

УДК 616.1:616-084

O.M. BARNA, Doctor of Medicine, Professor; Ya.V. KOROST, Candidate of Medicine

/P. L. Shupyk National Academy of Postgraduate Education, Kyiv/

# Estimation of Cardiovascular Risk Factors Prevalence Among the Population of Novohrad-Volynskyi

## Summary

An estimation of prevalence of cardiovascular risk factors among the residents of Novohrad-Volynskyi (Zhytomyr region, Ukraine) was made. The «Cabinet of the elderly people «60+ Cardio» was visited by 71 people over 60 years. Among them a very high death risk from cardiovascular disease (CVD) for the next 5 years had 50.71% people, high – 42.25%, moderate – 7.04% and low – 0%. Among 73 persons younger than 60 a very high risk had 2.74%, high risk – 15.07%, moderate risk – 32.88% and low risk – 53.42%. The biggest contribution among the possible risk factors in this population gives an excessive weight and arterial hypertension. All-Ukrainian Social Initiative «60+ Cardio» continues its work to raise the awareness of people with health problems of older people and strengthen the education of this category of people; improve the education of doctors and the medical community in general and implementation of treatment standards of elderly patients with CVD.

**Key words:** cardiovascular risk factors, modified scale SCORE, All-Ukrainian Social Initiative «60+ Cardio»

According to the analysis of international research «Global Burden of Disease Study 2010» five key risk factors (RF) in the global world are arterial hypertension (AH), smoking (including passive smoking), alcohol abuse, everyday air pollution by solid fuel, inadequate consumption of fruit in daily ration. The second five of important RF are: obesity (high body mass index – BMI), fasting hyperglycemia (including diabetes mellitus (DM), low body weight at birth, environmental pollution by liquid and gaseous substances, physical inactivity or lack thereof. The recognized RF are old age and male sex.

Every region of the world population has its own peculiarities. The most unfavourable RF according to the data of this analysis for the residents of Eastern Europe (including Ukraine) are: alcohol abuse, AH, smoking, obesity, diet, inadequate fruit consumption and hypercholesterolemia. That is for the people of Eastern Europe compared to the population of other parts of the world reducing the harmful effects of AH, smoking and obesity are the most important steps in the comprehensive prevention to improve the length and quality of life.

## Materials and methods of the research

New «Cabinet of the elderly people «60+ Cardio» of All-Ukrainian Social Initiative «60+ Cardio» was opened on April 24, 2014 in Novohrad-Volynskyi, Zhytomyr region, Ukraine in the «Enterprise Central Town District Pharmacy No. 217» (Shevchenko street, 29). The initiator of the project was the All-Ukrainian public organization «Association of preventive and anti-aging medicine», and its implementation was possible with support of pharmaceutical company «Sandoz». Since opening during three months the Cabinet was attended by 150 people who are not indifferent to their health. Among them the target audience – namely people over 60 years, was 50 % of all visitors. It was interesting to estimate the prevalence of risk factors not only among elderly people but to com-

pare these indices with younger generation of this population. There were evaluated the following parameters: attitude to smoking, medical history (diabetes mellitus, burdened heredity – close relatives who have had myocardial infarction, stroke, atherosclerotic vascular lesions of the lower limbs), anthropometric data (height, weight, body weight index (BWI), level of systolic blood pressure (SBP) and diastolic blood pressure (DBP) while twofold determining of arterial pressure (AP). The estimation of death risk from CVD (cardiovascular diseases) for the nearest 5 years was conducted according to modified scale SCORE.

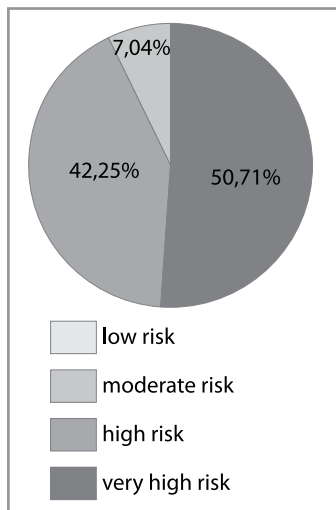
## Results and Discussion

The «Cabinet of the elderly people «60+ Cardio» was visited by 71 people over 60 years. Among them there were 22 men (30.99 %) with an average age  $70.7 \pm 6.6$ . 9 patients (12.68 %) continued to work after the retirement age.

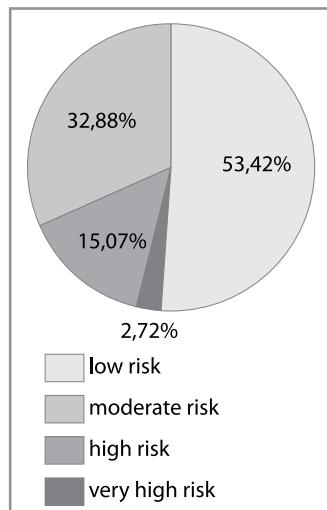
Only 5 persons (7.04 %) smoked among the polled people over 60 years. The burdened heredity had 57 people (80.28 %). Diabetes mellitus had 9 people (12.68 %) of those who had asked for help. At the time of inspection high blood pressure (above 140/90 mm Hg) had 37 persons (52.11 %). Overall in this population there was observed an increased BWI  $31.12 \pm 6.34$ . Excess weight (that is BWI  $>25 \text{ kg/m}^2$ ) was found out in the most of elderly people of this population – 55 persons (77.46 %), among them 39 people had obesity (54.92 %).

In assessing the death risk from CVD for the next 5 years of life (according to modified scale SCORE) it was determined that among people over 60 years 50.71 % persons had very high risk 42.25 % – high risk, 7.04 % – moderate risk and 0 % – low risk (Figure 1).

Using the fact that the local inhabitants were interested in the work of the «Cabinet 60+ Cardio», in general and to their health in particular, we decided to assess the prevalence of risk factors also



**Figure 1.** Estimation of the death risk from CVD for the next 5 years of life among persons over 60 years, residents of Novohrad-Volynskyi (1 – very high risk, 2 – high risk, 3 – moderate risk, 4 – low risk)



**Figure 2.** Estimation of the death risk from CVD for the next 5 years of life among persons younger than 60 years, inhabitants of Novohrad-Volynskyi (1 – very high risk, 2 – high risk, 3 – moderate risk, 4 – low risk)

among the people younger than 60 years. The total number of such people was 73 persons. The main part of them was women – 47 (64.38 %). Average age was  $46.26 \pm 9.7$  years. An average body weight index of this group was  $28.97 \pm 6.73$ . Herewith, the excessive body weight had 45 persons (61.64%), and obesity (namely BMI more than 30) – 26 (35.62 %). 10 persons had smoking addiction (13.7 %), 45 (61.64 %) examined persons had the burdened heredity. Only one person had diabetes mellitus (1.37 %). Only 26 persons had high blood pressure at the moment of inspection (35.62 %). Thus the distribution of the risk groups in this group was as follows 2 persons had very high risk (2.74 %), 11 persons – high risk (15.07 %), 24 persons – moderate risk (32.88%) and 39 persons – low risk (53.42%) (Figure 2).

Thus, in this population about half of people younger than 60 years had very high and high death risk from CVD for the next 5 years of life. According to the analysis the biggest contribution among the possible risk factors gives an excessive body weight. Obviously the insufficient awareness of population influences as to balanced nutrition and sufficient physical load. Also, it should be noted that in the most of examined patients high blood pressure was found out, that is it can be assumed the insufficient control of arterial hypertension by both non-pharmacological measures and medicines.

## Conclusions

Thus, AH and obesity are the most serious threat for inhabitants of this population. For practical doctors it is crucial to determine the treatment tactics. Strict control of blood pressure, if necessary – the use of combined drug therapy involving antihypertensive drugs from different pharmacological groups is the primary task of the doctor, even if the patient has a multiple RF. Prevention of bad habits (smoking and/or excessive alcohol consumption) is also important, since the understanding of their harm by patient and adequate

modification of the mode of life, probability to lengthen its duration and quality significantly increases. All-Ukrainian Social Initiative «60+ Cardio», which aims to promote better quality and life and increase life duration of patients of elderly age with cardiovascular diseases, continues its work to raise awareness of population with health problems of elderly people and strengthen the education of this category of population; improve the education of doctors and medical community in general and implement the standards of treatment of elderly patients with CVD.

## References

1. Горбась І. М. Шкала SCORE в Україні: можливість використання / І. М. Горбась // Медікс. Антиейджинг. – 2010. – № 2. – С. 22–26.
2. Горбась І. М. Епідеміологія основних факторів ризику серцево-судинних захворювань / І. М. Горбась // Артеріальна гіпертензія. – 2008. – № 2. – С. 15–18.
3. Горбась І. М. Оцінка поширеності та контролю факторів ризику серцево-судинних захворювань серед населення та лікарів / І. М. Горбась, О. М. Барна, В. Ю. Сакалош, М. А. Бакуменко // Ліки України. – 2010. – № 1. – С. 4–9.
4. A comparative risk assessment of burden of disease and injury attributable to 67 risk factors and risk factor clusters in 21 regions, 1990–2010: a systematic analysis for the Global Burden of Disease Study 2010 / S. S. Lim, T. Vos, A. D. Flaxman [et al.] // Lancet. – 2012. – Vol. 380. – P. 2224–2260.

## Резюме

### Оцінка поширеності факторів серцево-судинного ризику серед населення міста Новоград-Волинський

О.М.Барна, Я.В. Корост

Національна медична академія післядипломної освіти імені П.Л. Шупика, Київ

Проведено оцінку розповсюдженості факторів серцево-судинного ризику серед жителів міста Новоград-Волинський (Житомирська область, Україна). «Кабинет людини літнього віку «60+ Cardio» відвідала 71 людина старше 60 років. Серед них дуже високий ризик смерті від ССЗ на найближчі 5 років життя мають 50,71% осіб, високий – 42,25%, помірний – 7,04% і низький – 0%. Серед 73 осіб молодше 60 років дуже високий ризик мали 2,74%, високий – 15,07%, помірний – 32,88% і низький – 53,42%. Найбільший внесок серед можливих факторів ризику в даній популяції дає надмірна маса тіла та артеріальна гіпертензія. Всеукраїнська соціальна ініціатива «60+ Cardio» продовжує свою роботу задля підвищення обізнаності населення з проблемами здоров'я людей літнього віку і посилення освіти цієї категорії населення; покращення освіти лікарів і медичної громадськості в цілому та впровадження стандартів лікування пацієнтів літнього віку із ССЗ.

**Ключові слова:** серцево-судинні фактори ризику, модифікована шкала SCORE, Всеукраїнська соціальна ініціатива «60+ Cardio»

## Резюме

### Оценка распространенности факторов сердечно-сосудистого риска среди населения города Новоград-Волинский

О.Н. Барна, Я.В. Корост

Национальная медицинская академия последипломного образования имени П.Л. Шупика, Киев

Проведена оценка распространенности факторов сердечно-сосудистого риска среди жителей города Новоград-Волинский (Житомирская область, Украина). «Кабинет человека пожилого возраста «60+ Cardio» посетил 71 человек старше 60 лет. Среди них очень высокий риск смерти от ССЗ на ближайшие 5 лет жизни имеют 50,71% лиц, высокий – 42,25%, умеренный – 7,04% и низкий – 0%. Среди 73 человек моложе 60 лет очень высокий риск имели 2,74%, высокий – 15,07%, умеренный – 32,88% и низкий – 53,42%. Наибольший вклад среди возможных факторов риска в данной популяции дает избыточная масса тела и артериальная гипертензия. Всеукраинская социальная инициатива «60+ Cardio» продолжает свою работу с целью повышения осведомленности населения по проблеме здоровья людей пожилого возраста и усиления образования этой категории населения; улучшения образования врачей и медицинской общественности в целом и внедрения стандартов лечения пациентов пожилого возраста с ССЗ.

**Ключевые слова:** сердечно-сосудистые факторы риска, модифицированная шкала SCORE, Всеукраинская социальная инициатива «60+ Cardio»

**Додаткова інформація.** Автори заявляють про відсутність конфлікту інтересів.