ORIGINAL ARTICLE

Atrial fibrillation in outpatients with stable coronary artery disease: results from the multicenter RECENT study

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KEY WORDS

atrial fibrillation, coronary artery disease, risk stratification, thromboembolism

ABSTRACT

INTRODUCTION Atrial fibrillation (AF) frequently coexists with other cardiovascular diseases.

OBJECTIVES The aim of this study was to assess the prevalence of AF in outpatients with stable coronary artery disease (CAD) and to determine clinical and laboratory parameters associated with the higher prevalence of this arrhythmia. In addition, we compared the indications for antithrombotic treatment using the older $CHADS_2$ and the currently used CHA_2DS_2-VASc scores.

PATIENTS AND METHODS We studied the clinical data of 2578 Polish patients with stable CAD participating in the multicenter RECENT study (age, 65 ±10 years; men, 55%; Canadian Cardiovascular Society class I/II/III+IV, 38%/48%/14%).

RESULTS AF was present in 19% of patients with CAD. Advanced age, longer history of CAD, and concomitant heart failure were independently associated with the higher prevalence of AF (all $P < 0.05$). Among patients with CAD and AF, 73% of the patients required antithrombotic treatment according to the $CHADS_2$ score (≥2), and 94%—according to the CHA_2DS_2-VASc score (≥2). A CHA_2DS_2-VASc score of 2 or higher was found in 47% of the patients with a $CHADS_2$ score of 0 and 85% of those with a $CHADS_2$ score of 1. Twenty-one percent of patients with CAD and AF did not have unequivocal indications for antithrombotic treatment according to the $CHADS_2$ score (0–1), while they had strong indications for such treatment on the basis of the CHA_2DS_2-VASc score (≥2).

CONCLUSIONS AF affects every fifth ambulatory patient with CAD. According to the CHA_2DS_2-VASc score, almost all patients with CAD and AF require antithrombotic treatment, which may complicate coronary revascularization and related antiplatelet treatment.

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INTRODUCTION Atrial fibrillation (AF) is a highly prevalent cardiac arrhythmia,[1] affecting over 6 million of Europeans.[1-3] It is related to an increased risk of stroke and thromboembolism and generates large healthcare costs.[4-7] Moreover, it is a clinically significant arrhythmia frequently coexisting with other cardiovascular diseases and associated with high morbidity, limited ability to restore sinus rhythm, and necessity of long-term antithrombotic therapy.[1,8]

Regarding coronary artery disease (CAD), AF has been the subject of research mostly in the context of acute myocardial infarction (AMI), while most of the evidence regarding the prevalence of AF in the population of patients with stable CAD is limited to selected groups of inpatients undergoing invasive diagnostic and therapeutic procedures.[9-12] In a large international longitudinal registry of outpatients with stable CAD[13,14] in nearly 25 000 patients with available

electrocardiographic data, the heart rhythm was classified as "atrial fibrillation/flutter" in only 3% of the subjects. However, the registry excluded patients with conditions limiting life expectancy (eg, advanced heart failure [HF]).[14] Nevertheless, the indications for antithrombotic treatment in patients with CAD and AF have not been previously investigated in large observational studies, and it remains unknown how many patients require oral anticoagulation according to the older $CHADS_2$[15] and the currently recommended CHA_2DS_2-VASc scores.[16,17]

The aim of this study was to investigate the prevalence of AF in a representative population sample of Polish outpatients with stable CAD, and to determine clinical and laboratory parameters associated with the higher prevalence of AF. In addition, we compared the indications for antithrombotic treatment in patients with CAD and AF according to the $CHADS_2$ and CHA_2DS_2-VASc scores.

PATIENTS AND METHODS The study population included patients with stable CAD, participants of the multicenter observational RECENT study (Representative Evaluation of the CAD Treatment in the Outpatient Care in Poland) conducted in 2005.[18-20] The primary purpose of the RECENT study was to characterize the population of Polish outpatients with CAD. The selection of physicians participating in the study (specialists and general practitioners) and the inclusion and exclusion criteria were described in previous publications.[18-20]

Briefly, during the predetermined period of 14 days, each of the physicians enrolled 10 consecutive patients treated for CAD for at least 12 months. The diagnosis of CAD was established on the basis of typical anginal symptoms in patients older than 60 years, previously documented acute coronary syndrome, a history of coronary revascularization, significant stenosis on coronary angiography, or positive cardiac stress test results (either electrocardiography, echocardiography, or radionuclide imaging).[18-20]

A dedicated questionnaire completed by the physician provided information on a medical history of the patient, his or her current clinical condition (in particular, the severity of angina), coexisting risk factors for CAD, and administered treatment.[18-20] The question regarding the presence of concomitant AF (either paroxysmal or permanent) was included in the section "Heart rhythm and conduction abnormalities" and AF—as an arrhythmia coexistent with stable CAD—was diagnosed on the basis of a medical history and physical examination. Each patient gave written informed consent to participate in the study.

For the purposes of the analyses reported in this paper, we included patients who had a complete set of data on the risk factors of stroke and thromboembolism included in the $CHADS_2$ and the CHA_2DS_2-VASc scores (n = 2578: 99% of 2593 patients enrolled in the RECENT study).

Indications for antithrombotic therapy In order to assess the indications for antithrombotic treatment in patients with CAD and AF, we used the $CHADS_2$[15] and CHA_2DS_2-VASc[16] scores. Before the focused update of the European Society of Cardiology (ESC) guidelines for the management of AF was released in 2012, the $CHADS_2$ score was recommended for fast initial risk stratification of stroke, mainly in ambulatory conditions, and also to be performed by primary care physicians and noncardiologists.[1]

In the $CHADS_2$ score, 1 point was assigned to a patient for coexistent HF, arterial hypertension, diabetes, and age of ≥75 years; and 2 points were assigned for previous stroke and/or transient ischemic attack (TIA).[15] For patients with a $CHADS_2$ score of 2 or higher, antithrombotic therapy with vitamin K antagonists was recommended.[1] In the CHA_2DS_2-VASc score, 1 point was assigned to a patient for HF, arterial hypertension, diabetes, age of 65–74 years, and female sex; and 2 points were assigned for a history of stroke, TIA or thromboembolism, and for the age of ≥75 years.[16] CHA_2DS_2-VASc, a risk factor-based score, was initially recommended for a more detailed risk stratification of stroke, for example, in patients with a $CHADS_2$ score of ≤1),[1] and since the release of the focused update of the ESC guidelines in 2012, it has been the only recommended scale for assessing the risk of stroke in patients with this arrhythmia.[17] Patients with a CHA_2DS_2-VASc score of 2 or higher require antithrombotic treatment, while in those with a score of 1 point, such a therapy should be considered.[1]

In case of women younger than 65 years with AF alone (with a CHA_2DS_2-VASc score of 1 by virtue of sex), a CHA_2DS_2-VASc score of 0 is assigned because these patients have a low risk of thromboembolic events, and antithrombotic treatment is not recommended in such cases.[17]

Statistical analyses Continuous variables with a normal distribution were expressed as a mean ± standard deviation of the mean, and the intergroup differences were tested using the *t* test for unpaired samples. Continuous variables with a skewed distribution were expressed as a median with lower and upper quartiles. They were log-transformed (a natural logarithm, ln) to normalize their distribution, and the intergroup differences were tested using the *t* test for unpaired samples for normalized values. Categorized variables were expressed as a percentage, and the intergroup differences were tested using the χ^2 test.

Univariable and multivariable logistic regression models were applied to establish the variables associated with the higher prevalence of AF in ambulatory patients with CAD. In the univariable analyses, the following parameters were included as the potential risk factors for the higher prevalence of AF: 1) demographic, clinical, and laboratory variables (age, sex, systolic and diastolic blood pressure, resting heart rate, total cholesterol and

low-density lipoprotein cholesterol, triglycerides, serum creatinine, and hemoglobin); 2) symptomatology and history of CAD (Canadian Cardiovascular Society [CCS] class, angina during the previous 3 months, duration of CAD treatment, number of visits during the previous 12 months, previous AMI); 3) invasive and pharmacological treatment (a history of percutaneous transluminal coronary angioplasty and/or coronary artery bypass grafting, β-blockers, angiotensin-converting enzyme inhibitors, and/or angiotensin receptor blockers, calcium-channel blockers, antiplatelets, statins, long-acting nitrates, molsidomine, metabolic agents [cytoprotectives]); and 4) comorbidities (HF, diabetes, arterial hypertension, previous stroke and/or TIA, peripheral artery disease). Based on variables significantly associated with the higher (or lower) prevalence of AF in univariable analyses, we constructed a multivariable model to identify independent risk factors for the presence of AF.

In order to ensure the representativeness of our sample of patients with CAD for the whole population of patients with CAD in Poland, statistical analyses were performed using adequately chosen weights, according to the predetermined probe draw scheme.[18-20]

Statistical analyses were performed using the STATISTICA 10 data analysis software system (StatSoft, Inc., Tulsa, Oklahoma, United States). A P value of less than 0.05 was considered statistically significant.

RESULTS

Baseline characteristics of an analyzed cohort of patients with stable coronary artery disease

Of 2593 patients with CAD enrolled in the RECENT study, 2578 (99%) had a complete set of data regarding the risk factors of stroke included in the $CHADS_2$ and CHA_2DS_2-VASc scores, and these patients were analyzed in the current study.

The baseline characteristics of an analyzed cohort of outpatients with stable CAD are shown in TABLE 1.

Clinical and laboratory parameters associated with higher prevalence of atrial fibrillation

Nineteen percent of patients with stable CAD had concomitant AF. In univariate analyses, patients with AF were older, had higher resting heart rate, lower total cholesterol levels, worse renal function (higher serum creatinine levels), and reported a greater severity of angina (as assessed using the CCS scale) and longer history of CAD (all $P < 0.05$, TABLE 1). Furthermore, the prevalence of some cardiovascular comorbidities (HF, arterial hypertension, and peripheral artery disease) was also higher in patients with versus those without AF (all $P < 0.05$, TABLE 1).

In a multivariate logistic regression model, older age, longer history of CAD, concomitant HF, and no previous AMI were independently associated with the higher prevalence of AF in outpatients with stable CAD (all $P < 0.05$, TABLE 1, FIGURE 1). In patients older than 65 years, with a history of CAD longer than 6 years, and with HF, the prevalence of AF was 40%.

Indications for antithrombotic treatment in patients with stable coronary artery disease and atrial fibrillation according to the $CHADS_2$ and CHA_2DS_2-VASc scores

The prevalence of particular risk factors of stroke included in the $CHADS_2$ and CHA_2DS_2-VASc scores are shown in FIGURE 2. The distribution of the $CHADS_2$ and CHA_2DS_2-VASc scores is shown in FIGURES 3A and 3B, respectively. In outpatients with stable CAD and AF, according to the $CHADS_2$ score, 73% of the subjects required antithrombotic treatment (score ≥2, FIGURE 3A), and according to the CHA_2DS_2-VASc score—94% (score ≥2, FIGURE 3B). A CHA_2DS_2-VASc score of 2 or higher was found in 47% of the patients with a $CHADS_2$ score of 0 and in 85% of those with a $CHADS_2$ score of 1. Therefore, 21% of outpatients with stable CAD and AF did not have clear indications for antithrombotic therapy according to the $CHADS_2$ score (0–1), while they required oral anticoagulation according to the CHA_2DS_2-VASc score (≥2) (FIGURE 4).

DISCUSSION

There are two major findings arising from our study. First, AF affects every fifth ambulatory patient with stable CAD, and older age, longer history of CAD, concomitant HF, and no previous AMI are risk factors for a higher prevalence of AF. Second, according to the CHA_2DS_2-VASc score, almost all patients with stable CAD and AF require antithrombotic treatment.

AF frequently coexists with other cardiovascular diseases. In the population-based Cardiovascular Health Study,[21] AF has been shown to affect nearly every tenth patient with clinically overt cardiovascular disease. Although every third patient with AF is also diagnosed with CAD,[22] precise data on the prevalence of AF in outpatients with stable CAD are limited.[10,13,14] In the context of CAD, AF has been the subject of research mostly as a prognostic factor in patients with AMI.[23] The prevalence of AF in AMI ranges from 2% to 21%,[23] and this arrhythmia not only increases in-hospital mortality[24,25] but also worsens long-term outcome after discharge.[24] In turn, the accurate data on the prevalence of AF in an unselected population of patients with stable CAD are not available.[13,14] For example, in the Euro Heart Survey of Stable Angina coordinated by the ESC[10] and regarding patients with stable CAD, the presence of AF was not reported separately but was only one of the criteria of an abnormal electrocardiogram.

Our analysis of the RECENT cohort demonstrated that AF affects almost every fifth patient with stable CAD managed on an outpatient basis. It needs to be emphasized that we have investigated a representative group of ambulatory patients with a CAD history of several years (median 6 years), and these patients represent a general CAD population without any preselection.[18] The majority of previous studies on patients with stable CAD reporting the prevalence of AF have

TABLE 1 Baseline characteristics of the patients with coronary artery disease and risk factors for the presence of atrial fibrillation

Parameter	All patients (n = 2578)	AF (+) (n = 492)	AF (–) (n = 2086)	Logistic regression analysis								
				unit	univariate models				multivariate model (χ^2 = 132.7; P <0.0001)			
					OR	95% CI	χ^2	P value	OR	95% CI	χ^2	P value
demographic data, clinical status, and laboratory parameters												
age, y	65 ±10	70 ±9	64 ±10[a]	5 years	1.33	1.26–1.39	119.8	<0.0001	1.17	1.08–1.26	15.8	<0.0001
sex, male	55	53	56	yes vs no	1.11	0.92–1.35	1.16	0.28	–	–	–	–
BMI, kg/m^2	28.6 ±4.4	28.8 ±4.7	28.6 ±4.3	yes vs no	1.01	0.99–1.04	1.85	0.17	–	–	–	–
SBP, mmHg	135 ±17	134 ±17	135 ±17	5 mmHg	1.00	0.99–1.00	1.66	0.20	–	–	–	–
DBP, mmHg	81 ±10	81 ±12	81 ±10	5 mmHg	1.00	0.99–1.01	0.04	0.85	–	–	–	–
RHR, bpm	72 (66–80)	74 (68–80)	72 (66–80)[a]	1 ln bpm	4.69	2.21–9.96	16.2	<0.0001	–	–	–	–
total cholesterol, mmol/l	5.43 ±1.31	5.24 ±1.12	5.47 ±1.35[b]	1 mmol/l	0.90	0.82–0.98	5.55	0.02	–	–	–	–
LDL-C, mmol/l	3.24 ±1.06	3.17 ±1.09	3.26 ±1.05	1 mmol/l	0.97	0.85–1.09	0.30	0.58	–	–	–	–
triglycerides, mmol/l	1.85 ±1.06	1.77 ±1.06	1.87 ±1.06	1 mmol/l	0.90	0.8–1.02	2.83	0.09	–	–	–	–
serum creatinine, mg/dl	1.00 (0.84–1.21)	1.11 (0.89–1.31)	1.00 (0.82–1.21)[a]	1 ln mg/dl	1.69	1.05–2.72	4.69	0.03	1.39	0.79–2.42	1.32	0.25
hemoglobin, g/dl	13.7 ±1.6	13.5 ±1.6	13.7 ±1.6	1 g/dl	0.95	0.88–1.02	1.92	0.17	–	–	–	–
history and severity of CAD												
CCS class, I/II/III+IV	38/48/14	29/47/24	40/48/12[a]	III+IV vs II vs I	1.57	1.37–1.81	39.8	<0.0001	1.12	0.89–1.39	0.94	0.33
angina in the last 3 months	59	64	58[c]	yes vs no	1.26	1.04–1.54	5.53	0.02	–	–	–	–
history of CAD, y	6 (3–10)	8 (5–12)	6 (3–10)[a]	1 ln year	1.65	1.43–1.91	44.8	<0.0001	1.47	1.17–1.85	11.0	0.0009
prior AMI	50	42	52[a]	yes vs no	0.72	0.59–0.87	11.5	0.0007	0.57	0.42–0.77	13.1	0.0003
treatment												
prior CABG	14	13	15	yes vs no	0.84	0.63–1.11	1.57	0.21	–	–	–	–
prior PTCA	22	17	23[b]	yes vs no	0.69	0.54–0.89	8.47	0.004	–	–	–	–
β-blocker	81	76	82[b]	yes vs no	0.75	0.59–0.94	6.32	0.01	–	–	–	–
ACEI and/or ARB	80	83	80[c]	yes vs no	1.32	1.03–1.70	4.68	0.03	–	–	–	–
calcium channel blocker	24	26	23	yes vs no	1.06	0.85–1.31	0.26	0.61	–	–	–	–
antiplatelets	82	66	86[a]	yes vs no	0.35	0.28–0.43	94.0	<0.0001	–	–	–	–
statin	72	65	73[a]	yes vs no	0.69	0.56–0.84	13.4	0.0003	–	–	–	–
long-acting nitrate	53	58	52[c]	yes vs no	1.25	1.03–1.51	5.21	0.02	–	–	–	–
molsidomine	18	21	17	yes vs no	1.19	0.94–1.52	2.05	0.15	–	–	–	–
metabolic agents	14	11	14	yes vs no	0.78	0.58–1.05	2.64	0.1	–	–	–	–

TABLE 1 Baseline characteristics of the patients with coronary artery disease and risk factors for the presence of atrial fibrillation (continued from page 165)

Parameter	All patients (n = 2578)	AF (+) (n = 492)	AF (–) (n = 2086)	unit	Logistic regression analysis							
					univariable models				multivariable model (χ^2 = 132.7; P <0.0001)			
					OR	CI	χ^2	P value	OR	CI	χ^2	P value
comorbidities												
heart failure	34	56	29[a]	yes vs no	3.12	2.57–3.79	132.6	<0.0001	3.13	2.30–4.27	52.1	<0.0001
diabetes	24	27	23	yes vs no	1.24	0.99–1.53	3.66	0.06	–	–	–	–
arterial hypertension	78	83	77[b]	yes vs no	1.36	1.06–1.73	6.08	0.014	0.93	0.62–1.39	0.13	0.72
previous stroke and/or TIA	10	17	8[a]	yes vs no	2.21	1.68–2.89	33.1	<0.0001	–	–	–	–
peripheral artery disease	10	12	9[c]	yes vs no	1.21	0.90–1.63	1.63	0.2	–	–	–	–

Data are presented as mean ± standard deviation, median (upper and lower quartiles), or a percentage, where appropriate.

a P <0.001, **b** P <0.01, **c** P <0.05; for details, see the "Patients and methods" section

Abbreviations: ACEI, angiotensin-converting enzyme inhibitor; AF, atrial fibrillation; AMI, acute myocardial infarction; ARB, angiotensin receptor blocker; BMI, body mass index; CABG, coronary artery bypass grafting; CAD, coronary artery disease; CI, confidence interval; COPD, chronic obstructive pulmonary disease; CCS, Canadian Cardiovascular Society; DBP, diastolic blood pressure; LDL-C, low-density lipoprotein cholesterol; OR, odds ratio; PTCA, percutaneous transluminal coronary angioplasty; RHR, resting heart rate; SBP, systolic blood pressure; TIA, transient ischemic attack

included strictly selected groups of patients, for example, hospitalized patients undergoing coronary angiography to confirm or exclude CAD. This may favor the enrollment of patients rather in the early stages of the disease, when invasive diagnostic procedures are performed, and the complications of long-term CAD (eg, HF) have not yet been developed. For example, in the Coronary Artery Surgery Study trial,[11] in the group of over 18 000 patients with CAD confirmed by coronary angiography, the prevalence of AF was less than 0.6%. In another study, Lokshyn et al.[9] found that in the group of patients with significant occlusions on coronary angiography, only 1.7% had concomitant AF. Moreover, in a Portuguese study by Galrinho et al.,[12] AF was documented in 1.3% of 556 patients with CAD confirmed by coronary angiography. Our study demonstrated that in a broad population of unselected ambulatory patients with CAD, AF is not an incidental finding but a frequent comorbidity.

The data from the RECENT study also allowed to precisely characterize the population of patients with CAD and AF. Patients with AF were older, had a longer history of CAD, greater severity of angina, and had more comorbidities. Furthermore, we have shown that older age, longer history of CAD, lack of previous AMI, and presence of HF are independently associated with the higher prevalence of AF.

These results correspond with those reported in previous large population-based studies which demonstrated that the prevalence of AF increases with age (eg, in the ATRIA study, AF affected only 0.1% of adults younger than 55 years and 9% of those aged 80 years or older).[2] Indeed, advanced age is an important risk factor for developing both CAD[26] and AF,[1,27] and the higher occurrence of AF in elderly patients is presumably associated with the loss and isolation of atrial myocardium responsible for conduction abnormalities.[1] Nevertheless, the pathophysiology of AF is complex and, apart from advanced age, there are several factors (particular disease syndromes, metabolic derangements, autonomic influences) affecting the structure and functioning of atrial myocardium and thus predisposing to AF.[28] We also demonstrated that the longer history of CAD, independently of the presence of overt HF, is associated with the higher prevalence of AF. Of note, the hypothesis that uncomplicated CAD favors the occurrence of AF, eg, by triggering atrial ischemia, has not been verified yet,[29] and further research is needed to confirm this.

AF also affects a significant proportion of patients with HF, and its prevalence ranges from 4% to nearly 50% of the patients, depending on the severity of cardiac failure.[30] It needs to be acknowledged that links between AF and HF are complex and clinically important from several perspectives.[1] The occurrence of AF may result from HF (eg, via the mechanism of increased neurohormonal activation), but also AF may aggravate HF symptoms and decompensate previously stable HF.[1]

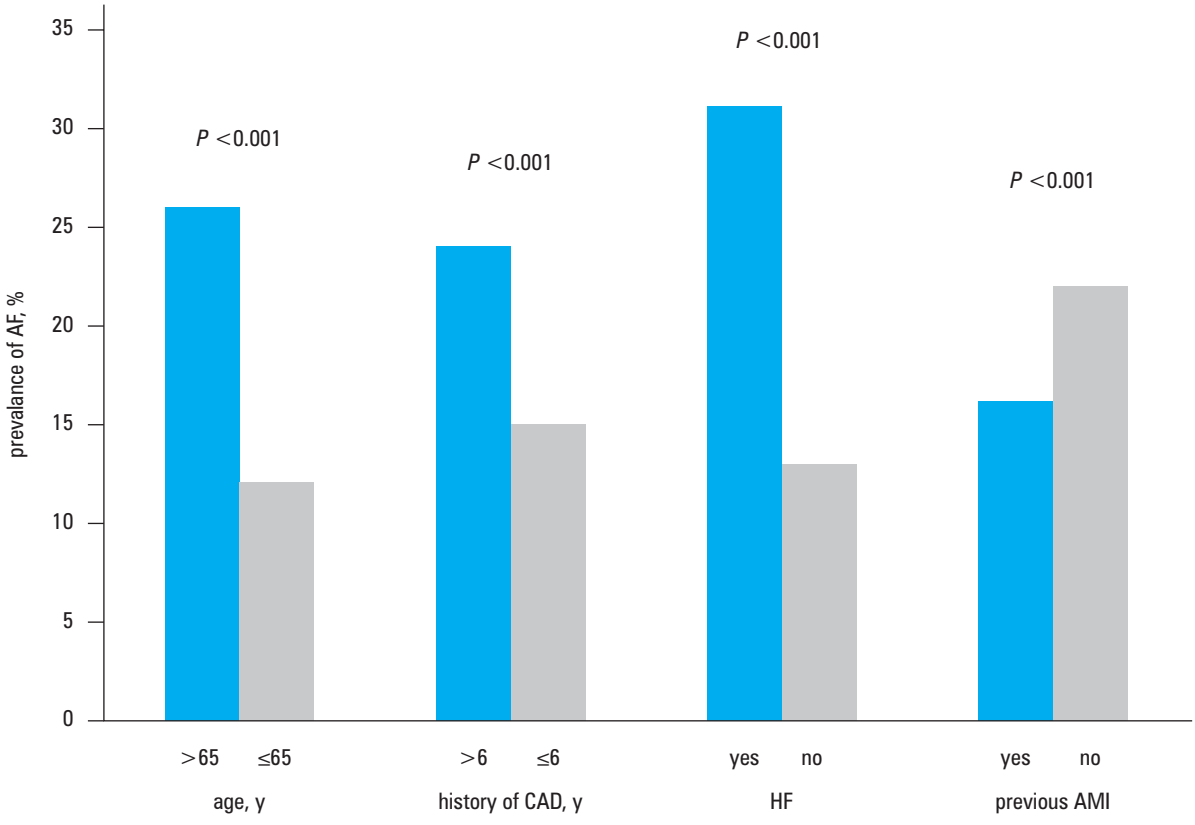

FIGURE 1 Prevalence of atrial fibrillation (AF) in patients with stable coronary artery disease, divided into clinical subgroups according to the presence or absence of the risk factors of concomitant AF
Abbreviations: HF, heart failure; others, see **TABLE 1**

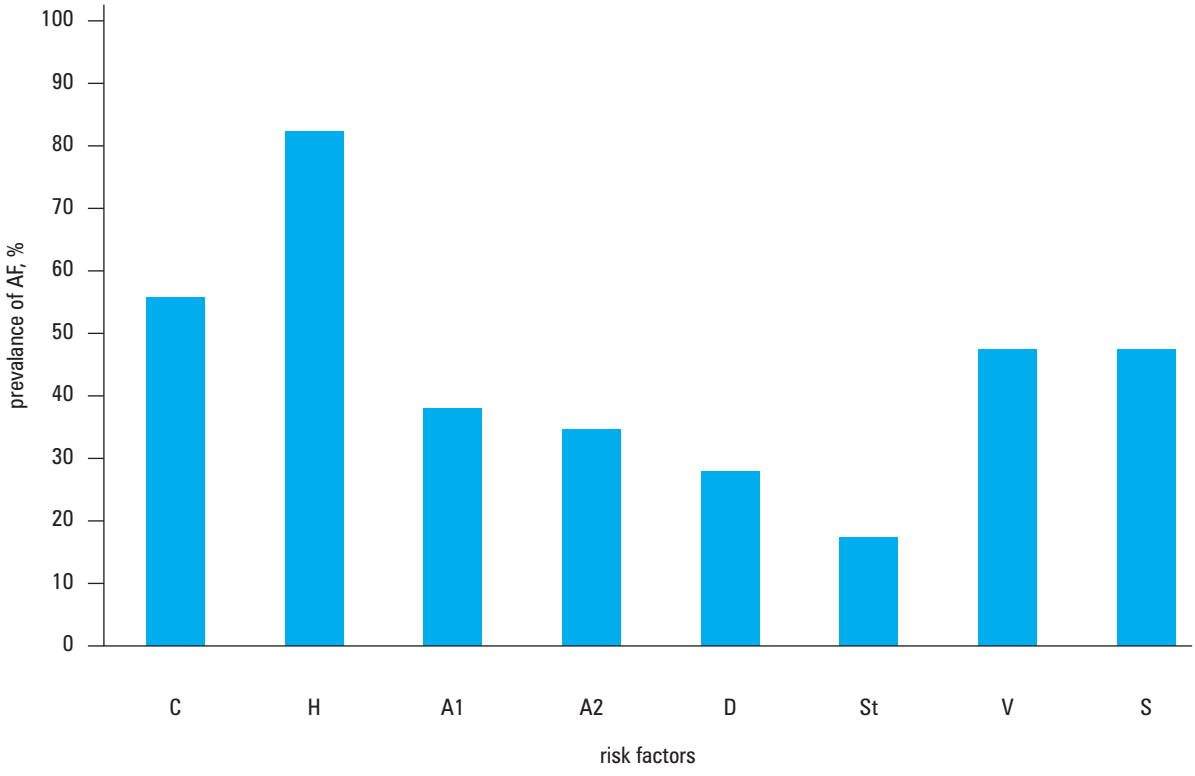

FIGURE 2 Prevalence of risk factors for stroke (included in the $CHADS_2$[15] and the CHA_2DS_2-VASc[16] scores) in the representative Polish population of patients with stable coronary artery disease and atrial fibrillation (RECENT study)
Abbreviations: C, congestive heart failure; H, arterial hypertension; A_1, age 65–74 years; A_2, age ≥75 years; D, diabetes mellitus; St, previous stroke or transient ischemic attack; V, vascular disease; S, female sex

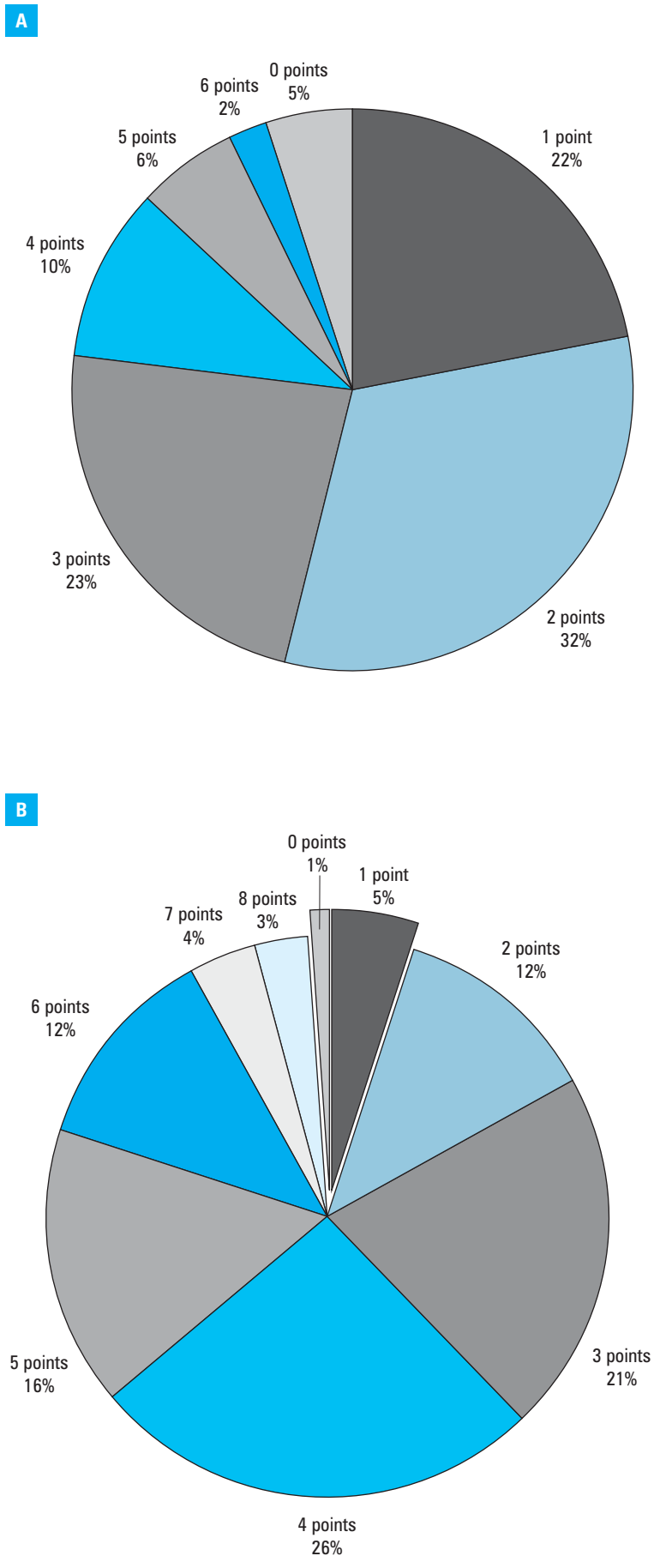

FIGURE 3 Distribution of the $CHADS_2$ score[15] (**A**) and CHA_2DS_2-VASc score[16] (**B**) in the representative Polish population of patients with stable coronary artery disease and atrial fibrillation (RECENT study)

In the current study, we also showed that according to the CHA_2DS_2-VASc risk stratification scheme, almost all patients with stable CAD and AF require antithrombotic treatment. Furthermore, in every fifth patient with CAD and AF, antithrombotic treatment was strongly recommended if the CHA_2DS_2-VASc score was 2 or higher, while it was not recommended if the $CHADS_2$ score was lower than 2. Until the publication of the 2012 focused update,[17] the 2010 ESC guidelines for the management of AF[1] recommended the use of the $CHADS_2$ score as a simple, easily remembered scale for the risk stratification of stroke in AF, especially for primary care physicians and noncardiologists. Since the update of the guidelines,[17] the $CHADS_2$ risk stratification scheme is no longer recommended, and the CHA_2DS_2-VASc score remains the leading tool (class I recommendation; level of evidence, A). Indeed, the $CHADS_2$ score has numerous limitations, mainly because it misses several important risk factors such as female sex,[31,32] age of 65–74 years,[33] and vascular disease,[34,35] which according to recent evidence increase the risk of adverse thromboembolic events in patients with AF.[16,34,36,37] We demonstrated that in outpatients with stable CAD and AF, the risk stratification of stroke and thromboembolism using the CHA_2DS_2-VASc score extends the recommendations for chronic antithrombotic therapy to a large proportion of patients (21%) who previously had no (or had less evidenced) indications for such a management according to the $CHADS_2$ score (<2). From the clinical point of view, these results indicate that invasive procedures (eg, elective percutaneous transluminal coronary angioplasty) performed in patients with stable CAD and AF should be preceded by a thorough analysis of bleeding risk to reduce the number of postprocedural bleeding events associated with simultaneous antithrombotic and antiplatelet therapy.

Conclusions AF affects every fifth ambulatory patient with stable CAD, and in those with advanced age, longer history of CAD, and coexistent HF, the prevalence is twice as high. According to the CHA_2DS_2-VASc score, almost all patients with CAD and concomitant AF require antithrombotic treatment, which may complicate coronary revascularization procedures and related antiplatelet therapy.

Contribution statement AZ, MT, MM, WN, KR, PS, and MZ were responsible for the analysis and interpretation of the data, statistical analysis, and drafting of the manuscript. RP, AW, WB, and PP were responsible for the analysis and interpretation of the data and critical revision of the manuscript for important intellectual content. EAJ was responsible for the analysis and interpretation of the data, critical revision of the manuscript for important intellectual content and overall supervision.

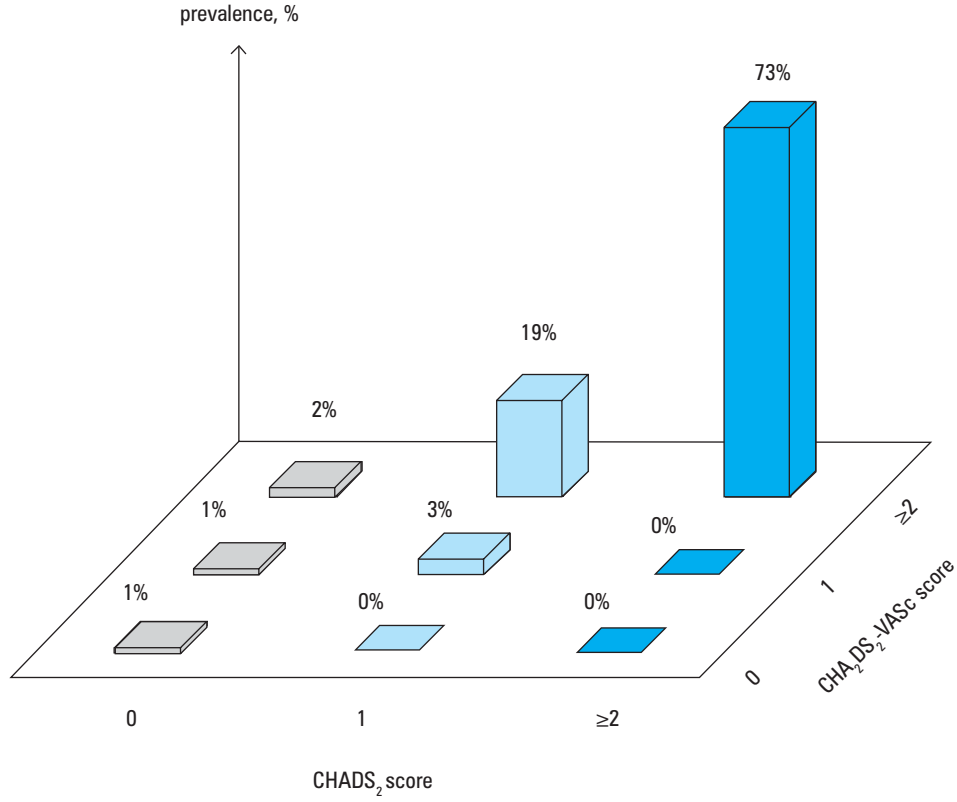

FIGURE 4 Distribution of the CHA_2DS_2-VASc score[16] in the representative Polish population of patients with stable coronary artery disease and atrial fibrillation in the respective categories of the $CHADS_2$ score (0, 1, and ≥2 points)

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Conflict of interest RP and AW are employees of Servier Poland and received a grant from Servier Poland to conduct the RECENT study. WB is a consultant and member of the speaker's bureau of Servier. PP reports grants and personal fees from Vifor Pharma Ltd., and personal fees from Amgen, Servier, Sanofi-Aventis, Novartis, Johnson & Johnson, Bayer, Pfizer, Merck, BMS, Abbott, Boehringer Ingelheim, Respicardia, Coridea, Abbott Vascular, and Berlin-Chemie. EAJ reports honoraria for lectures and manuscript preparation (other than the current work) from Servier.

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Migotanie przedsionków u ambulatoryjnych pacjentów ze stabilną chorobą wieńcową – wyniki wieloośrodkowego badania RECENT

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SŁOWA KLUCZOWE

choroba wieńcowa, migotanie przedsionków, powikłania zakrzepowo-zatorowe, stratyfikacja ryzyka

STRESZCZENIE

WPROWADZENIE Migotanie przedsionków (*atrial fibrillation* – AF) często współistnieje z innymi chorobami układu sercowo-naczyniowego.

CELE Celem pracy było zbadanie częstości występowania AF u ambulatoryjnych pacjentów ze stabilną chorobą wieńcową (*coronary artery disease* – CAD) oraz określenie klinicznych i laboratoryjnych parametrów związanych z częstszym występowaniem tej arytmii. Porównano również wskazania do leczenia przeciwkrzepliwego ocenione za pomocą starszej skali $CHADS_2$ oraz aktualnie obowiązującej skali CHA_2DS_2-VASc.

PACJENCI I METODY Przeanalizowano dane kliniczne 2578 polskich pacjentów ze stabilną CAD biorących udział w wieloośrodkowym badaniu RECENT (wiek: 65±10 lat; mężczyźni: 55%; klasa Canadian Cardiovascular Society I/II/III+IV: 38%/48%/14%).

WYNIKI AF występowało u 19% pacjentów z CAD. Starszy wiek, dłuższa historia CAD i współwystępująca niewydolność serca były niezależnie związane z częstszym występowaniem AF (wszystkie $p < 0,05$). Na podstawie punktacji w skali $CHADS_2$ (≥2 punkty) 73% pacjentów z CAD i AF miało wskazania do leczenia przeciwkrzepliwego, a na podstawie punktacji w skali CHA_2DS_2-VASc – 94% pacjentów (wynik ≥2 punkty). 47% pacjentów z wynikiem w skali $CHADS_2 = 0$ i 85% z wynikiem $CHADS_2 = 1$ uzyskało w skali CHA_2DS_2-VASc wynik ≥2 punkty. 21% pacjentów z CAD i AF nie miało jednoznacznych wskazań do leczenia przeciwkrzepliwego na podstawie wyniku w skali $CHADS_2$ (0–1 punktów), podczas gdy na podstawie punktacji w skali CHA_2DS_2-VASc (≥2 punkty) mieli mocne wskazania do takiej terapii.

WNIOSKI AF występuje u co piątego ambulatoryjnego pacjenta z CAD. Na podstawie punktacji w skali CHA_2DS_2-VASc prawie wszyscy pacjenci ze stabilną CAD i AF wymagają leczenia przeciwkrzepliwego, co może wiązać się z utrudnieniami podczas procedur rewaskularyzacji wieńcowej oraz leczenia przeciwpłytkowego.

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