.

The aim of the study was to determine the characteristics of stress reactions and psycho-emotional sphere of patients with hypertension.

**Materials and methods**

The study involved 176 patients who were divided into groups:


Group B (n = 75). Men, mean age 48,33 ± 7,12 years. Hypertension II-III degree, hypertension stage II, IHD, angina pectoris II FC

Group C (n = 35). Men, mean age 47,78 ± 8,54 years. Hypertension II-III degree hipetonicnha disease stage II-III, heart filurer (NYCA) II-III, IHD, angina pectoris II-III FC.

The results were compared with the results obtained in preventive screening psychological examination of 143 healthy men of appropriate age (control group).

The influence of psychological stress was carried out by questionnaire "Determination of nervous and mental strain" (by T. Nemchin, 1988), the scale of PSM-25 (by Lemyr-Tessier-Fillion-, 1983), Method for determining stress-endurance and social adaptation (by Holmes and Rage,1995) Boston stress-endurance test, and evaluation of stress (by Kouhen, 1995). Researches of the psycho-emotional sphere conducted next methods: Beck depression scale (BDI), self-test hypochondria (by Wilson test), "exhaustion of vitality" (by Appels) and scales of anxiety (by Spielberger).
Results

1. Study level of mental stress. As seen from the results, the highest level of neuro-psychological stress (58.63 ± 1.32 points) was observed in patients of group C, where stress factors added discomfort associated with the restrictions they impose disease (Table 1).

Table 1.
The level of neuro-psychological stress in patients with hypertension
(points, M±m)

<table>
<thead>
<tr>
<th></th>
<th>Groupe A (n=76)</th>
<th>Groupe B (n=75)</th>
<th>Groupe C (n=35)</th>
<th>Control groupe (n=143)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level of neuro-psychological stress</td>
<td>46.73±4.22*</td>
<td>53.39±3.21*</td>
<td>58.63±1.32*</td>
<td>34.28±6.32**</td>
</tr>
</tbody>
</table>

Note: * The differences between the I, II and III groups were significant (p <0.05)
** The differences between the experimental and control group were significant (p <0.05)

2. Study of the stress strain by the method of PSM-25. Survey conducted by the method of PSM-25 showed clear differences associated with phasic syndrome of emotional stress and related hypertension and its complications (Table 2).

Table 2.
Stress strain by the method of PSM-25
(points, M±m)

<table>
<thead>
<tr>
<th></th>
<th>Groupe A (n=76)</th>
<th>Groupe B (n=75)</th>
<th>Groupe C (n=35)</th>
<th>Control groupe (n=143)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Points by PSM-25</td>
<td>132.54±8.22*</td>
<td>106.6±5.21</td>
<td>108.9±7.21</td>
<td>91.54±4.29**</td>
</tr>
</tbody>
</table>

Note: * The differences between the rates groupe A and other groups significant (p <0.05)
** differences between the rates groupe B, C and control groups are not significant (p>0.05).
It is observed a significant increase in the stress intensity (132,54 ± 8,22 points) in patients of group A. In group B patients observed a slight decrease in this index to 106,6 ± 5,21 points, followed by a slight increase in patients of group C -108, 9 ± 7,21 (difference not significant), however the difference between the rates of patients surveyed groups compared with the control group (91,54 ± 4,29) is accurate.

3. Study of stress resistance and influence. Confirmed last trends by results of the research of stress resistance and influence evaluable patients (Table 3).

Table 3.

<table>
<thead>
<tr>
<th>Tests of stress-resistance</th>
<th>Groupe A (n=76)</th>
<th>Groupe B (n=75)</th>
<th>Groupe C (n=35)</th>
<th>Control groupe (n=143)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boston test</td>
<td>48,52±7,21*</td>
<td>45,39±2,23*</td>
<td>46,79±4,32*</td>
<td>29,52±4,41</td>
</tr>
<tr>
<td>Holmes and Rage Test</td>
<td>66,72±8,32*</td>
<td>69,39±5,29*</td>
<td>62,89±5,22*</td>
<td>39,71±4,21</td>
</tr>
<tr>
<td>Test by Kouhen</td>
<td>25,52±3,83*</td>
<td>23,98±4,32*</td>
<td>26,43±2,17*</td>
<td>13,63±3,28</td>
</tr>
</tbody>
</table>

Note:* The differences between the experimental and control group were significant (p <0,05)

As seen from the table, stres-endurance (test Holmes and Rage) in patients of all groups surveyed about the same level - average, closer to high.

Boston test showed that patients with the first stage of hypertension stressful situation are of great importance in personal and social functioning, that these people are constantly in a state of the stress intensity. Among the most disturbing factors - being overweight, lack of proper rest and emotional loneliness.

Test self stress by Kouhen showed that patients in the study groups is low ability to manage stress. This especially refers to the ability to practice with a high volume of professional activity, a sense of aggression and nervousness.
Thus, although significant differences between the performance of research groups have been identified, observed significant difference as compared with the control group, which in itself indicates a low level of stress and stresovýtryvalosti these patients.

This could hypothetically be due to genetically determined characteristics generally adaptive body reserves, including psycho-social adaptation, which in vocational and social stress goes limit-adaptation-dysadaptosis disease.

4. Study of specificity of psycho-emotional sphere.

Significant difference between the rates depression, and fatigue ipohondrychnosti in groups is not received, indicating a low degree psyhopaty patients selected for medical and social groups, one trend to increased psychotic symptoms in patients with resistant hypertension. At the same time, the high level of reactive anxiety in groups A and B, possibly related to the specific job. The data practically coincide with those of other researchers.

Table 4.

**Indicators of psycho-emotional sphere of patients studied.**

<table>
<thead>
<tr>
<th></th>
<th>Groupe A (n=76)</th>
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<th>Groupe C (n=35)</th>
<th>Control groupe (n=143)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression</td>
<td>13,78±5,21</td>
<td>14,79±2,43</td>
<td>16,43±4,22</td>
<td>15,34±6,23</td>
</tr>
<tr>
<td>Hypochondria</td>
<td>6,13±3,11</td>
<td>5,56±3,21</td>
<td>9,21±3,11</td>
<td>6,56±2,14</td>
</tr>
<tr>
<td>Exhaustion</td>
<td>4,54±3,32</td>
<td>4,67±4,26</td>
<td>7,43±2,21</td>
<td>4,92±1,26</td>
</tr>
<tr>
<td>Reactive anxiety</td>
<td>16,32±2,12*</td>
<td>17,21±3,22*</td>
<td>13,21±4,63</td>
<td>9,54±2,32</td>
</tr>
<tr>
<td>Personal anxiety</td>
<td>9,15±3,21</td>
<td>11,21±3,05</td>
<td>10,36±3,54</td>
<td>10,09±3,56</td>
</tr>
</tbody>
</table>

Note:* The differences between the experimental and control group were significant (p <0,05)

Conclusions:

1. Patients with arterial hypertension require study of stress adaptation and psycho-emotional sphere.
2. Successful treatment of hypertension impossible without psychotherapy and/or use of psychopharmacological agents.

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Literature.

3. Depression and anxiety are associated with a diagnosis of hypertension 5 years later in a cohort of late middle-aged men and women./ J Hum at all. /J Hum Hypertens. 2012 May 17. doi: 10.1038/jhh.

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