

Międzywydziałowa Katedra i Zakład Zdrowia Publicznego Akademii Medycznej w Lublinie
Kierownik: prof. dr hab. Maciej Latałski

EDYTA OPALIŃSKA, MARIUSZ GONIEWICZ,
WOJCIECH KRAWCZYK

*Knowledge of prevention of cardiovascular diseases
in fourth-year students
of Pedagogical and Psychological Faculty,
Maria Curie-Skłodowska University in Lublin*

Znajomość profilaktyki chorób układu krążenia wśród studentów
IV roku Wydziału Pedagogiki i Psychologii
Uniwersytetu Marii Curie-Skłodowskiej w Lublinie

Over a few previous years we have observed a significant increase in incidence and mortality of cardiovascular diseases (CVD), especially coronary heart disease (CHD) and hypertension (HA). Therefore it seems important to undertake efforts to stop the adverse health trends. Main attention should be paid to recognise CVD risk factors. People dealing with youth education such as teachers, tutors need to have a little knowledge of CVD to teach the young how to prevent CVD in their adult life.

The aim of the study was to assess knowledge of CVD risk factors in teachers to be – fourth-year students of Pedagogical and Psychological Faculty of Maria Curie-Skłodowska University (UMCS) in Lublin.

MATERIAL AND METHODS

Study subjects were fourth-year students of Pedagogical and Psychological Faculty of UMCS in Lublin. The studied group comprised 62 students – 40 women (65%) and 22 men (35%), aged 22–25, mean age was 23 years. All data were collected on the base of a questionnaire including 20 questions.

The following issues were evaluated: students' knowledge of CVD risk factors, influence of eating habits and physical activity in preventing cardiac diseases and their opinion about mass media position in health education of the society.

RESULTS

The investigation showed that only 51.6% of respondents defined CHD properly as ischaemia of heart muscle, which is the result of coronary artery stenosis or occlusion by atherosclerotic plaques or thrombus. High percentage of subjects (38.7%) identified the disease with collecting excess of animal fat in heart muscles fibres, which disturbs its contractility.

Study participants were asked to indicate CHD risk factors. Of all factors they mostly chose smoking (72.6%), hypercholesterolaemia and/or obesity (66.1%), age over 40 years (61.3%), low physical activity (48.4%), hypertension (35.5%) – Fig. 1 Generally respondents properly indicated men predominance for myocardial infarction (MI) (62.9%). The majority (77.4%) considered that at the age of over 40 years CHD events such as MI occurred more often.

Of all factors associated with prevalence of HA respondents considered first of all stress (96.8%), obesity (74.2%) and smoking (71%). Few students identified the relationship between excess of salt in the diet (24.4%), alcohol consumption (33.9%) and elevated blood pressure (BP) – Fig. 2 Half of the students knew that BP should be measured quite often, at least once a month. Only a third of students (30.6%) could recognise values for normal BP.

Estimating diet influence on atherosclerosis prevalence, students considered high cholesterol level (56.4%) and excessive alcohol consumption (40.3%). Study participants were also asked about principles of rational diet. Most of them (95.1%) associated it with regular food intake, some of them (80.6%) considered reduction of animal fat and cholesterol in the diet. The majority (74.2%) seemed to recognise the importance of fruit and vegetables. Only few students (16.1%) showed the importance of dietary fibre in the diet (Fig. 3)

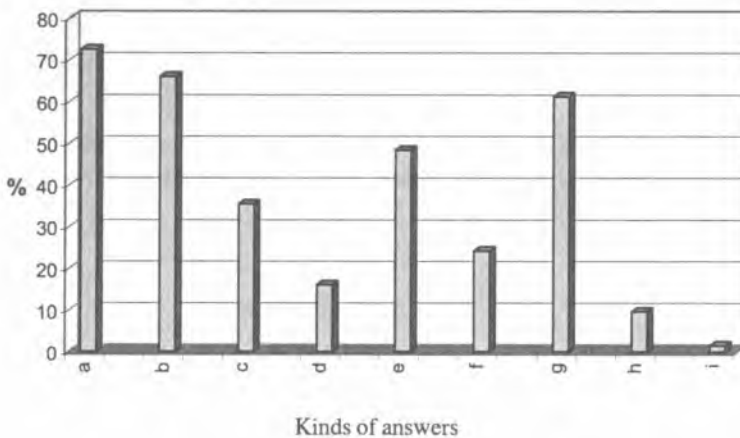


Fig. 1. Knowledge of CHD risk factors in students

a – smoking, b – hypercholesterolaemia and/or obesity, c – hypertension, d – diabetes mellitus, e – low physical activity, f – male sex, g – age over 40 years, h – often bacterial infections, i – none of the answers

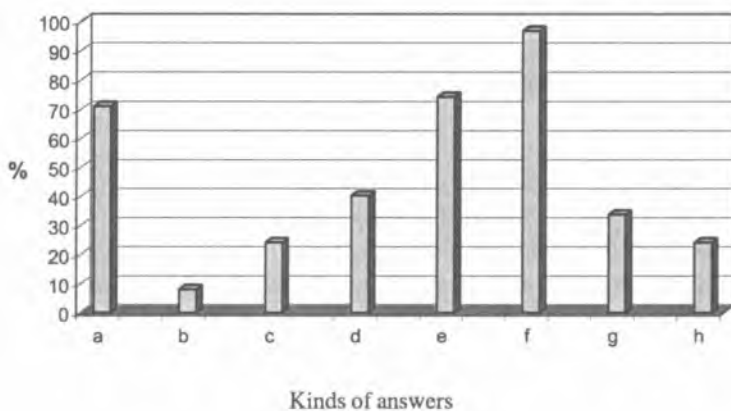


Fig. 2. Knowledge of HA risk factors in students

a – smoking, b – drugs, c – excess of salt in a diet, d – excess of animal fat in a diet, e – obesity, f – stress, g – excessive alcohol intake, h – little sleep

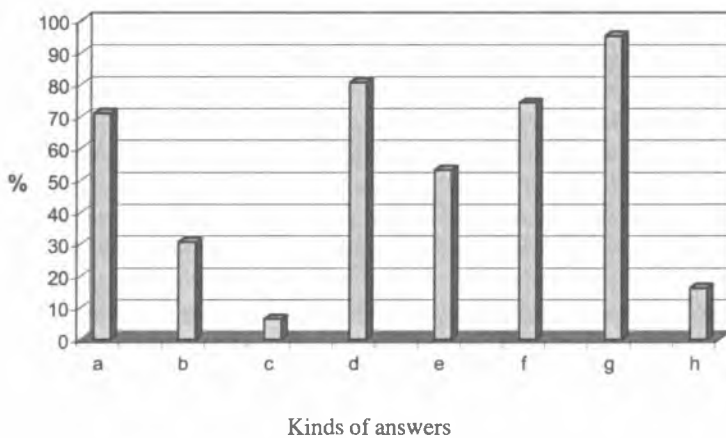


Fig. 3. Knowledge of main principles of rational diet in students

a – supply in energy, b – right proportions among protein, fat and carbohydrates, c – right proportions between animal and vegetable protein, d – reduction of animal fat and cholesterol, e – reduction of carbohydrates intake, f – fruit and vegetables consumption, g – regular food intake, h – dietary fibre intake

Physical activity was found to prevent CVD by most of the respondents (82.2%). However, only 24.2% knew that it was necessary to exercise regularly a few times a week to protect against CVD.

Finally subjects were asked about mass media influence on medical education of the society. They almost all agreed that CVD prevention should be included in television programmes, but personally they would give up such programmes if they met them on TV.

DISCUSSION

It is agreed that CVD have become the leading health problem in Polish population for a few years. Nowadays they are the main reason of all fatal events. That phenomenon has demonstrated permanent increasing tendency, both in men and women, especially middle-aged (13). In order to stop these adverse trends it seems necessary to widespread principles of CVD prevention, which is connected with knowledge of CVD risk factors. Respondents in our study demonstrated that they knew CHD risk factors quite well. It has been found that incidence of CHD in men is significantly higher than in women. The examinations point to overmortality of middle-aged men in Poland because of CHD. It is the reason of 31,000 fatal events in male population and 11,000 in female one. Such results were showed by Rywik and other authors, who assessed incidence and mortality of CVD among Warsaw population. These investigations were known as Pol-MONICA Warsaw programme co-ordinated by WHO (13). Most of the students indicated men as more vulnerable to MI comparing to women. They also found that the age over 40 years was associated with higher incidence of CHD.

Hypertension is proved in a third of Polish population (13). HA leads in consequence to stroke, heart attack and heart failure. The principal aim seems to use antihypertensive therapy to lower incidence of severe complications of elevated BP (6, 16). Our studies revealed that stress was considered to play the main role in HA prevalence. Some reports show the significance of stress in etiology of CVD: people performing stressful jobs have usually elevated BP (7). According to our respondents, there is a main influence of obesity and smoking on HA prevalence, which is demonstrated by numerous authors (2, 8, 12). Many researchers point to excessive salt and alcohol intake in etiology of HA (2, 4, 5, 8). Only a few study participants were aware of it.

According to WHO the following criteria for normal BP were established: systolic BP < 140 mmHg and diastolic BP < 90 mmHg. Some of the students did not recognise these values, while it is agreed that early diagnosis and treatment of elevated BP may reduce severe complications. Among all hypertensives in Poland only 15% of men and 30% of women are systematically treated (13). The results of early mentioned population research Pol-MONICA point to the problem of high frequency of HA in Polish society and its insufficient control, which differs from the world level (14).

It is known that almost all CVD develop on the base of atherosclerosis (5). Over a half of students considered high cholesterol level and excess alcohol intake to be associated with atherosclerosis existence. Only a few respondents knew the important role of dietary fibre, which apart from its many qualities, also protects against atherosclerosis by lowering cholesterol level in blood (1, 8). Many reports demonstrate the fact that proper diet could stop development of atherosclerosis (3, 11, 12). It is emphasised that elevated cholesterol level increases risk for CHD fatal events while its reduction due to diet and/or drug therapy, according to the latest investigations, significantly lowers heart attacks and total mortality of CHD (15).

Physical activity is important especially in CVD prevention, however we need to take exercises systematically a few times (3–4) a week for at least 30 minutes (5,10). High physical activity according to many authors is regarded as essential factor protecting us against CVD (2, 8, 9, 10). Epidemiological studies prove reverse correlation between high physical activity and elevated BP (10). Most of our study participants indicated the importance of sport practising, however over a half presumed, that exercising once a week is enough to prevent CVD.

CONCLUSIONS

Students of Pedagogical and Psychological Faculty of UMCS are good enough at CVD prevention. Most of them recognise CHD and HA risk factors, whereas their knowledge of criteria for normal BP is rather poor. They indicate the importance of high physical activity and proper diet in CVD prevention. The respondents pay attention to mass media contribution in medical education of our society, but personally they are not really interested in medical programmes on TV.

The obtained answers show enough knowledge of CVD prevention in students – teachers to be. It will allow them to provide proper level of basic medical education in the teaching process of the youth in the future.

REFERENCES

1. Bennett W.G., Cerda J.J.: Korzyści spożywania błonnika. *Med. Dypl.*, 5, 119, 1997.
2. Czarkowski M.: Niefarmakologiczne metody leczenia nadciśnienia tętniczego. *Klinika*, 2, 3, 1993.
3. Diet, nutrition and the prevention of chronic diseases. Report of a WHO Study Group. Technical Report, Series 797, Geneva 1990.
4. Figuero V.M.: Działanie alkoholu na serce, *Med. Dypl.*, 7, 115, 1998.
5. Grundy S.M.: Obniżenie stężenia cholesterolu u pacjentów z chorobą niedokrwienną serca. *Med. Dypl.*, 7, 129, 1998.
6. Januszewicz A.: Leczenie farmakologiczne nadciśnienia tętniczego. *Med. Sci. Rev. Kardiologia.*, 1, 40, 1998.
7. Łapiński M. et al.: Wpływ stresu związanego z wykonywaną pracą na ciśnienie tętnicze krwi u kontrolerów ruchu lotniczego. *Klinika*, 2, 38, 1993.
8. O'Keefe J. H. Jr. et al.: Zmiana stylu życia a zapobieganie chorobie wieńcowej. *Med. Dypl.*, 5, 61, 1997.
9. Paffenbarger R.S. Jr., et al.: The association of changes in physical activity level and other lifestyle characteristics with mortality among men. *N. Engl. J. Med.*, 328, 538, 1993.
10. Physical exercise in the management of hypertension. *WHO Bull.*, 69, 149, 1991.
11. Prevention of coronary heart disease. Report of a WHO Expert Committee. Technical Report, Series 678, Geneva 1982.

12. Puska P. et al.: Controlled, randomized trial of the effect of dietary fat on blood pressure. *Lancet*, 1, 1, 1983.
13. Rywik S. et al.: *Epidemiologia chorób układu krążenia–Program Pol–MONICA*. Kard. Pol., 44 (Suppl. II), 7, Warszawa, 1996.
14. Rywik S. et al.: Poland and US Collaboration Study on Cardiovascular Epidemiology. Hypertension in the community. Prevalence, treatment and control of hypertension in the Pol–MONICA Project and the US Atherosclerosis Risk in Communities Study. *Ann. Epidemiol.*, 8, 3, 1998.
15. Scandinavian Simvastatin Survival Study Group. Randomized trial of cholesterol lowering in 4, 444 patients with coronary heart disease. The Scandinavian Simvastatin Survival Study (4S). *Lancet* 344, 1383, 1994.
16. Smith S.C. Jr. et al.: Preventing heart attack and death in patients with coronary disease. *Circulation*, 92, 2, 1995.

Otrz.: 1999.11.29

STRESZCZENIE

W ostatnich latach obserwuje się istotny wzrost zachorowalności i umieralności spowodowanej chorobami układu krążenia (ChUK), zwłaszcza chorobą niedokrwinną serca (ChNS) i nadciśnieniem (NT). Zahamowanie tych niekorzystnych tendencji zdrowotnych wiąże się przede wszystkim z rozpowszechnieniem profilaktyki ChUK oraz – co za tym idzie – znajomością czynników ryzyka tych chorób. Celem pracy była więc ocena stanu wiedzy studentów IV roku Wydziału Pedagogiki i Psychologii UMCS w Lublinie na ten temat. Badaniem objęto 62 osoby, w tym 40 kobiet i 22 mężczyzn w wieku 22–25 lat. Narzędzie badawcze stanowił kwestionariusz ankiety, składający się z 20 pytań. Oceniono znajomość czynników ryzyka ChNS i NT wśród studentów oraz wiedzę na temat zasad racjonalnego żywienia i aktywności fizycznej. Badanie wykazało dość dobrą znajomość tej problematyki wśród przyszłych nauczycieli i wykładowców, co pozwoli im w przyszłości właściwie kształtować postawy zdrowotne młodego pokolenia.