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ARTYKUŁ ORYGINALNY / *ORIGINAL ARTICLE*

Age, sex, and secondary prevention of ischaemic heart disease in everyday practice

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Abstract

Background: Many researchers have studied age- and sex-related differences in the management of patients with coronary artery disease. However, the results are inconsistent.

Aim: To assess sex- and age-related bias in the secondary prevention in patients hospitalised due to ischaemic heart disease.

Methods: Five hospitals with departments of cardiology serving a city and surrounding districts in southern Poland participated in the study. Consecutive patients hospitalised from 1 April 2005 to 31 July 2006 due to acute coronary syndrome or for a myocardial revascularisation procedure and aged ≤ 80 years were recruited and interviewed 6–18 months after hospitalisation.

Results: The hospital records of 640 patients were reviewed and 513 (80.2%) patients participated in the follow-up interview. Women were older and less educated than their male counterparts. Sex was not independently associated with the control of major risk factors in the post-discharge period, whereas age was related to a higher probability of having high blood pressure and a lower chance of smoking. Multivariate analysis showed that females were prescribed calcium antagonists (odds ratio [OR] 2.13; 95% confidence intervals [CI] 1.34–3.39) and diuretics (OR 1.52; 95% CI 1.00–2.31) more often than males. Age was independently related to the prescription rate of diuretics (≥ 70 years vs. < 60 years; OR 1.61; 95% CI 1.19–2.20). The prescription rate of antiplatelets, beta-blockers, angiotensin converting enzyme-inhibitors/sartans, lipid-lowering drugs, and anticoagulants was not related to age or sex.

Conclusions: We found no major sex-related difference in the frequency of achieving recommended goals in secondary prevention, whereas age was related to a lower prevalence of smoking and a higher probability of having high blood pressure in subjects after hospitalisation for coronary artery disease.

Key words: coronary artery disease, risk factors, secondary prevention, age, sex

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INTRODUCTION

Coronary artery disease (CAD) is the most common single cause of death in developed countries. According to European Society of Cardiology guidelines, preventive interventions aimed at patients with cardiovascular disease have been ranked as the highest priority [1].

Numerous studies have analysed the different management practices in men and women with acute coronary syn-

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dromes [2–7]. Recently, several studies concerning sex-related differences in CAD management have been published [8–12]. Some [2–4, 9], but not all [5, 10, 11], of these studies showed that women are examined and treated less aggressively than men. Moreover, some analyses have indicated that the prognosis of women with ischaemic heart disease (IHD) is worse compared to their male counterparts [3, 4, 9]. However, other investigators have found no gender-related differences in cardiovascular risk in patients with CAD [5, 8, 10, 13–15]. It has also been suggested that differences in mortality, although present in univariate analysis, disappear after multiple adjustments [6, 7, 16–18]. Several analyses have shown an even higher risk in men [2, 19]. It has also been suggested that women were less likely than men to accept a physician's recommendation for any intervention [20].

Age is one of the most important factors determining the prognosis of patients with CAD [1, 15, 18]. Nevertheless, it has been shown that older people are often treated less aggressively [21–23]. Narrowing the gap between recommended therapy and actual practice in this population remains vitally important, because the population of older adults is rapidly growing and because cardiovascular disease is the leading cause of morbidity and mortality in the elderly.

The main goal of the Cracovian Program for Secondary Prevention of Ischaemic Heart Disease was to assess and improve the quality of clinical care in the secondary prevention of CAD in Krakow [24–26]. Subsequently, the same hospitals took part in the European Action on Secondary Prevention through Intervention to Reduce Events (EUROASPIRE) surveys which were conducted under the auspices of the European Society of Cardiology (ESC). The surveys showed that there was considerable potential for further improvement in secondary prevention in European countries [27], including Polish hospitals [25, 26].

We used data from hospitals who had participated in the Cracovian Program for Secondary Prevention of Ischaemic Heart Disease and the EUROASPIRE surveys to estimate sex- and age-related differences in the secondary prevention in patients hospitalised due to IHD in Krakow [24–26].

METHODS

The groups analysed in the study and the methods used in the Cracovian Program for Secondary Prevention of Ischaemic Heart Disease have been described in earlier reports [24–26]. A brief description is given below.

Five hospitals with departments of cardiology serving Krakow (a city in the south Poland) and surrounding districts participated in the study. The total population of this area was around 1,200,000. In each department, we reviewed the medical records of consecutive patients aged ≤ 80 years and hospitalised between 1 April 2005 and 31 July 2006 with the following discharge diagnosis or procedures:

— acute myocardial infarction (first or recurrent, no prior percutaneous coronary intervention [PCI] or coronary artery bypass grafting [CABG])
— unstable angina (first or recurrent, no prior PCI or CABG)
— elective or emergency PCI (first, no prior CABG)
— elective or emergency coronary artery bypass surgery (first).

Patients were identified retrospectively. We did not include data of patients undergoing CABG and valve surgery during the same procedure. Those who died during their in-hospital stay were excluded from the analysis. If a patient was hospitalised more than once during the study period, only the first hospitalisation was regarded as an index event. All medical records were reviewed by trained reviewers using a standardised data collection form that included information about demographics, personal cardiac history, coronary risk factors, and medications.

The study participants were invited to take part in a follow-up examination 6–18 months after discharge. A standard questionnaire was used to obtain data on the patient's demographic characteristics, personal history of IHD, smoking status, blood pressure, fasting glucose, plasma lipids, and prescribed medications. The patient's height and weight were measured in a standing position without shoes and heavy outer garments using standard scales with a vertical ruler. The patient's body mass index (BMI) was calculated according to the following formula: BMI = weight [kg]/(height [mL])^2. The patient's blood pressure was measured twice from the upper right arm in a sitting position after at least 5 min of rest. For plasma lipid and glucose measurements, a fasting venous blood sample was taken between 7.30 and 8.30 a.m. We used for the present report the results of analyses conducted no later than 4 h after the blood collection. The analyses were carried out using enzymatic automated methods. The study protocol was approved by the Bioethics Committee of the Institution.

Statistical analysis

The categorical variables are reported as percentages and continuous variables as means ± standard deviation. The Pearson χ^2 test was applied to all categorical variables. Normally distributed continuous variables were compared using the Student's t test, whereas variables without normal distributions were compared using the Mann-Whitney U test. Categorical variables were compared using the χ^2 test (or Wilcoxon test when appropriate). The correlations were evaluated using the Spearman rank correlation. A two-tailed p value of less than 0.05 was regarded as indicating statistical significance. Multivariate logistic analysis was used to assess the independent influence of age and sex on the probability of a patient being prescribed a cardiovascular drug, as well as the probability of the patient having a risk factor controlled. All variables from Table 1 were included in the multivariate model.

Table 1. Characteristics of the patients participating in the study

	Women (n = 185)	Men (n = 455)	P	Total (n = 640)
Age [years]	62.4 ± 8.9	60.5 ± 8.9	< 0.05	61.1 ± 8.9
Category:			< 0.05	
Myocardial infarction	30.3%	21.8%		24.2%
Unstable angina	33.5%	25.1%		27.5%
PCI	21.1%	32.5%		29.2%
CABG	15.1%	20.7%		19.1%
Type of hospital:			< 0.05	
Teaching	32.4%	48.3%		43.6%
District	67.6%	51.9%		56.4%
Mean time between index hospitalisation and follow-up examination [years]*	1.1 ± 0.3	1.1 ± 0.4	NS	1.1 ± 0.4
Mean duration of education [years]*	10.8 ± 3.5	12.1 ± 3.4	< 0.05	11.7 ± 3.5
Outpatient setting*:			NS	
Hospital outpatient clinic	53.3%	51.8%		52.2%
General practitioner	31.8%	34.3%		33.5%
Private cardiologist	11.7%	10.9%		11.1%
No physician	3.3%	3.1%		3.1%
Professionally active*:			< 0.05	
Yes	17.7%	37.3%		31.4%
No	82.3%	62.7%		68.6%

*Available only for those who attended the follow-up examination (154 women and 359 men); PCI — percutaneous coronary intervention; CABG — coronary artery bypass grafting

RESULTS

The hospital records of 640 patients were reviewed. The clinical characteristics of the study population are presented in Table 1. Two hundred and seventy two (42.5%) patients were < 60 years of age, 243 (38.0%) were 60–70 years, and 125 (19.5%) were ≥ 70 years. The patients qualified for CABG were significantly older than the other groups (CABG 64.0 ± 8.0 years; PCI 59.6 ± 9.2 years; myocardial infarction 60.6 ± 9.2 years; unstable angina 61.0 ± 8.6). Patients hospitalised in university and community hospital departments were of a similar age (60.9 ± 9.1 vs. 61.2 ± 8.8 years, p = NS). The patient's age correlated with the patient's duration of education (r = –0.17, p < 0.05), but not with the mean time between the index hospitalisation and the follow-up examination (r = –0.05, p = NS). Patients who were active professionally at the time of the follow-up examination were younger compared to the rest of the study group (55.4 ± 7.4 vs. 63.9 ± 8.3 years, p < 0.0001). No correlation was found between the outpatient setting and age (hospital outpatient clinic 60.8 ± 9.0 years, general practitioner 62.0 ± 9.3 years, private cardiologist 60.8 ± 7.9 years, no regular health check-up 62.4 ± 7.9 years; all comparisons were statistically not significant).

Univariate analysis showed that women were prescribed calcium antagonists and diuretics at discharge from hospital more frequently than men (Table 2). After multivariate adjustments, sex turned out to be independently related to the prescription rate of calcium antagonists (Table 3). Age was related to the prescription rates of calcium antagonists, diuretics and antidiabetic drugs (Table 2). Multivariate analysis confirmed that an age of 60–70 years was related to a higher probability of being prescribed calcium antagonists, diuretics and antidiabetic drugs compared to younger subjects (Table 3). Older patients (age ≥ 70 years) also had a higher probability of being prescribed a diuretic. On the other hand, in older patients, the probability of being prescribed a beta-blocker was lower. The prescription rate of antiplatelets, angiotensin converting enzyme-inhibitors (ACE)-inhibitors/sartans, lipid-lowering drugs, and anticoagulants was not related to age or sex.

Out of a total of 640 recruited patients, 513 (80.2%) participated in the follow-up examination (1.1 ± 0.4 years after discharge on average). The participation rate did not differ significantly between men and women (79.9% vs. 83.2%, p = NS) nor between age groups (79.4% vs. 79.0% vs. 84.0% for patients at age < 60 years, 60–70 years, and ≥ 70 years, respectively, p = NS). The time from the patient's discharge to the follow-up examination did not differ significantly between either sex or age groups.

At the follow-up examination, women and older participants had blood pressure levels that were below

Table 2. Prescription rates at discharge by age and sex

	AP	BB	ACEI/S	CA	D	LLD	AC	AD
Men	98.0%	89.7%	88.6%	17.4%	32.8%	96.0%	4.2%	21.8%
Women	96.8%	89.7%	88.6%	31.9%	43.2%	94.6%	4.3%	23.8%
p	NS	NS	NS	< 0.0001	< 0.05	NS	NS	NS
Age [years]								
< 60	97.4%	92.7%	87.5%	14.7%	26.1%	96.3%	3.7%	16.9%
60–70	97.1%	88.5%	89.3%	28.0%	42.0%	95.1%	4.5%	26.3%
≥ 70	99.2%	85.6%	89.6%	24.0%	44.8%	95.2%	4.8%	26.4%
p	NS	NS	NS	< 0.0001	< 0.0001	NS	NS	< 0.05
Total	97.7	89.7	88.6	21.6	35.8	95.6	4.2	22.3

AP — antiplatelets; BB — beta-blockers; ACEI/S — angiotensin converting enzyme inhibitors/sartans; CA — calcium antagonists; D — diuretics; LLD — lipid lowering drugs; AC — anticoagulants; AD — antidiabetic agents

Table 3. Odds ratios (95% confidence intervals) of being prescribed a drug at discharge by age and sex

	AP	BB	ACEI/S	CA	D	LLD	AC	AD
Sex*:								
Men	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Women	0.67 (0.23–1.97)	1.07 (0.60–1.90)	0.90 (0.52–1.57)	2.22 (1.48–3.35)	1.37 (0.95–1.97)	0.76 (0.34–1.72)	0.97 (0.41–2.29)	1.01 (0.67–1.53)
Age [years]**:								
< 60	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
60–70	1.01 (0.31–3.24)	0.53 (0.28–0.99)	1.19 (0.68–2.08)	2.14 (1.36–3.38)	1.93 (1.31–2.84)	0.78 (0.32–1.89)	1.31 (0.53–3.19)	1.75 (1.12–2.72)
≥ 70	1.80 (0.62–5.25)	0.66 (0.47–0.94)	1.15 (0.81–1.63)	1.30 (0.98–1.71)	1.51 (1.20–1.90)	0.99 (0.57–1.72)	1.13 (0.66–1.94)	1.29 (0.99–1.68)

*adjusted for age, diagnostic category, and type of hospital; **adjusted for sex, diagnostic category, and type of hospital; abbreviations as in Table 2

Table 4. Risk factor control rates 6–18 months after hospitalisation by age and sex

	Non-smoking	BP < 140/90 mm Hg	LDL-C < 2.5 mmol/L	FG < 7.0 mmol/L	BMI < 30 kg/m^2
Men	78.3%	54.8%	61.8%	85.5%	68.3%
Women	85.1%	44.7%	56.7%	90.7%	64.1%
p	NS	< 0.05	NS	NS	NS
Age [years]:					
< 60	67.1%	60.7%	57.7%	87.1%	62.7%
60–70	86.5%	46.6%	61.1%	85.8%	70.7%
≥ 70	96.2%	43.3%	64.1%	89.3%	68.9%
p	< 0.0001	< 0.01	NS	NS	NS
Total	80.3	51.8	60.3	87.2	67.0

BP — blood pressure; LDL-C — low density lipoprotein; FG — fasting glucose; BMI — body mass index

140/90 mm Hg (Table 4) less frequently. After multivariate adjustments, age remained significantly related to the frequency of high blood pressure (Table 5). Sex was not independently related to the control of any major risk factor. The prescription rates 6–18 months after hospitalisation according to sex and age groups are presented in Table 6. Females were prescribed diuretics and calcium antagonists more frequently in both the univariate and multivariate analyses (Table 7). Age was independently related to the prescription rate of diuretics. The prescription rate of antiplatelets, beta-blockers, ACE-inhibitors/sartans, lipid-lowering drugs, and anticoagulants was not related to age or sex.

Table 5. Odds ratios (95% confidence intervals) of risk factor control 6–18 months after hospitalisation by age and sex

	Non-smoking	BP < 140/90 mm Hg	LDL-C < 2.5 mmol/L	FG < 7.0 mmol/L	BMI < 30 kg/m²
Sex*:					
Men	1.00	1.00	1.00	1.00	1.00
Women	1.41 (0.80–2.48)	0.78 (0.52–1.17)	0.84 (0.56–1.27)	1.67 (0.87–3.20)	0.86 (0.56–1.31)
Age [years]**					
< 60	1.00	1.00	1.00	1.00	1.00
60–70	3.03 (1.77–5.21)	0.61 (0.40–0.93)	1.09 (0.71–1.66)	0.88 (0.48–1.61)	1.53 (0.98–2.38)
≥ 70	3.88 (2.25–6.68)	0.76 (0.59–0.98)	1.21 (0.93–1.58)	1.22 (0.81–1.83)	1.21 (0.92–1.58)

*adjusted for age, years of education, professional activity, diagnostic category, type of hospital, outpatient setting, and time between index hospitalisation and follow-up; **adjusted for sex, years of education, professional activity, diagnostic category, type of hospital, outpatient setting, and time between index hospitalisation and follow-up; abbreviations as in Table 4

Table 6. Prescription rates 6–18 months after hospitalisation by age and sex

	AP	BB	ACEI/S	CA	D	LLD	AC	AD
Men	90.7%	89.1%	79.2%	17.7%	30.6%	87.1%	7.3%	21.6%
Women	88.2%	82.5%	78.6%	32.5%	43.5%	81.7%	4.6%	22.1%
p	NS	< 0.05	NS	< 0.001	< 0.01	NS	NS	NS
Age [years]:								
< 60	89.7%	89.8%	79.0%	17.7%	25.7%	86.9%	4.7%	17.8%
60–70	90.5%	84.3%	80.1%	25.1%	38.7%	88.4%	8.4%	20.4%
≥ 70	89.5%	86.7%	77.4%	25.7%	44.8%	77.1%	6.7%	32.4%
p	NS	NS	NS	NS	< 0.01	< 0.05	NS	< 0.05
Total	90.0	87.1	79.0	22.1	34.5	85.5	6.5	21.8

Abbreviations as in Table 2

Table 7. Odds ratios (95% confidence intervals) of being prescribed a drug 6–18 months after hospitalisation by age and sex

	AP	BB	ACEI/S	CA	D	LLD	AC	AD
Sex*:								
Men	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Women	0.77 (0.40–1.46)	0.64 (0.36–1.14)	1.04 (0.64–1.71)	2.13 (1.34–3.39)	1.52 (1.00–2.31)	0.71 (0.40–1.23)	0.51 (0.21–1.24)	0.97 (0.59–1.59)
Age [years]**:								
< 60	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
60–70	0.98 (0.62–1.54)	0.97 (0.55–1.69)	1.19 (0.68–2.08)	1.64 (0.95–2.86)	1.86 (1.15–3.01)	1.10 (0.55–2.19)	2.26 (0.89–5.71)	1.19 (0.67–2.10)
≥ 70	1.10 (0.52–2.31)	0.85 (0.59–1.22)	1.15 (0.81–1.63)	1.27 (0.90–1.80)	1.61 (1.19–2.20)	0.62 (0.42–1.92)	1.14 (0.64–2.02)	1.39 (1.00–1.91)

*adjusted for age, years of education, professional activity, diagnostic category, type of hospital, outpatient setting, and time between index hospitalisation and follow-up; **adjusted for sex, years of education, professional activity, diagnostic category, type of hospital, outpatient setting, and time between index hospitalisation and follow-up; abbreviations as in Table 2

Finally, we compared the prescription rates at discharge and at the time of the follow-up interview. The prescription rate of antiplatelets, ACE inhibitors/sartans and lipid lowering drugs decreased (all $p < 0.001$), whereas the prescription rate of beta-blockers ($p = 0.08$), calcium antagonists ($p = 0.72$), diuretics ($p = 0.74$), anticoagulants ($p = 0.074$), and antidiabetic drugs ($p = 0.69$) did not change significantly.

DISCUSSION

Recruiting coronary patients hospitalised in all city hospitals with departments of cardiology, we were able to show no major sex- or age-related bias in the quality of medical care in secondary prevention of CAD. We used goals from the ESC 2003 guidelines [28] as cut-off values because we recruited subjects hospitalised in 2005–2006, whereas the follow-up interviews took place in 2006 and from January to March 2007 (thus prior to the publication of the ESC 2007 guidelines).

It is widely believed that women are on average ten years older at the time of developing cardiovascular disease. In our study population, the mean age of women was higher only by two years compared to men. Several factors could reduce this difference. Firstly, we recruited subjects after a first coronary event as well as subjects who had experienced a recurrent event. It can be assumed that a sex-based difference in age is much smaller in patients with a long history of CAD. Secondly, we excluded all patients aged over 80. As the majority of CAD patients aged 80 years or more are females, this criterion could indeed reduce the difference in the mean age between sexes. Thirdly, due to an increased number of co-morbidities, older patients are less likely to undergo CABG. Indeed, relatively fewer women were in the CABG group. Fourthly, the difference in the mean age at the time of the first manifestation of cardiovascular disease is now decreasing, as has been shown recently [29].

The common belief that women are underdiagnosed and undertreated may be due to atypical early symptoms, often ambiguous diagnostic test results, and the widespread belief that cardiovascular disease occurs more frequently in men [30, 31]. The results of the present study suggest that the sex-based bias in secondary prevention is not a major problem in departments of cardiology in the city where the study was done. We found no significant difference in the prescription rates of cardiovascular medications between women and men, with the exception of diuretics and calcium antagonists, which were prescribed more often to women. Indeed, the most interesting finding of the present analysis is that women with CAD were prescribed certain cardiovascular drugs more frequently than their male counterparts. This may be due to a higher proportion of women with severe hypertension. It is widely accepted that older females have hypertension more frequently, and that the course of hypertension is more serious in elderly females compared to males [32]. Unfortunately, we have no data on the number of patients with 1st, 2nd, or 3rd grade hypertension. In the past, numerous studies have been published indicating a somewhat lower probability of being prescribed cardiovascular drugs among women with IHD [2, 9, 33–35]. No major influence of sex was also reported [36, 37]. Recently, Dallongeville et al. [38] studied data from 22 European countries and showed results similar to ours on the prescription rates of calcium antagonists and diuretics in men and women. Our present results are in accordance with the data from the Cracovian Program for Secondary Prevention of Ischaemic Heart Disease which were obtained several years earlier [39].

Our results confirm that in recent decades there has been a significant improvement in the approach to secondary prevention of IHD in women. It seems that nowadays there is no significant sex-based difference in cardiovascular prevention. As hospitals from only one university city took part in the survey, the existence of a sex-based bias in secondary prevention in other regions of the country cannot be ruled out. It should also be stressed that control of the most important risk factors is insufficient in both men and women, and that the improvement in this area, if detectable, is very slow [24, 26, 40]. It is important to make further progress in the implementation of secondary prevention in everyday practice [41].

Previously published studies have indicated that the quality of medical care is related to the patients' age and that the prescription rates of cardioprotective drugs and that the control of risk factors is lower in aged subjects [21–23]. Our results show that in the city where the survey was carried out, age does not influence the quality of medical care in secondary prevention: rates of hyperglycaemia, high cholesterol level and obesity were similar across all age groups. On the other hand, age was related to the control of hypertension, but this can probably be explained by the increasing prevalence of hypertension with age as well as by more severe forms of hypertension and the difficulties of treating high blood pressure that are specific to elderly patients, rather than by a lower quality of medical care. Indeed, the prescription rates of diuretics were even higher in older participants compared to subjects below 60 years of age. This finding is consistent with the current guidelines [1].

We did not find any significant relation between age or sex and the prescription rate of antiplatelets, beta-blockers, drugs interfering with the renin–angiotensin system or lipid-lowering drugs. Indeed, our results suggest that the prescription rates of cardiovascular drugs with the biggest number of scientific proofs showing their beneficial effect on survival in CAD patients are not influenced by the patients' age or sex.

We found the control of hypercholesterolaemia to be much better compared to the high risk subgroup of the 3ST-POL study population [42]. However, important differences between the studies should be underlined. Śliż et al. [42] analysed ambulatory patients, whereas we recruited subjects hospitalised due to CAD. Indeed, the quality of the hypercholesterolaemia management during hospitalisation is the most important factor related to lipid management in the post-discharge period [43]. Moreover, Śliż et al. [42] defined high risk patients as those who have CAD, diabetes or SCORE ≥ 5, whereas we analysed only coronary patients.

Limitations of the study

Our study does have some limitations. The first is that we were not able to assess the risk of cardiovascular complications. Second, there may have been some unrecognised differences in the subgroups handled by particular hospitals or across diagnostic groups which might have influenced the approach to secondary prevention. Third, groups analysed in the study were not representative of all CAD patients as they were limited to patients who were hospitalised for acute CAD events or for revascularisation procedures. Therefore, it should be stressed that our results should not be directly applied to coronary patients who do not have a history of hospitalisation due to IHD or to those living in other parts of Poland.

CONCLUSIONS

We found no major sex-related difference in achieving the recommended goals in secondary prevention, whereas age was related to a lower prevalence of smoking and a higher probability of having high blood pressure in subjects after hospitalisation due to CAD.

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Wiek, płeć a wtórna prewencja choroby niedokrwiennej serca w codziennej praktyce

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Streszczenie

Wstęp: W ostatnich latach opublikowano wiele analiz, w których oceniano związek między wiekiem i płcią pacjenta a jakością opieki medycznej u osób z chorobą niedokrwienną serca. Jednak wyniki badań nie są zgodne. Część wskazuje, że różnica zależna od płci jest spowodowana bardziej zaawansowanym wiekiem i innym profilem czynników ryzyka kobiet w porównaniu z mężczyznami.

Cel: Celem pracy była ocena wpływu wieku i płci na częstość stosowania leków o działaniu kardioprotekcyjnym oraz na częstość kontroli głównych czynników ryzyka u pacjentów po hospitalizacji z powodu ostrego zespołu wieńcowego (OZW) lub w celu rewaskularyzacji mięśnia sercowego.

Metody: Do badania kwalifikowano kolejnych pacjentów w wieku ≤ 80 lat hospitalizowanych na 5 oddziałach kardiologicznych krakowskich szpitali od 1 kwietnia 2005 r. do 31 lipca 2006 r. z powodu OZW lub w celu rewaskularyzacji mięśnia sercowego. Osoby te zostały zaproszone do badania w okresie 6–18 miesięcy po wypisie ze szpitala. Na podstawie dokumentacji szpitalnej oceniono częstość zalecania przy wypisie ze szpitala podstawowych grup leków o działaniu kardioprotekcyjnym, a także częstość ich stosowania i kontrolę głównych czynników ryzyka w 6–18 miesięcy po wypisie.

Wyniki: Do badania zakwalifikowano 640 pacjentów, a do badania w 6–18 miesięcy po wypisie ze szpitala zgłosiło się 513 (80,2%) osób. Kobiety były starsze niż mężczyźni (62,4 ± 8,9 *vs.* 60,5 ± 8,9 roku; p < 0,05). Płeć żeńska wiązała się z większym prawdopodobieństwem zalecenia leku z grupy antagonistów wapnia przy wypisie ze szpitala [iloraz szans (OR) 2,22; 95% przedziały ufności (CI) 1,48–3,35], natomiast wiek z częstością zalecania antagonistów wapnia (≥ 60 *vs.* < 60 lat; OR 2,14; 95% CI 1,36–3,38) i diuretyków (≥ 70 *vs.* < 60 lat; OR 1,51; 95% CI 1,25–1,90). Z kolei w 6–18 miesięcy po hospitalizacji płeć wiązała się z częstością stosowania antagonistów wapnia (OR 2,13; 95% CI 1,34–3,39) oraz diuretyków (OR 1,52; 95% CI 1,00–2,31), natomiast wiek jedynie z częstością stosowania diuretyków (≥ 70 *vs.* < 60 lat; OR 1,61; 95% CI 1,19–2,20). Częstość stosowania leków przeciwpłytkowych, leków beta-adrenolitycznych, inhibitorów enzymu konwertującego angiotensynę lub sartanów, leków hipolipemizujących i antykoagulantów nie wiązała się z wiekiem lub płcią. Płeć nie była istotnie związana z częstością właściwej kontroli czynników ryzyka, natomiast wiek korelował z częstością niepalenia (≥ 70 vs. < 60 lat; OR 3,88; 95% CI 2,25–6,68) i częstością ciśnienia tętniczego < 140/90 mm Hg (≥ 70 *vs.* < 60 lat; OR 0,76; 95% CI 0,59–0,98).

Wnioski: W grupie osób po hospitalizacji z powodu OZW lub w celu rewaskularyzacji mięśnia sercowego nie stwierdzono zależnych od płci istotnych różnic w jakości opieki medycznej w zakresie wtórnej prewencji choroby niedokrwiennej serca. Wiek korelował z rzadszym paleniem tytoniu i gorszą kontrolą ciśnienia tętniczego, co może się wiązać z częstszym występowaniem umiarkowanego i ciężkiego nadciśnienia w starszych grupach wiekowych.

Słowa kluczowe: choroba niedokrwienna serca, czynniki ryzyka, wtórna prewencja, wiek, płeć

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