

#### MONITORING OF QUALITY OF LIFE IN PATIENTS WITH ARTERIAL HYPERTENSION OF OLDER AGE GROUPS

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#### ABSTRACT

Arterial hypertension (AH), as in all countries with developed economies, is one of the urgent medical and social problems. It is one of the most common diseases in old age. About 50% of people aged 60-69 years and more than 75% in the age group over 70 years have elevated blood pressure (BP). It is shown that with each decade of life, the prevalence of arterial hypertension increases by about 10%, reaching a maximum (75%) in people over 70 years of age. Consequently, the risk of vascular events increases significantly with age, primarily cerebral stroke and myocardial infarction, which annually claim the lives of about 12 million people in the world. Therefore, the quality of hypertension treatment largely determines the quality and life expectancy of the population.

The aim of the study was to assess the quality of life of patients of older age groups with arterial hypertension (AH) and the reasons for the decrease in this indicator.

Material and methods. 71 patients with stage II–III hypertension were examined (according to the recommendations of VNOK–2010, ESH/ESC–2009) — employees and pensioners of the Ministry of Internal Affairs (MIA) and the Ministry of Defense (MO) and their family members, including 35 elderly people (60-74 years — according to the WHO classification, 18 patients of senile age (75 years and older), and 18 patients of the control group (45-59 years). A decrease in the quality of life was not detected only in 17.1% (13 people) of men and 19.3% of women (26 patients) of elderly age (Table. 3), in 13.3% of men and 17.7% of women of senile age (6 and 11 patients, respectively) and 18.2% and 23.4% of patients of the control group (8 and 15 people), however, the differences are not significant.

In a mild degree, QL was reduced in 16 elderly men and 30 women (21.1% and 22.2%, respectively), in 17.8% and 17.0% (8 and 11 people) of the senile group, in the control group, a slight decrease in QL was unreliably higher compared to other groups of 27.3% and 23.4% (12 and 15 patients).





Conclusion: The majority of patients of all age groups, regardless of gender differences, have a moderate decrease in QL, about a third of all patients have a significant decrease in QL.

Keywords: Arterial hypertension, quality of life, elderly, senile age

## INTRODUCTION

Essential hypertension (hypertension) accounts for 90-95% of cases of hypertension. In other cases, secondary, symptomatic arterial hypertension is diagnosed: renal (nephrogenic) - 3-4%, endocrine - 0.1–0.3%, hemodynamic, neurological, stressful, due to the intake of certain substances (iatrogenic) and hypertension of pregnant women, in which an increase in blood pressure is one of the symptoms of the underlying disease. Among iatrogenic hypertension, those caused by the intake of biologically active additives and medications are particularly distinguished. Women taking hormonal contraceptives are more likely to develop hypertension (this is especially noticeable in obese women, women who smoke and older women). With the development of hypertension against the background of taking these drugs and biologically active additives, they should be canceled. The decision to cancel other medications is made by the doctor. Hypertension not caused by oral contraceptives is not a contraindication to hormone replacement therapy in postmenopausal women. However, at the beginning of hormone replacement therapy, blood pressure (blood pressure) should be monitored more often, since it may increase.

The differences between the medical opinion on the effectiveness of treatment made by a doctor based on the results of a clinical examination and the assessment of the patient's quality of life can be significant. This is due to the peculiarities of the patient's personality, the burden of some diagnostic and therapeutic procedures (certain types of therapy may be subjectively more unpleasant than the disease itself), and the side effects of drugs, their effect on the psycho-emotional sphere, etc. All this convinces of the need for widespread implementation in clinical practice, an integrated approach to assessing the condition of patients during treatment and rehabilitation with the inclusion of integral criteria of their subjective state, namely, QOL as a measure of their physical, mental and social well-being.

Arterial hypertension (AH) is one of the most common chronic diseases for which currently the goal of therapy is not so much recovery as improvement of circulatory function with a satisfactory quality of life.

Since modern classes of antihypertensive drugs according to clinical efficiency (achievement of target blood pressure levels, organoprotection, etc.). Arterial



hypertension is a serious medical and social problem, the prevalence of which among the adult population is 40%. At the beginning of the XXI century, the concept of "quality of life" turned into a subject of scientific research and became more accurate – "quality of life related to health". Currently, the integrative indicator of the quality of life of patients and risk factors for hypertension have not been sufficiently studied. The data obtained during the study should increase the efficiency ongoing therapy, reduce the risk of complications and improve the quality of life of patients.

Aging is not synonymous with disease, it is an inevitable stage in the development of the body. However, with age, the number of diseases increases. It is no less difficult to diagnose "healthy" in old age than it is to recognize diseases.

The effectiveness of a particular treatment method is evaluated according to various criteria. This includes the assessment of objective data on the condition of patients, and the calculation of statistical parameters such as mortality, relapse rate, etc. However, all these criteria of survival and life expectancy leave the most important aspects of a person's life, namely everything that defines him as an active member of society, uncovered. These factors are assessed by the quality of life. To date, the quality of life (QOL) is defined as an integral characteristic of the physical, mental and social functioning of a person in his subjective perception.

The absence to date of uniform criteria for assessing the quality of life of patients does not allow objectifying the indications for choosing a specific intervention.

The aim of the study was to assess the quality of life of patients of older age groups with arterial hypertension (AH) and the reasons for the decrease in this indicator.

## **MATERIALS AND METHODS**

71 patients with stage II–III hypertension were examined (according to the recommendations of VNOK–2010, ESH/ESC–2009) — employees and pensioners of the Ministry of Internal Affairs (MIA) and the Ministry of Defense (MO) and their family members, including 35 elderly people (60-74 years — according to the WHO classification, 18 patients of senile age (75 years and older), and 18 patients of the control group (45-59 years). The results of the research were entered into the protocols and into the database. Statistical processing was performed using the "STATISTICA" package.

The methodology for assessing the quality of life consists of 17 questions, including the restriction of the patient in physical, mental, work activities, changing relationships in family and friends, as well as restrictions in leisure activities, physical culture and sports. The examinee is offered a choice of 4 answer options: "I'm very worried", "it's unpleasant for me", "I'm indifferent", "I'm glad about it". Each answer



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is assigned a certain score (-2, -1, 0 or +1, respectively). The QL test filling time takes about 5 minutes, the test has high reliability.

For the normative indicators of the quality of life, a QOL value equal to or exceeding 0 was taken. Indicators from -2 to -4 points were regarded as a slight decrease in the quality of life; from -5 to -7 — a moderate decrease in the quality of life. Indicators  $\geq$ -8 points were taken for a significant decrease in the quality of life.

The results of the research were entered into the protocols and into the database. For statistical data processing, the SPPS v.19 program was used. The reliability of differences was analyzed using the Student-Fisher t—test in a confidence interval of more than 95%. The Kolmogorov—Smirnov criterion was used to test the hypothesis of the normality of the distribution. In the case of an abnormal distribution of the variation series, the reliability of the differences was analyzed using the Kruskell, Mann—Whitney criterion. To compare the relative indicators, the criterion  $\lambda_2$  was used. Statistically significant differences were considered at values of p<0.05.

#### RESULTS

We noted a decrease in QL to moderate indicators in all groups, there were no significant differences between the groups, the minimum indicator of a decrease in QL was registered in women of senile age (-5.56 points), the maximum indicator was registered in men of the same group (-6.49 points).

A decrease in the quality of life was not detected only in 17.1% (13 people) of men and 19.3% of women (26 patients) of elderly age (Table. 3), in 13.3% of men and 17.7% of women of senile age (6 and 11 patients, respectively) and 18.2% and 23.4% of patients of the control group (8 and 15 people), however, the differences are not significant.

In a mild degree, QL was reduced in 16 elderly men and 30 women (21.1% and 22.2%, respectively), in 17.8% and 17.0% (8 and 11 people) of the senile group, in the control group, a slight decrease in QL was unreliably higher compared to other groups of 27.3% and 23.4% (12 and 15 patients).

Significant differences were found in elderly women with a moderate decrease in QOL compared with elderly women (p<0.05) – 35.6% and 20.0%, respectively (22 and 27 patients, respectively). In other subgroups, no significant differences were obtained either between age categories or by gender criteria within the age group.

According to our data, about a third of all examined patients have a significant decrease in QOL, from 29.0% in elderly women (18 patients) to 38.5% in elderly women (52 patients). However, there was no reliability between the indicators between the groups.



Such a high level of QL reduction in all age groups is due, in our opinion, both to the influence of hypertension risk factors and the course of the disease itself. Almost all (over 93%) of the examined patients had a very high risk of hypertension (risk 4), more than 70% had associated clinical conditions (stage III hypertension).

We also analyzed the causes of the decrease in QOL, identified the following features in patients in different age and gender groups. It was noted that the decrease in QOL in patients is largely due to: a) the need to limit physical activity – from 72.7% in men in the control group to 82% in women of senile age, b) the need to be treated — from 52.3% in men in the control group to 75.5% in men of senile age; c) a decrease in activity in everyday life — from 40.0% in men in the control group to 75.6% in men of senile age; up to 75.6%; d) restriction of leisure — from 29.5% in men in the control group to 60.0% in men of senile age; f) restriction in nutrition — from 26.6% in women in the control group to 47.6% in women of senile age; g) reduction in contacts with friends — from 31.3% in women in the control group to 45.2% in elderly women; h) changes in relationships with loved ones — from 34.4% in women in the control group to 46.7% in men of senile age. To a lesser extent, we noted a decrease in income (9.8–38.6%); reduction in position (11.5–20.4%), as well as smoking cessation (3.2–15.9%) and changes in sexual life (11.1–34.1%).

When analyzing the reasons for the decrease in QOL between groups of patients in points, it was revealed that elderly men had the lowest scores for such indicators as: a) the need to be treated -1.07; b) the need to limit physical activity -0.76; c) restriction of leisure -0.61; d) decreased activity in everyday life -0.72. At the same time, significant differences were revealed between men of this age group and senile age in the indicator "change in sexual life" -0.45 and -0.18 points, respectively (p=0.049). A significant difference within the group with women of their own age was revealed by a change in sexual life (-0.45 and -0.13 points, respectively, p =0.0001), a decrease in contacts with friends (-0.38 and -0.59 points, respectively, p =0.023). In elderly women, the lowest scores were for such indicators as: a) the need to be treated -1.02; b) the need to limit physical activity -0.74; c) a decrease in activity at home -0.90; d) a decrease in contacts with friends -0.58. In women of this age group and women of senile age, a significant difference was revealed in terms of indicators: a decrease in income (-0.28 and -0.11 points, respectively, p =0.046), a decrease in contacts with friends (-0.59 and -0.39 points, respectively, p =0.023). There were significant differences in QOL indicators between elderly women and the control group: decreased activity in everyday life (-0.90 and -0.52 points, respectively, p=0.004), restriction in nutrition (-0.38 and -0.17 points, respectively, p=0.010).



In men of senile age, the lowest scores were for such indicators as: a) the need to be treated -1.20; b) the need to limit physical activity -0.80; c) restriction of leisure -0.76; d) decreased activity in everyday life -0.91. At the same time, significant differences were revealed between men of this age and the control group in terms of QOL: the need for treatment (-1.20 and -0.80 points, respectively, p =0.025); changes in relationships with loved ones (-0.58 and -0.32 points, respectively, p=0.041); a decrease in income (-0.18 and -0.45 points, respectively, p =0.015); restriction of leisure (-0.76 and -0.36 points, respectively, p = 0.005); decrease in activity in everyday life (-0.91 and -0.64 points, respectively, p = 0.040). There was no significant difference between the group and women of their own age in terms of QOL indicators. In senile women, the lowest scores were for such indicators as: a) the need to be treated -1.03; b) the need to limit physical activity -0.82; c) decreased activity in everyday life -0.82; d) demotion -0.76. In women of this age and women of the control group, a significant difference in quality of life was revealed: restriction of work activity (-0.21 and -0.46 points, respectively, p=0.040); decrease in income (-0.11 and -0.41, respectively, p=0.005); demotion (-0.76 and -0.32, respectively, p=0.044); decreased activity in everyday life (-0.82 and -0.52 points, respectively, p = 0.029); restriction in nutrition (-0.49 and -0.17 points, respectively, p = 0.012); smoking cessation (-0.08 and -0.02 points, respectively, p = 0.036). In the men of the control group, the lowest scores were for such indicators as: a) the need to be treated -0.80; b) the need to limit physical activity -0.73; c) a change in sexual life -0.50; d) a decrease in activity at home -0.64. A significant difference within the group with women of their own age in terms of QOL was revealed by the QOL indicator – a decrease in physical activity (-0.48 and -0.24 points, respectively, p=0.021). The women of the control group had the lowest scores for such indicators as: a) the

The women of the control group had the lowest scores for such indicators as: a) the need to be treated -1.06; b) the need to limit physical activity -0.76; c) restriction of leisure -0.51; d) decreased activity in everyday life -0.52.

## CONCLUSION

The majority of patients of all age groups, regardless of gender differences, have a moderate decrease in QL, about a third of all patients have a significant decrease in QL. The decrease in QOL in all age groups is due to the need to limit physical activity, the need to be treated, a decrease in activity in everyday life, a restriction of leisure; restriction in nutrition, a decrease in contacts with friends, a change in relationships with loved ones. Significant differences between the groups are noted in the following indicators: the need for treatment (women of senile age and control group), changes in relationships with loved ones (men of senile age and control group), restrictions on



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work activities (women of senile age and control group), a decrease in income (men of elderly and senile age; women of senile age and control group), demotion (women of senile age and control group), restriction of leisure (men of senile age and control group), decreased contacts with friends (women of elderly and senile age), decreased activity in everyday life (men and women of senile age compared with the control group), dietary restriction (elderly women and the control group compared to the control group and elderly women, respectively), smoking cessation (women of senile age and control group), changes in sexual life (men of elderly and senile age).

Significant differences within the groups were revealed by the following indicators: a decrease in contacts with friends (in elderly men and women), a decrease in physical activity (in men and women of the control group), smoking cessation (in elderly men and women), changes in sexual life (in elderly men and women).

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