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Gender and Age Peculiarities of Prevalence of An Anxiety-Depressive Syndrome in Patients with Arterial Hypertension

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ABSTRACT

A one-stage cross-longitudinal selective 1% study of the prevalence of clinical forms of anxiety and depression among AH patients; taking into account gender differences and the age of patients was conducted. As a comparison group, persons with no signs of AH were selected. The survey covered 10104 patients, including 3876 men and 6228 women. The dependence of the frequency and clinical form of anxiety and depression on the incidence of the AH population is proved, which determines the tactics and protocol for the treatment of patients with AH.

Keywords

A selective study, The prevalence of anxiety-depressive syndrome in patients with arterial hypertension.

Introduction

Anxiety and depression are risk factors that affect both the development of arterial hypertension and the prognosis of survival of patients with cardiovascular pathology, being a powerful independent predictor of mortality [1-6]. Some neurochemical, neuroendocrine changes in depressive disorders may be a pathophysiologic mechanism that causes an increased vulnerability of patients with depression to cardiovascular disease [7]. In turn, patients with established AH have a tendency to secondary somatogenic depressions caused by the use of antihypertensive drugs [8-11] and the development of chronic cerebral ischemia, which is a very significant factor in the pathogenesis of depression [12] due to the defeat of subcortical structures and basal ganglia. Depressive and anxiety-depressive disorders are involved in the formation of a clinical picture of cardiovascular diseases.

Depression worsens compliance with therapy [13], reduces the quality of life and social adaptation of patients.

Despite a large number of studies performed with the use of modern clinical diagnostic and epidemiological methods [13-17], the data given in the literature, as a rule, do not allow completely solving a number of clinical aspects of the peculiarities of mental disorders in cardiology. According to the literature, the available psychosomatic studies are, as a rule, pronounced "cutoff" character [10,13]. In the literature, there is very little data on mass research of this problem in specific regions of Russia.

The aim of the research is to study the clinical-epidemiological, gender and age features of the prevalence of anxiety and depression in patients with arterial hypertension.

Methods

The base of the research was the population of the Novgorod and Pskov regions of the Russian Federation and the East Kazakhstan

region of the Republic of Kazakhstan. The study uses a systematic descriptive type of clinical-statistical research based on a typological stratified sample.

Regions	Men	Women	Total
Novgorod Region	1146	2379	3525
Pskov Region	912	1197	2109
The East Kazakhstan Region of the RK	1818	2652	4470
Total	3876	6228	10104

Table 1: The number of respondents surveyed in the sample study.

During the first stage of a clinical-epidemiological population study using the standard epidemiological protocol for active detection of AH, as well as the second stage - psychometric screening (on the hospital scale of anxiety and depression of HADS, the questionnaire of Beck depression), the category of patients with high figures of systolic (140 mm Hg and above) and diastolic blood pressure (90 mm Hg or higher), anxiety and depression was identified.

Results

Assessing the state of anxiety and depression, diagnosed with the hospital scale HADS, significant gender and age features in the age structure and levels, both anxiety and depression, were established.

The state of anxiety and depression among patients with AH we evaluated in two grades - subclinical and clinical manifestations of anxiety and depression, taking into account gender and age features.
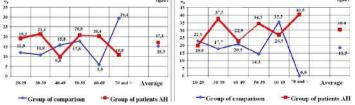

Figure 1: Characteristics of subclinical manifestations of anxiety according to the HADS scale in the male subpopulation.
Figure 2: Characteristics of subclinical manifestations of anxiety according to the HADS scale in the female subpopulation.
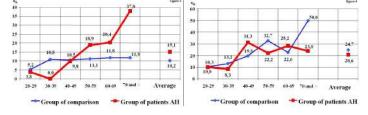

Figure 3: Characteristics of clinical manifestations of anxiety according to the HADS scale in the male subpopulation.
Figure 4: Characteristics of clinical manifestations of anxiety according to the HADS scale in the female subpopulation.

As it is shown in Figures 1 and 2 subclinical manifestations of anxiety in the group of patients with hypertension on average

exceed the values in the control group within 2% of men and 12% of women. The prevalence of subclinical anxiety manifestations averaged 30.4% among women with hypertension (18.5% in the comparison group) and 17.1% (15.3% in the comparison group) among men.

Clinical manifestations of anxiety (Figures 3 and 4) have a clearly manifested tendency to increase in the group of men with AH, beginning at the age of 40-49 years. Among women, this indicator has consistently high values from statistical corridors of 22.2-31.3%, starting with the age group of 40-49 years. In the comparison group, there were very few variations from the average for the male subpopulation and the increase in the age group of 70 years and older among women. The mean values among the group of AH patients were higher than in the comparison group. Thus, we can note a manifested tendency to a dynamic increase in the indicator of clinical forms of anxiety in the male subpopulation and high rates of prevalence of subclinical forms, both among men and women.
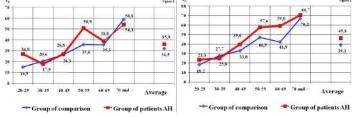

Figure 5: Characteristics of mild levels (subclinical depression) according to the Beck scale in the male subpopulation.
Figure 6: Characteristics of mild levels (subclinical depression) according to the Beck scale in the female subpopulation.
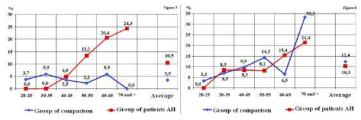

Figure 7: Characteristics of clinical forms of depression according to the Beck scale in the male subpopulation.
Figure 8: Characteristics of clinical forms of depression according to the Beck scale in the female subpopulation.

When assessing the prevalence of depression among AH patients, it was found that the subclinical form of depression in the Beck scale is characterized by an excess of the specific gravity of the indices in the group of AH patients irrespective of gender differences. Thus, in the male subpopulation, the average level of the subclinical form of depression is 35.9% (the comparison group is 31.9%), in the female subpopulation - 45.8% (the comparison group is 39.1%) (Figures 5 and 6). Fracture ages, manifested by a double increase in depression in men are 50-59 years, and one-and-a-half increase in women aged 40-49 years.

A somewhat different picture is observed when assessing the clinical forms of depression (Figures 7 and 8). In this case,

significant gender differences in the dynamics of growth in the group of patients with AH were revealed. Thus, in the group of AH patients, a rapid growth of the index was registered, beginning with the age group 40-49 years (4.9%) which reaches 24.3% in the age group of 70 years and older. In the comparison group, this trend is absent. The average incidence of clinical forms of depression among men was 10.5% (comparison group 3.5%). In the female subpopulation, minor differences in the experimental and control groups were noted, with the exception of the age group of 70 years and older.
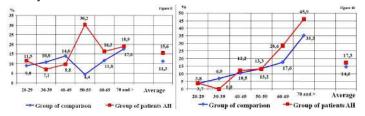

Figure 9: Characteristics of subclinical manifestations of depression on the scale of HADS in the male subpopulation.

Figure 10: Characteristics of subclinical manifestations of depression on the scale of HADS in the female subpopulation.
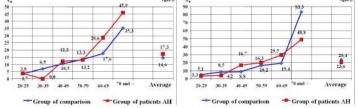

Figure 11: Characterization of clinical manifestations of depression on the scale of HADS in the male subpopulation.

Figure 12: Characterization of clinical manifestations of depression on the scale of HADS in the female subpopulation.

Thus, it can be stated that the female subpopulation is mainly characterized by subclinical forms of depression, and the male subpopulation is characterized by clinical and subclinical forms of depression. This indicates a different mechanism for the formation of a small depressive syndrome in AH patients, depending on gender.

The same picture was observed in the evaluation of subclinical (Figures 9 and 10) and clinical (Figures 11 and 12) forms of depression on the hospital scale HADS. However, both the average and dynamic levels found on the HADS scale were found to be twice as low as that in the Beck scale. A similar pattern was observed in both the female and male subpopulations, while the percentage of detectable clinical forms of depression on the HADS scale, both among men and women, was significantly higher, and according to the HADS scale, the proportion of patients with clinical forms of depression was twice as high as in the Beck scale. The revealed regularity makes it necessary to use the Beck scale mainly for the diagnosis of subclinical forms of depression, and the HADS scale for the diagnosis of clinical forms of depression. The combined use of both scales makes it possible to reveal statistical patterns by complementary of the results obtained with the joint application of both scales.

Thus, during the study it was shown that anxiety and depression are components of clinical syndromes of AH. The age-related features of clinical manifestations of anxiety are more manifested among men, but overall the subclinical and clinical anxiety level is higher among women (subclinical form in 30.4% of women and 17.1% of men, clinical form in 20.6% of women and 15.1% % of men). A feature of the prevalence of depression among AH patients is a more manifested age tendency among men.

Discussion and Conclusion

The results of a selective study of the prevalence of anxiety and depression among the population of 2 territories of the Northwest of Russian Federation in a comparative aspect with a typical territory of the Republic of Kazakhstan showed that in the male population subclinical manifestations of anxiety in the group of AH patients do not exceed the level of this index in the comparison group, 70 years and older, when the proportion of people with subclinical anxiety among patients with hypertension is 3.7 times higher than in the comparison group. At the same time, the clinical manifestations of anxiety have a clearly manifested tendency for growth in men of both groups, beginning from the age of 40-49 years, reaching a maximum of 24.5% in patients of the AH group in the age group of 60-69 years and 9.1% in group comparison in the age group of 70 years and older.

When analyzing subclinical manifestations of anxiety among women, a higher specific gravity of this form of anxiety as a whole is noted, regardless of the presence or absence of elevated blood pressure.

Considering the prevalence of the clinical form of anxiety in women, it is possible to note higher figures (within 10-15%) among AH patients in comparison with the control group. The most striking age group for clinical manifestations of anxiety was found in the female subpopulation aged 60-69 years: 43.0% in the AH patients group and 40.6% in the comparison group.

The presence of a pronounced tendency to growth of both subclinical and clinical manifestations of depression was established irrespective of gender and geographical differences. It was shown that the subclinical form of depression has an increased specific gravity of the indices in the group of AH patients irrespective of gender. Thus, in the group of men with AH, the turning point characterizing the three-time increase (from 6.7% to 21.4%) of the subclinical form of depression is the age group of 40-49 years. In the same age group in the female population of AH patients, the indicator increased from 15.4% to 27.8%.

In assessing the clinical forms of depression, both in the group of AH patients of male population and in the group of AH patients of female population, the growth of this indicator, starting from the age group of 30-39 years, was registered. Among men, the proportion of people with clinical depression increases from 9.8% at the age of 50-59 to 35% at the age of 70 and older. Among women, a sharp increase in the proportion of people with clinical depressive symptoms among patients with AH is observed in the

interval from 60-69 years old (25.3%) and 70 years old and older - 44%. In the comparison group, there is no similar trend towards an increase in the indicator.

Thus, it is proved that the presence of an anxiety-depressive syndrome determines the incidence of AH population regardless of gender differences.

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