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Quality of life and physical activity seniors with hypertension

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Abstract

Introduction: Hypertension is a very common blood disorder common in older people. This disease, as well as many others that often accompany the elderly, affects both the quality of life and to physical activity of seniors.

Aim of the work: To assess quality of life and physical fitness of the elderly.

Material and methods: The study was conducted among the elderly in Bydgoszcz. The study used standardized questionnaires such as the scale of the ADL, IADL, Barthel, WHO questionnaire QOL- Bref and Legal Data socjodemgraficznych own authorship. Study on variables was performed using Kruskal-Wallis test and Mann-Whitney test. Variability presented as the arithmetic mean (M) and standard deviation (SD). The level of significance $p \leq 0.05$ considered statistically significant. The research group consisted of 100 people.

Results: The quality of life of respondents depends on the length of the years of being infected with hypertension. It has been demonstrated statistical relationships in all areas of the WHO scale QOL- Bref, and the period of being infected with hypertension. With the increase in the period of illness reduce the amount of points earned by the respondents, which lowers the quality of life of respondents in every area of the WHO scale QOL- Bref. The length of the ill influence on the physical activity of the test population as assessed by scales: ADL IADL and Barthel. We observed an inverse proportional with the increase where the period of being infected with the disease reduced the results obtained from the questionnaires, indicating a decrease in patient autonomy.

Conclusions: We found a statistically significant relationship between the sense of quality of life and the length of years of being infected with hypertension. This observation has any field

scale WHOQOL- Bref. Statistical analysis shows that the longer the period of being infected with hypertension, including physical fitness was significantly lower subjects.

Key words: quality of life, physical fitness, hypertension, geriatrics

Introduction: Arterial hypertension is one of the most important risk factors for premature deaths worldwide. Blood pressure levels are determined by the linear relationship to mortality and the incidence of cardiovascular diseases, e.g. heart attack, stroke, heart failure, etc. in all age groups [1]. Arterial hypertension is an abnormal value of systolic and diastolic blood pressure, which exceeds the normal level determined on the basis of studies carried out in a group of the population, in which there are no signs of cardiovascular dysfunction [2,3]. Arterial hypertension is a very common disease in the elderly. It may be assumed that over 40% of elderly people in Poland suffer from hypertension. This disease, as well as many others that often accompany the elderly, affects both the quality of life and physical activity of seniors [4].

Aim of the study: Assessment of the quality of life and physical fitness of elderly people.

Material and methods: The research was conducted among elderly people in Bydgoszcz. Standardized questionnaires such as ADL, IADL, Barthel scale, WHO QOL- Bref questionnaire and a metric of own sociodemographic data were used in the study.

The ADL scale evaluates such elements as bathing, dressing, personal hygiene, movement, physiological activities and eating. For each of these elements, the examined person can receive from 1 to 3 points, depending on the degree of independence of the activity. The higher the number of points obtained in the examination, the more dependent the person is [5]. IADL scale - scale of assessment of complex everyday activities according to Lawton (IADL); this scale includes the following activities; whether the examined person is able to use a phone, is able to reach a place outside the walking distance, is able to go shopping for groceries, is able to prepare meals independently, can carry out housework on their own, etc.

The respondent receives 3 points if he or she does the activity on his or her own, 2 points if he or she does the activity with little help, 1 point if he or she is unable to do the activity on his or her own. The higher the number of points, the more independent the person is examined [6].

According to Barthel, the scale of the patient's self-service fitness assessment is used to assess whether the patient requires help with eating, changing from bed to pram, maintaining personal hygiene, using toilet, etc. For each question the respondent can receive 10 points if he or she does not require help, 5 points if he or she requires partial help and 0 points if he or she requires total help. The higher the number of points, the more independent the patient is [6].

Quality of life measurement scale - WHOQOL- BREF scale (shortened version -26 questions). The shortened version consists of four areas: physical field, psychological field, social relations and environment. For each question the respondent can receive from 1 to 5 points. In each field the score can be from 4 to 20 points. The higher the number of points, the better the quality of life of the examined person [7].

The Bioethical Committee at the L. Rydygier Medical College in Bydgoszcz approved the study. Statistical analysis was performed using STATISTICA for Windows by StatSoft® using the Kruskal-Wallis test and the U Mann-Whitney test. The variability was presented as an arithmetic mean (M) and standard deviation (SD). The level of significance $p \leq 0.05$ was assumed to be statistically significant.

Results:

The research group consisted of 100 people. These were patients over 65 years old staying in hospitals in Bydgoszcz. Women accounted for 62% and men for 38% of respondents. The respondents were divided into four age categories. At the age of 75-74 there were 55% of respondents, 75-80 years old accounted for 27%, 81-89 years old is a group of 15% and over 90 years old only 3% of the surveyed population. The largest number of people had vocational education - 38%, primary education - 23%, secondary education - 21% and higher 18% of respondents. People living with their families constituted 69% of the respondents, the

rest were living alone - 24% and staying in DPS - 7% of the respondents. Nearly half of the respondents suffered from arterial hypertension from 5 years to 9 years - 46%, the remaining ones were 10-15 years - 24% and over 15 years - 30% of the population.

Table I. Analysis of correlation between the results of the questionnaire WHOQOL-Bref to the period for high blood pressure

Pair of variables period of hypertension disease vs.	Correlation of the order of the Spearman rank		
	R	t(N-2)	p
ADL	-0,408	-4,425	0,000
IADL	-0,509	-5,860	0,000
Barthel	-0,505	-5,798	0,000

Table I illustrates the analysis of the WHOQOL-Bref results in relation to the period of hypertension. In each of the analyzed cases there are dependencies. The obtained relationships are inversely proportional, which indicates that as the period of disease increases, the number of points obtained by the respondents decreases, i.e. the quality of life of the respondents in each area of the WHO QOL- Bref scale is lowered.

Table II. Analysis of correlation between the results of the questionnaire, ADL, IADL and Barthel relative to the period for high blood pressure

Pair of variables period of hypertension disease vs.	Correlation of the order of the Spearman rank		
	R	t(N-2)	p
Somatic	-0,442	-4,879	0,000
Psychological	-0,354	-3,743	0,000
Social	-0,428	-4,684	0,000
Environmental	-0,359	-3,804	0,000

Table II presents an analysis of the correlation between the results from the ADL, IADL and Barthel questionnaires in relation to the period of hypertension. An inversely proportional relationship was observed where the results obtained from the questionnaires decrease with the increase in the duration of the disease, which indicates a decrease in the autonomy of patients.

Discussion of results:

Our own studies show that the quality of life depends on the length of years of hypertension. Statistical dependence in all areas of the WHO QOL- Bref scale and the period of hypertension disease was shown. Along with the increase in the period of the disease, the number of points obtained by the respondents decreases, i.e. the quality of life of the respondents in each area of the WHO QOL- Bref scale is reduced. Our own studies correspond to the results of Stachowska M and co-research, where the quality of life of the respondents decreases with the length of blood hypertension prevalence [8]. The results of our own research partly correspond to the results of Sawicka K. and co-research, where the length of blood hypertension disease has an impact on the quality of life in the field of physical scale of WHO QOL-Bref [9]. Paczkowska A. and co-workers, obtained statistically significant

relations between physical and psychological disciplines and the period of blood hypertension disease, which is also confirmed by their own studies [10]. Our own studies show that the physical fitness of the examined persons depends on the length of the disease. The more years of the disease, the worse the physical activity of the subjects. M. Muszyalik M. and co-received similar results [11]. The own study also corresponds to the study by Bujanowska-Fedak M. and co-workers, where it was shown that chronic diseases, including arterial hypertension, reduce the physical fitness of seniors [12]. Elderly people struggle with multifunctionality, where very often arterial hypertension causes a number of complications, which leads to a decrease in their functioning in everyday life.

Conclusions:

Statistically significant correlations between the sense of quality of life and the length of years of hypertension disease were demonstrated. This observation concerned each area of the WHOQOL-Bref scale. Statistical analysis shows that the longer the period of hypertension, the lower the physical fitness was statistically significant.

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