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Medical knowledge level and health behaviours of patients after coronary artery bypass grafting

Poziom wiedzy medycznej oraz zachowania zdrowotne pacjentów po zabiegu pomostowania aortalno-wieńcowego

Małgorzata Synowiec-Piłat[1], Michał Jędrzejek[2], Joanna Sarbinowska[2]

[1]Department of Humanistic Medical Sciences, Wrocław Medical University, Wrocław, Poland
[2]Student Society for Societal Activation for Health and Health Promotion, Faculty of Medicine, Wrocław Medical University, Wrocław, Poland

Abstract

Introduction. Coronary artery bypass grafting (CABG) is a method of myocardial revascularization. Patients after CABG require comprehensive care and rehabilitation. The aim of this study was to evaluate the level of medical knowledge and health behaviours of patients with coronary artery disease who underwent CABG. Data from this study will be used to develop educational workshops for this group of patients.

Material and methods. The study included 106 patients after CABG hospitalized in a cardiac rehabilitation unit and was based on a highly standardized questionnaire developed by the authors. Statistical analysis included descriptive statistics, chi-square test, and correspondence analysis ($p < 0.05$ was considered statistically significant).

Results. Medical knowledge of respondents was poor (one fourth did not know a single risk factor for coronary artery disease, only 33% knew the components of a cardioprotective diet, and 25%, 67% and 55% did not know normal values of blood pressure, cholesterol level, and glycaemia, respectively) and their health-related behaviours were inappropriate (76% did not make any major change in their lifestyle since the diagnosis, only 40% followed dietary recommendations, 61% forgot to take medications regularly, and only 60% measured blood pressure regularly). Analysis of the study data confirmed that poor medical knowledge and inappropriate health-related behaviours were related to low economic status, poor education, and inhabiting small cities/towns.

Conclusions. Due to insufficient level of medical knowledge and inappropriate health-related behaviours of patients after CABG, it is necessary to incorporate health education within cardiac rehabilitation programs for this group of patients, with a particular focus on inequalities in health and disease.

Key words: coronary artery bypass grafting, cardiac rehabilitation, coronary artery disease, medical knowledge, health behaviours

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Introduction

With current significant economic growth, advances in technology, and adverse societal lifestyle changes, chronic degenerative diseases have become a major epidemiological problem [1]. The most important of these are cardiovascular diseases (CVD) which are not only a medical but also a social issue, as they are the most common cause of

Address for correspondence: dr n. med. Małgorzata Synowiec-Piłat, Zakład Humanistycznych Nauk Lekarskich, Uniwersytet Medyczny im. Piastów Śląskich, ul. J. Mikulicza-Radeckiego 7, 50–345 Wrocław, tel.: 71 784 14 96, faks: 71 784 01 03, e-mail: m.synowiecpilat@gmail.com

mortality virtually everywhere in the world [2]. CVD are the cause of about 48% of all deaths in Europe [1] and about 47% of all deaths in Poland [1, 2].

The most common cause of mortality among CVD is coronary artery disease, resulting from coronary atherosclerosis in more than 98% of cases [1–4]. Currently, acute coronary syndromes are associated with smaller mortality than in the past, as dynamic development of new medical technologies and new generations of drugs have allowed more precise diagnosis and rapid and effective treatment. This has contributed to prolonged survival and improved quality of life despite presence of the disease. Thus, with further developments of therapeutic procedures, the number of patients with established CVD and a history of a coronary event may be expected to increase [1]. As a result, the secondary prevention population is increasing [5], and these patients require complex care and development of appropriate cardiac rehabilitation programs [6, 7].

Patients after coronary artery bypass grafting (CABG) definitely require cardiac rehabilitation which should allow not only restoration of previous exercise tolerance both also return to other previous activities [8]. Preventive efforts are needed to maintain graft patency and prevent development of new lesions in other arteries [1]. This is particularly important due to the fact that numerous risk factors for atherosclerosis are usually present in these patients [1]. These preventive efforts are realized through cardiac rehabilitation programs that encompass a number of major components including activation of the musculoskeletal system, health education, and psychological and social interventions. Their goals are to eliminate or reduce adverse effects of risk factors [1, 4]. A need for multifactorial long-term cardiac rehabilitation has been stressed [8].

The basis for the development and implementation of effective health promotion projects, including introduction of appropriate strategies and effective methods of care to improve overall health status and quality of life, should be appropriate knowledge base regarding medical knowledge level and actual health behaviours of these patients, along with social determinants of these behaviours. An analysis of the available literature indicates a need for further research regarding these issues. Studies performed both in Poland [9, 10] and in Western Europe [11, 12] provided information mainly on the prevalence of risk factors [11] and mortality due to CVD [12] but only fragmentarily dealt with knowledge level and health behaviours of cardiac patients [9–11, 13, 14]. Specifically, such studies are lacking in patients after CABG.

The aim of our study was to determine medical knowledge level and health behaviours of patients with coronary artery disease who underwent surgical myocardial revascularization.

Material and methods

The study included 106 patients after CABG who underwent stationary rehabilitation in the Rehabilitation Unit at the Medinet Lower Siliesian Cardiac Disease Centre (Dolnośląskie Centrum Chorób Serca „Medinet") in Wrocław, Poland, from January till December 2012. The study was approved by the Bioethics Committee at the Medical University of Wrocław (approval No. 713/2011). The study was based on a highly standardized questionnaire developed by the authors. Descriptive statistics were used to analyze the collected data, and chi-square statistics was calculated to evaluate relations between pairs of nominal variables. Correspondence analysis was used to evaluate which variable categories were interrelated. $P < 0.05$ was considered statistically significant. Social and demographic characteristics of the study subjects are shown in Table 1.

Results

Medical knowledge level

One in four of the study subjects (25%) was not able to indicate any risk factor for coronary artery disease, 20% of the study subjects were able to indicate one risk factor, 16% indicated two risk factors, and 39% indicated three or more risk factors. The indicated risk factors included inappropriate diet (50 answers), smoking (36 answers), low physical activity (35 answers), exposure to stress (31 answers), excessive alcohol consumption (28 answers), elevated cholesterol level (5 answers), overweight/obesity (5 answers), and hypertension (3 answers; the total number of answers exceeds 106 as patients were allowed to give more than one answer).

All patients were asked to give normal values of blood pressure, cholesterol level, and glycaemia, and right answers were given by 75%, 33%, and 45% patients, respectively. Patients were also asked about the technique of blood pressure measurement and 89% reported they were familiar with it (Table 2).

Normal blood pressure values were known to 80% respondents with hypertension and 68% respondents without hypertension. Familiarity with blood pressure measurement technique was declared by 92% respondents with hypertension and 83% respondents without hypertension. Only 62% of respondents with hypertension were able to give their usual blood pressure values (Table 2). Normal blood pressure values were significantly more frequently known to subjects above 65 years of age ($p = 0.0068$), working part-time or retired ($p = 0.035$), and those with net household income per person in the range of 501–900 Polish zloty or above 1200 Polish zloty ($p = 0.0419$). Familiarity with blood pressure measurement technique was reported significantly more frequently by respondents who rated their economic status as moderate or high ($p = 0.0006$).

Table 1. Sociodemographic characteristics of the respondents (n = 106)

Sociodemographic characteristics of the respondents	n	%
Gender		
Men	79	75
Women	27	25
Age		
< 65 years	49	46
≥ 65 years	57	54
Education		
Primary	53	50
Secondary	35	33
Incomplete higher	7	7
Higher	11	10
Marital status		
Married	78	74
Informal relationship	1	1
Widowed, divorced, single	27	25
Number of children		
0	14	13
1	20	19
2	47	44
≥ 3	25	24
Professional status		
Full-time job	20	19
Part-time job	6	6
Social security benefit	9	8
Unemployed	6	6
Retired	65	61
Place of residence		
Rural	25	24
Town/small city (< 50,000 inhabitants)	34	32
Medium-sized city (50,000–10,000 inhabitants)	17	16
Large city (> 100,000 inhabitants)	30	28
Financial situation (net household income per person)		
< 500 PLN	4	4
501–900 PLN	27	26
901–1200 PLN	31	29
1201–1500 PLN	30	28
> 1500 PLN	9	9
No answer	5	4
Subjectively evaluated economic status		
High	57	54
Moderate	46	43
Low	3	3

Table 2. Knowledge of normal blood pressure values, blood pressure measurement technique, and normal values of blood cholesterol and glucose levels in various groups of patients with or without concomitant diseases

	n	%
Knowledge of normal blood pressure values		
Overall (n = 106)	80	75
Patients with hypertension (n = 65)	52	80
Patients without hypertension (n = 41)	28	68
Knowledge of blood pressure measurement technique		
Overall (n = 106)	94	89
Patients with hypertension (n = 65)	60	92
Patients without hypertension (n = 41)	34	83
Knowledge of normal blood cholesterol level values		
Overall (n = 106)	35	33
Patients with hyperlipidaemia (n = 50)	27	54
Patients without hyperlipidaemia (n = 56)	8	14
Knowledge of normal blood glucose level values		
Overall (n = 106)	48	45
Patients with diabetes (n = 35)	19	54
Patients without diabetes (n = 71)	29	41

Normal blood cholesterol level values were known to more than half (54%) of respondents with hypercholesterolaemia and 14% of respondents without hypercholesterolaemia, and 54% of subjects reporting hypercholesterolaemia knew their own blood cholesterol level (Table 2). Normal blood cholesterol level values were significantly more frequently known to inhabitants of medium-sized and large cities ($p = 0.0008$), those who rated their economic status as high ($p = 0.028$), and those with net household income per person above 1200 Polish zloty ($p = 0.0339$).

Normal blood glucose values were known by just over half (54%) of respondents with diabetes and 41% of respondents without diabetes.

One in three patients (33%, n = 35) knew components of a cardioprotective diet. The most common answers included large consumption of vegetables (16 answer), low-fat products (14 answers) and fruits (13 answers). Less frequent answers included large consumption of fish (5 answers), reduced salt intake (4 answers), and consumption of poultry (3 answers), fruit juices (2 answers), and wholemeal bread (2 answers; the total number of answers does not sum to 35 as patients were allowed to give more than one answer). Components of a cardioprotective diet

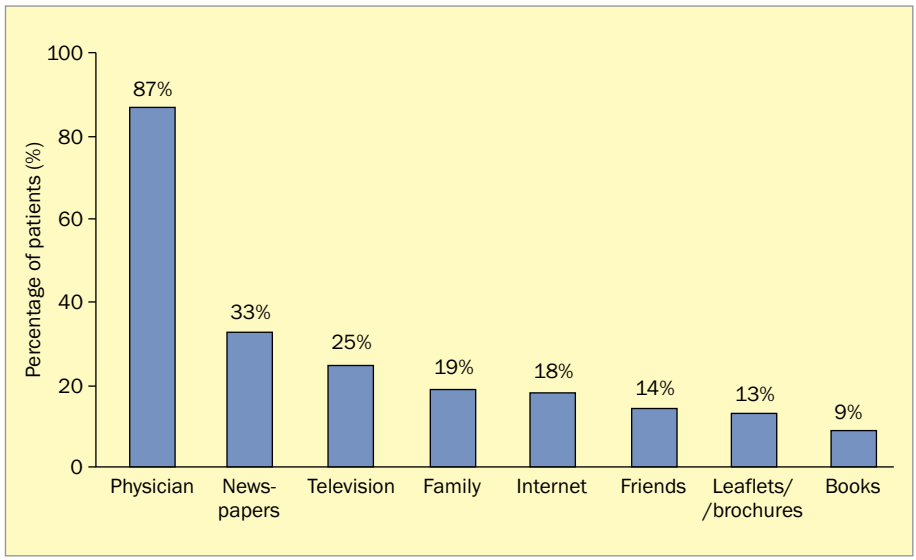

Figure 1. Sources of respondent knowledge about coronary artery disease (percentage of patients indicating a given answer; percentages do not sum to 100%, as patients were allowed to give more than one answer)

were significantly more frequently known by inhabitants of medium-sized cities (p = 0.0384), those who rated their economic status as high (p = 0.028), and those with net household income per person above 1200 Polish zloty (p = 0.0002).

When asked about sources of their knowledge about the disease, the patients most commonly (87%) indicated a physician as a source of information (Figure 1).

Healthy behaviours

A large majority of patients (76%) made no changes in their lifestyle since the diagnosis. Among the remaining respondents (24%, n = 25), the most common change was introduction of a healthy diet (11 answers), followed by increased physical activity (5 answers), avoidance of strenuous physical work (5 answers), reduction of stress (4 answers), smoking cessation (3 answers), and reduction in body weight (1 answer; the total number of answers does not sum to 25 as patients were allowed to give more than one answer). A large majority of respondents (81%, n = 86) expressed the need for lifestyle changes, and two thirds felt they needed major changes. Lifestyle changes after the diagnosis of coronary artery disease were made significantly more frequently by subjects who were convinced they needed long-term treatment and rehabilitation (p = 0.0093).

A large majority of respondents (84%, n = 89) declared they measured blood pressure but only 60% of them (n = 53) made them regularly (at least 3 times a week). Regular blood pressure measurements were made significantly more frequently by patients who rated their economic status as high (p = 0.0021). Of note, blood pressure was measured by nearly all (60 of 65) patients with the diagnosis of hypertension, compared to more than half of those (n = 41) without hypertension.

A large majority of respondents (76%) declared controlling their body weight, while 19% did not do it (5% of respondents gave no answer). Nearly half of patients (40%, n = 42) declared adherence to specific diets including low-fat (18 answers), with increased consumption of lean meats and fish (10 answers), with increased consumption of vegetables and fruits (8 answers), diabetic (7 answers), and light diet (4 answers; the total number of answers does not sum to 42 as patients were allowed to give more than one answer). Adherence to any dietary recommendations was reported significantly more frequently by subjects with secondary education (p = 0.0203).

One in three patients (33%, n = 35) declared regular alcohol consumption, 40% consumed alcohol occasionally (less than once a month), and 27% did not drink alcohol. Alcohol consumption was significantly more frequently reported by men (p = 0.0198), subjects who rated their economic status as low (p = 0.0418), and those who considered their health condition severe but not life-threatening (p = 0.0150).

At the time of evaluation, all patients declared abstinence from smoking but 69% of patients (n = 73, including 84% of men) reported history of smoking. Mean duration of exposure to smoking was 25 years, and the mean time since smoking cessation was 13 years. History of smoking was reported significantly more frequently by men (p = 0.0015). The most commonly indicated reasons for quitting smoking were heart disease (21 answers) and perceived harm from

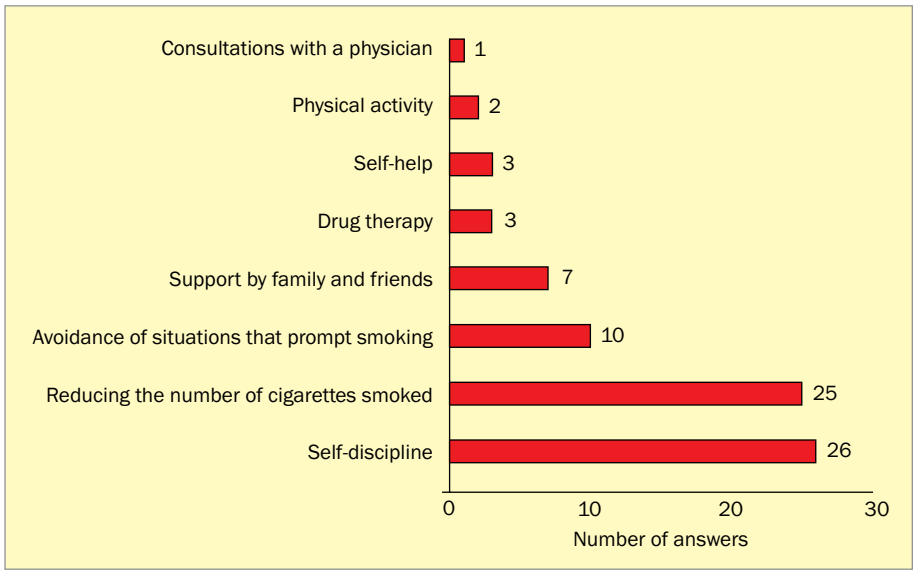

Figure 2. Methods to quit smoking used by the respondents (number of answers; answers do not sum to 73, as patients were allowed to give more than one answer)

smoking (20 answers). Methods used by the patients to quit smoking are shown in Figure 2.

Respondents were also asked whether it happened that they forgot to take their medications since the diagnosis. A positive answer was given by 61% of patients (n = 65), including 39 patients who indicated that this happened on rare occasions, 20 patients who answered it happened sometimes, and 6 patients who answered it happened frequently. Regular intake of medications was reported significantly more frequently by younger patients ($p = 0.0003$), those who considered their health condition severe ($p = 0.0068$), and those who received support ($p = 0.0452$), while retired patients were significantly less likely to take their medications regularly ($p = 0.0083$).

Nearly half of patients (40%, n = 42) reported they needed somebody to remind them about the need to take medications (rarely — 19 answers, sometimes — 11 answers, frequently — 12 answers). Dosage self-modification without previous consultation with a physician was reported by 16% of respondents. Adherence to the recommended dosage was reported significantly more frequently by patients who rated their economic status as moderate or high ($p = 0.0245$).

Discussion

Due to an increasing number of survivors of an acute coronary syndrome, there is a need for a complex cardiac rehabilitation program, encompassing all aspects of secondary prevention. Maintaining graft patency and preventing development of new lesions in other vessels requires strict patient adherence to treatment recommendations. A prerequisite for the latter is appropriate patient education regarding the disease itself and further management following rehabilitation [1]. The aim of the present study was to evaluate the level of medical knowledge and health behaviours of patients after CABG with a view to develop educational workshops for this patient group.

Considering patient characteristics in regard to gender, age, and concomitant diseases, although our sample was relatively small, it was comparable to other populations of patients with coronary artery disease in studies both in Poland and abroad. A higher number of men compared to women in our study group may be explained by a generally higher incidence of coronary artery disease among men. Similar proportions of patients of both genders were reported also in other larger studies [15–17]. Age structure of our study group was also in agreement with nationwide data, as 60% of patients with myocardial infarction in the 2003–2005 Polish Registry of Acute Coronary Syndromes were above 65 years of age [1]. Prevalence of hypertension, hypercholesterolemia, and diabetes in our study group was also only slightly higher compared to Polish patients with acute coronary syndromes in the EUROASPIRE III survey, of whom 49% had hypertension, 42% had dyslipidaemia, and 30% had diabetes [11].

Medical knowledge is one of the most important variables affecting attitudes and behaviours related to health and disease. Knowledge regarding disease specifics, its risk factors and lifestyle components affecting disease development is a starting point for any attempts to introduce health-oriented behaviours and attitudes.

Our data indicate that the level of medical knowledge among the studied patients was low: one in four respon-

dents was not able to name any risk factor for coronary artery disease, and only one in three (33%) knew components of a cardioprotective diet. Patient knowledge regarding normal blood pressure, cholesterol level and glycaemia was also insufficient, as wrong answers to these questions were given by 25%, 67%, and 55% respondents. Patients diagnosed with concomitant diseases including hypertension, hyperlipidaemia and diabetes were more likely to know normal blood pressure values and measurement techniques, normal cholesterol levels, and normal blood glucose levels, respectively, compared to patients without these conditions. In a study by Cheng et al. who evaluated patients hospitalized due to coronary artery disease, 66% of subjects were able to give their own blood pressure values [18], and 43% knew their blood cholesterol level [19].

Our analysis also revealed numerous unfavourable health-related behaviours in the study group. Although two thirds of the respondents declared controlling their body weight, only 40% adhered to a specific diet. As many as 1/3 of patients regularly consumed alcohol, and 61% of patients admitted they forgot to take medications regularly. Although 84% declared measuring blood pressure, only 60% did it systematically. Similar findings were reported by Mizia-Stec et al. [9]. One very positive aspect is the fact that all patients declared abstinence from smoking. Among Polish participants in the EUROASPIRE III survey (including 20% of patients after CABG) who were evaluated at about 12 months after a cardiac event, 88% of those who smoked quitted smoking, 64% reported weight reduction, and 97% declared adherence to a healthy diet [11].

Of note, a large majority of respondents (81%) felt they needed lifestyle changes, and two thirds of them felt they needed major changes.

Multiple sociomedical studies showed that the worse patient economical situation and lower education level, the poorer medical knowledge and more frequent unfavourable health-related behaviours [20, 21], leading to higher morbidity and mortality. These associations were also confirmed for coronary artery disease [18, 19] and in patients after CABG [22–24]. Our findings are also consistent with these results, as analysis of our data showed an effect:

— of the patient income on the level of medical knowledge (including knowledge of normal blood pressure and cholesterol level values, and components of a cardioprotective diet);
— of the patient economical situation on both the level of medical knowledge (including knowledge of blood pressure measurement techniques, normal cholesterol level values, and components of a cardioprotective diet) and healthy behaviours (alcohol consumption and systematic medication intake);
— of the patient education on healthy behaviours (adherence to dietary recommendations).

The place of residence is another factor affecting inequalities related to health and disease [20]. Inhabiting small cities/towns predisposes to poor medical knowledge and inappropriate health-related behaviours [25]. Such a relationship between the place of residence and the level of medical knowledge (knowledge of normal cholesterol level values and components of a cardioprotective diet) was also confirmed in our study.

Finally, it should be noted that patients mostly indicated a physician as a source of information related to health and disease (87%), thus highlighting a particular importance of the patient-physician relationship and the need to improve patient-physician communication.

Poor medical knowledge and inappropriate health-related behaviours, along with a large prevalence of important somatic risk factors (hypertension, dyslipidaemia, diabetes), are important problems in many patients with coronary artery disease, which justifies educational efforts in this patient population. Treatment outcomes are importantly related to adoption of a healthy lifestyle, and an increasing number of patients after CABG indicates a need for a complex cardiac rehabilitation program, encompassing all aspects of secondary prevention [1, 5, 7, 8].

Conclusions

Insufficient level of medical knowledge and inappropriate health behaviours of the studied patients after CABG indicate a need for coordinated, multidimensional health promotion efforts.

Social inequalities in healthcare should be addressed.

Further sociomedical analyses regarding these issues should be undertaken in larger patient populations.

Conflict(s) of interest

None declared.

Streszczenie

Wstęp. Pomostowanie aortalno-wieńcowe (CABG) jest jedną z metod rewaskularyzacji mięśnia sercowego. Chorzy po tym zabiegu wymagają kompleksowej opieki oraz rehabilitacji. Celem pracy było poznanie poziomu wiedzy medycznej oraz zachowań zdrowotnych pacjentów z chorobą niedokrwienną serca po przebytym zabiegu kardiochirurgicznym. Dane z pracy posłużą do opracowania warsztatów edukacyjnych dla tej grupy pacjentów.

Materiał i metody. Badaniem objęto 106 pacjentów po zabiegu CABG hospitalizowanych na oddziale rehabilitacji kardiologicznej. Podstawą badania był autorski kwestionariusz obejmujący wywiad o wysokim poziomie standaryzacji. W analizie danych posłużono się statystykami opisowymi, a w celu badania zależności obliczano wartość statystyki χ^2 oraz zastosowano analizę korespondencji (za poziom istotności uznano < 0,05).

Wyniki. Badani pacjenci odznaczają się małą wiedzą medyczną (1/4 nie zna ani jednego czynnika ryzyka choroby niedokrwiennej serca; zaledwie 33% zna zasady diety kardioprotekcyjnej; 25%, 67% i 55% nie zna prawidłowych wartości, odpowiednio, ciśnienia tętniczego, cholesterolemii i glikemii) oraz przejawiają niekorzystne zachowania zdrowotne (76% nie dokonała większych zmian w dotychczas prowadzonym stylu życia od momentu postawienia diagnozy; zaledwie 40% realizuje zalecenia dietetyczne; 61% zapomina o regularnym przyjmowaniu leków; tylko 60% regularnie mierzy ciśnienie tętnicze). Analiza danych potwierdziła, że małej wiedzy medycznej oraz niewłaściwym zachowaniom zdrowotnym sprzyjają gorsza sytuacja ekonomiczna, niskie wykształcenie badanych oraz zamieszkiwanie w małych miejscowościach.

Wnioski. Ze względu na niewystarczający poziom wiedzy medycznej oraz niewłaściwie zachowania zdrowotne pacjentów po CABG niezbędne jest poszerzenie programu rehabilitacji kardiologicznej o edukację zdrowotną tej grupy pacjentów ze szczególnym zwróceniem uwagi na kwestię nierówności w zdrowiu i chorobie.

Słowa kluczowe: pomostowanie aortalno-wieńcowe, rehabilitacja kardiologiczna, choroba niedokrwienna serca, wiedza medyczna, zachowania zdrowotne

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Komentarz

dr hab. n. med. Łukasz Krzych
Oddział Kliniczny Kardioanestezji i Intensywnej Terapii
Śląskiego Centrum Chorób Serca w Zabrzu
Sekretarz Zarządu „Klubu 30” PTK

Praca zatytułowana „Poziom wiedzy medycznej oraz zachowania zdrowotne pacjentów po zabiegu pomostowania aortalno-wieńcowego (CABG)” Małgorzaty Synowiec-Piłat, Michała Jędrzejka i Joanna Sarbinowskiej w bardzo prosty, ale przejrzysty sposób unaocznia skalę problemu, z którym kardiologia prewencyjna boryka się od lat. Wskazują już na to dane z badania Pol-MONICA [1], zweryfikowane w projekcie WOBASZ [2].

W tej specyficznej grupie pacjentów, bo już z zaawansowaną chorobą wieńcową, wymagającą interwencji chirurgicznej, 1/4 badanych nie znała ani jednego (!) czynnika ryzyka choroby niedokrwiennej serca, a 76% osób nie dokonało większych (czytaj: radykalnych) zmian w dotychczasowym siedzącym trybie życia. Wyniki badania są osobliwe, zważywszy na tyle lat trwania programu POLKARD, którego celem stała się identyfikacja zagrożeń zdrowotnych i wdrażanie działań ukierunkowanych na zmniejszenie zachorowalności na choroby układu krążenia i umieralności z ich powodu [3].

Martwi mnie, że mimo tylu akcji medialnych pacjenci wciąż nie wiedzą, jakie są: prawidłowa wartość ciśnienia tętniczego (także osoby chorujące na nadciśnienie), wartość glikemii (dotyczy to prawie połowy chorujących na cukrzycę!) czy, wreszcie, stężenie cholesterolu (dramatyczny wskaźnik wśród osób bez hipercholesterolemii). Pociesza natomiast wynik wskazujący, że pacjenci odczuwali potrzebę zmian w dotychczasowym stylu życia. Jednocześnie należy sobie zadać szczere pytanie, ilu z nich tak naprawdę będzie na tyle silnych, by sprostać temu wyzwaniu. Uważa się, że przeciętnie połowa chorych nie wie o istniejącym obciążeniu poszczególnymi czynnikami ryzyka sercowo-naczyniowego, a z pozostałej („świadomej”) grupy połowa nie działa aktywnie, by ryzyko to kontrolować (*vide*: dyslipidemie, nadciśnienie tętnicze). Prezentowane doniesienie powinno być więc przyczynkiem do dalszych badań i weryfikacji, czy deklaracje nie były zwykłym *wishful thinking*... Stanowczo to sugeruję!

Co zatem wynika z prezentowanego artykułu? Przesłanie jest proste: jeśli nic się nie zmieni, to ci chorzy poniosą katastrofalne konsekwencje swojej niewiedzy — z progresją miażdżycy i okluzją pomostów włącznie. Ponieważ społeczeństwo nie jest świadome, że wszystkie działania z zakresu ochrony zdrowia (diagnostyka, prewencja, terapia itd.) są ukierunkowane przede wszystkim na obniżenie ryzyka ich zgonu (w tym przedwczesnego), to może warto pokazać, że równie dotkliwe będzie ograniczenie jakości (komfortu) ich życia? Choć jakość życia jest tylko „miękkim” punktem końcowym w wielu badaniach, to jednak jest parametrem „bezpośrednio” odczuwalnym w codziennym funkcjonowaniu i bardzo świadomie pojmowanym przez chorych. To tylko dywagacje, ale są one konieczne, aby nadać kształt dalszym interwencjom, o których wspominają sami Autorzy.

Czytając artykuł, zauważyłem jedno ograniczenie wnioskowania — nie wzięto pod uwagę czasu trwania choroby niedokrwiennej serca. Jeśli był to incydent *de novo*, przy którym stwierdzono chorobę wielonaczyniową i pacjenta kierowano bezpośrednio na rewaskularyzację, to poczucie choroby, poziom wiedzy i znajomość zachowań wpływających

na zdrowie były odmienne od tych obserwowanych u osób z wieloletnim wywiadem chorobowym. Jednak wierzę, że to marginalny odsetek pacjentów, dlatego pojawia się kolejna wątpliwość — gdzie leży błąd? Czy winni są lekarze, którzy prowadzili tych chorych? Czy źle działa system? Trudne i niepolityczne pytanie... Z artykułu wiemy, że to właśnie na lekarzu ma spoczywać obowiązek edukacji prozdrowotnej, gdyż chorzy z tego „źródła" czerpią wiedzę. Zanim więc zaczniemy odczuwać zadowolenie z posiadania doskonałego systemu, w którym prawdziwa kardiogrupa będzie obejmować dietetyka, pielęgniarkę środowiskową, fizjoterapeutę i edukatorów zdrowotnych, trzeba myśleć o zachęcaniu lekarzy do niesienia swoistego kaganka oświaty.

Komentarz może nie powinien generować więcej pytań niż opinii, ale przedstawiona mi do oceny praca to doskonałe studium przypadku kompletnej bezradności, z którą spotykamy się w codziennej praktyce.

Piśmiennictwo

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