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Atrial Fibrillation in Turkey:
Epidemiologic Registry

AfD atriyal
fibrilasyon
derneđi



Dicle Üniversitesi
Kalp Hastanesi

"AFTeR" Çalışma verilerinin analizi

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Dicle Üniversitesi Kalp Hastanesi/Diyarbakır

31.05.2014/Antalya

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Mayıs 2006...

Journal of the American College of Cardiology
© 2005 by the American College of Cardiology Foundation
Published by Elsevier Inc.

Vol. 46, No. 9, 2005
ISSN 0735-1097/05/\$30.00
doi:10.1016/j.jacc.2005.06.077

Hospitalized Patients With Atrial Fibrillation and a High Risk of Stroke Are Not Being Provided With Adequate Anticoagulation

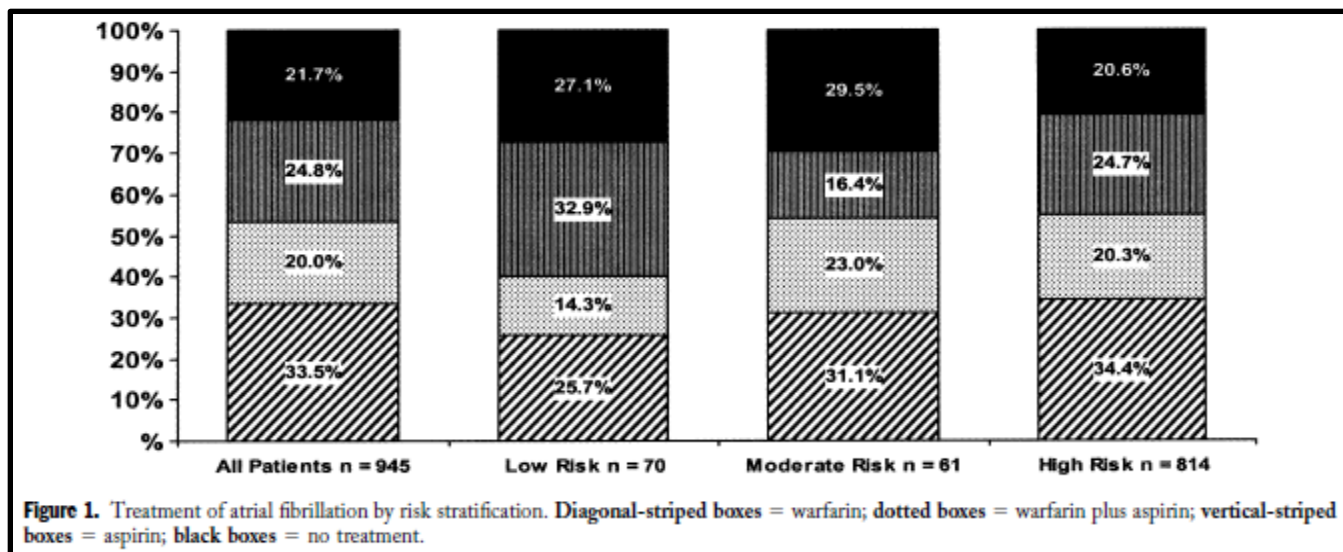
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for the NABOR Steering Committee

Cleveland, Ohio; Durham, North Carolina; and Oak Brook, Illinois

OBJECTIVES	The purpose of this study was to determine both treatment gaps and predictors of warfarin use in atrial fibrillation (AF) patients enrolled in a national multicenter study.
BACKGROUND	The National Anticoagulation Benchmark Outcomes Report (NABOR) is a performance improvement program designed to benchmark anticoagulation prophylaxis, treatment, and outcomes among participating hospitals.
METHODS	A retrospective cohort study of inpatients was performed at 21 teaching, 13 community, and 4 Veterans Administration hospitals in the U.S. Patients with an ICD-9-CM code for AF (427.31) were randomly selected.
RESULTS	Among the 945 patients studied, the mean age was 71.5 (\pm 13.5) years; 43% were >75 years of age, 54.5% were men, and 67% had a history of hypertension. Most (86%) had factors that stratified them as at high risk of stroke, and only 55% of those received warfarin. Neither warfarin nor aspirin were prescribed in 21% of high-risk patients, including 18% of those with a previous stroke, transient ischemic attack, or systemic embolic event. Age >80 years ($p = 0.008$) and perceived bleeding risk ($p = 0.022$) were negative predictors of warfarin use. Persistent/permanent AF ($p < 0.001$) and history of stroke, transient ischemic attack, or systemic embolus ($p = 0.014$) were positive predictors of warfarin use, whereas high-risk stratification was not.
CONCLUSIONS	This study confirms the under-use of warfarin, but also adds to published reports in several regards. It showed that risk stratification, the guidepost for treatment in international guidelines, had little effect on warfarin use, and that age >80 years and AF classification (permanent/persistent) are factors that influence warfarin use. (J Am Coll Cardiol 2005;46:1729-36) © 2005 by the American College of Cardiology Foundation

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Relationship of stroke risk classification to anticoagulant treatment

Nisan 2009...

Atriyal fibrilasyonlu hastalarda oral antikoagülan kullanımı

Oral anticoagulant use in patients with atrial fibrillation

Dr. Faruk Ertaş, Dr. Hamza Duygu, Dr. Halit Acet, Dr. Nihan Kahya Eren,
Dr. Cem Nazlı, Dr. Asım Oktay Ergene

Atatürk Eğitim ve Araştırma Hastanesi Kardiyoloji Kliniği, İzmir

Bulgular: Hastaların %72.8'inde sürekli/kalıcı AF, %27.2'sinde paroksizmal AF vardı. Hastaların %32.4'ü 75 yaş ve üstü gruptaydı. İnme gelişim riski açısından hastaların %69.3'ü yüksek, %21.8'i orta, %8.9'u düşük risk grubundaydı. İnme açısından hipertansiyon (%66.7) en sık görülen risk faktörüydü. Hastaların 107'si (%25.1) aspirin ve warfarin, 211 (%4.9) sadece warfarin, 237'si (%55.6) sadece aspirin kullanırken, 61 hasta (%14.3) hiçbirini kullanmamaktaydı. Oral antikoagülan kullanma oranı %30.1 bulundu. Yetmiş beş yaş ve üstü hastalarda (p=0.0001), hipertansiyon (p=0.023) ve koroner arter hastalığı (p=0.004) olanlarda oral antikoagülan kullanımı anlamlı derecede azdı. Oral antikoagülan kullanan hastaların %47.7'si (n=61) kılavuzların önerdiği hedef INR değerlerine ulaşabilmişti. Cinsiyet, yaş, klinik risk faktörleri ve sosyoekonomik parametrelerin hiçbirisi hastaların hedef INR değerine ulaşmasında etkili bulunmadı. Oral antikoagülan kullanmama nedenleri arasında ilk sırada ilacın hekim tarafından reçetelendirilmemesi (%74.3), ikinci sırada tıbbi kontrendikasyonlar (%9.8) gelmekteydi.

Tablo 5. Atriyal fibrilasyonlu hastalarda oral antikoagülan tedaviye başlanmama nedenleri (n=276)

	Sayı	Yüzde
Hekim tarafından reçetelendirmeme	205	74.3
Tıbbi kontrendikasyon	27	9.8
Hekim önerisi olmadan tedavinin hasta tarafından kesilmesi	19	6.9
Sosyoekonomik nedenler	11	4.0
Atriyal fibrilasyon tanısının yeni konması	8	2.9
Hastanın tedaviyi reddetmesi	6	2.2

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Haziran 2010...



Original Article

Turk J Med Sci
2012; 42 (Sup.1): 1172-1179
© TÜBİTAK
E-mail: medsci@tubitak.gov.tr
doi:10.3906/sag-1109-36

Predictors of warfarin use in patients with non-valvular atrial fibrillation who presented to the cardiology outpatient clinic of a tertiary hospital in Turkey: an observational study

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Mehmet Ata AKIL, Mustafa OYLUMLU, Mehmet Sıddık ÜLGEN

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Aralık 2011...

Atrial Fibrillation in Turkey: Epidemiologic Registry (AFTER) study design

Türkiye'de Atrial Fibrilasyon: Epidemiyolojik Kayıt (AFTER) çalışması dizaynı

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ÖZET

Amaç: Atriyal fibrilasyon (AF) ülkemiz için önemli bir sağlık sorunudur. Ülkemizde ileriye dönük, çok merkezli ve ülke epidemiyolojisini yansıtan ölçekte herhangi bir çalışma mevcut değildir. Bu çalışmayla ülkemizde çok merkezli bir çalışmada AF hastalarının epidemiyolojik verilerinin öne dönük olarak analizi, takibi ve değerlendirilmesi amaçlandı.

Yöntemler: Ülkemizden yedi coğrafi bölgeye ait nüfusu yansıtabilecek şekilde elektrokardiyografisinde en az bir defa AF atağı tespit edilmiş olan ardışık 2300 hasta çalışmaya alınacaktır. Hastalar ikinci yılın sonunda majör kardiyak sonlanım noktaları (ölüm, geçici iskemik atak, inme, sistemik tromboembolizm, majör kanama ve hastane yatışı) açısından değerlendirilecektir.

Bulgular: Çalışma sonunda elde edilecektir. İlk bulguların Aralık 2012 tarihinde elde edilmesi planlanmaktadır.

Sonuç: AFTER (Atrial Fibrillation in Turkey: Epidemiologic Registry) çalışması ile kılavuzların önerileri doğrultusunda ülkemizdeki AF hastalarının genel risk profili, oral antikoagülan tedavi kullanım sıklığı, tedavi alan hastalarda hedef INR değerlerine ulaşıp ulaşılmadığı ve hastaların kanama riskleri belirlenecektir. Çalışma sonunda ülkemizde AF'li hastalarda majör istenmeyen olay sıklığı ve bu olayların bağımsız belirteçleri de belirlenecektir. (*Anadolu Kardiyol Derg 2013; 13: 339-43*)

Anahtar kelimeler: Atriyal fibrilasyon, yöntem, risk, ileriye dönük çalışma

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Methods

Study design, sample size

AFTER study is planned as a prospective, observational and multicenter study and a 2-year follow-up of the patients.

In the anticipation of a total of 310 deaths and 650 events with a death rate of 6.8 and approximately 15 combined events per 100 person/year will be necessary for the multivariate logistic regression analysis intended to find out the independent indicators of the major adverse events. The follow up of 2300 patients for two years is calculated to be adequate. According to the data provided by the Turkish Statistical Institution, 2300 patients reflecting the population of the seven regions of our country will be included in the study.

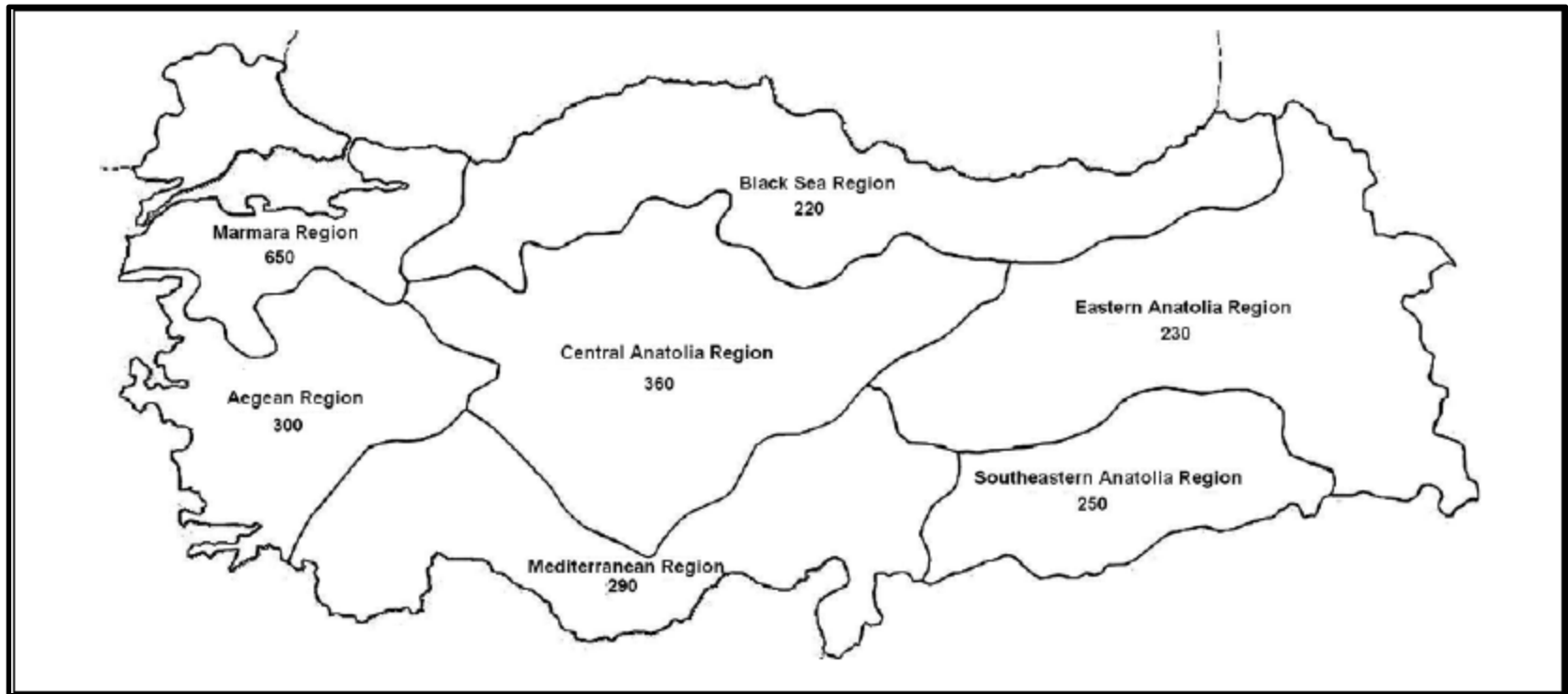
Sample representation

First of all, all the tertiary centers from seven geographical areas were invited to participate. A sample representing the population of that geographical area was measured. After

agreement, these centers were interviewed and informed about the number of the patients that they shall admit in the study according to the population of the area. The numbers of the patients included in the study according to the regions are shown in [Figure 1](#). Overall, 17 tertiary health care centers agreed to participate in the study. The names and coordinators are shown in [Table 1](#).

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Regional distribution of patients in AFTER study

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Faruk Ertaş, Hasan Kaya	Diyarbakır (Coordinator center)	Dicle University Faculty of Medicine
Alpay Arıbaş	Konya	Necmettin Erbakan University Meram Faculty of Medicine
Bayram Köroğlu	İstanbul	Siyami Ersek Education and Research Hospital
Bülent Vatan	Sakarya	Sakarya University Faculty of Medicine
Çağlar E. Çağlayan	Adana	Adana Numune Education and Research Hospital
Göksel Acar	İstanbul	Kartal Koşuyolu Education and Research Hospital
Mehmet Gül	İstanbul	Mehmet Akif Ersoy Education and Research Hospital
Mehmet Kanadaşı	Adana	Çukurova University Faculty of Medicine
Murat Yüksel	Malatya	Malatya State Hospital
Nihan Kâhya Eren	İzmir	İzmir Atatürk Education and Research Hospital
Nuri Köse	Muğla	Muğla Yücelen Hospital
Rüstem Yılmaz	Samsun	Samsun Gazi State Hospital
Selçuk Gedik	Ankara	Ankara Numune Education and Research Hospital
Serkan Bulur	Düzce	Düzce University Faculty of Medicine
Tolga Çimen	Ankara	Yıldırım Beyazıt University, Dışkapı Education and Research Hospital
Zekeriya Kaya	Şanlıurfa	Harran University Faculty of Medicine
Ziya Şimşek	Erzurum	Atatürk University Faculty of Medicine

Coordinators and names of centers participating in AFTER study (by alphabetical order)

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Algorithm of the trial

The main steps of the procedures are shown in **Figure 2**. The inclusion criteria will determine which patients are eligible for the participation to the study. The inclusion criteria are determined as "all consecutive patients over 18 years of age who applied to the cardiology outpatient clinics with at least one attack of AF identified on electrocardiographic examination". Emergency admittances, inpatients, patients who refuse to be included in the study or do not sign the consent form will be excluded from the study. The standard registration form shown in **Figure 3** will be filled out for each patient and the patients will sign a consent form.

Trial outcomes

Primary outcome considered is the major cardiac endpoints (death, transient ischemic attack, stroke, systemic thromboembolism, major hemorrhage and hospital admission). In addition, the medication condition of the patients will also be

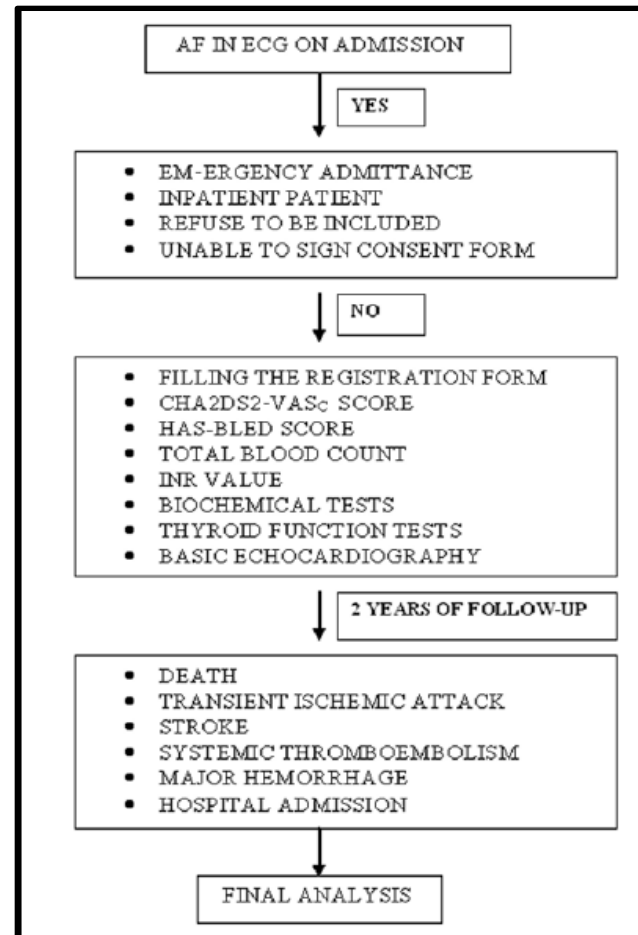
assessed. The inclusion of the patients in the study will be started in April 2012 and the date of the achievement of the targeted number of patients will be the ending date.

Ethical considerations

Ethics Committee consent of the study coordinating center was obtained (The Ethics Committee of the University of Dicle; 28/3/2012-491). Every patient will sign a consent form.

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Main steps of the procedures

Variables of AFTER study

Kind of AF -1

First attack of AF	Paroxysmal AF	Persistent AF	Permanent AF
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Kind of AF -2

Valvular AF	Non-valvular AF
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VALVULAR AF

Mitral stenosis + AF	Prosthetic Heart Valve + AF
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NON-VALVULAR AF

Congestive HF/ LV dysfunction	Stroke/ TIA/ Thromboemboli
HT	Vascular Disease *
Age ≥ 75 years	Age 65-74 years
Type-2 DM	Women sex

*MI, PAH, Aortic plaque

CONCOMITANT DISEASES

Ischemic cardiomyopathy	Hypertrophic cardiomyopathy
Dilated cardiomyopathy	Thyrotoxicosis
Smoking	

BLEEDING

HT	Bleeding history
Abnormal renal or hepatic functions	Labile INR
Stroke/Tia history	Age > 65 years
Drugs or alcohol use	

ECHOCARDIOGRAPHIC PARAMETERS

EF	LA thrombus/SEC
LA diameter	LA volume

HEMATOLOGICAL PARAMETERS

Wbc	Neutrophils
Hb	Lymphocytes
Htc	Monocytes
Plt	Basophiles
MPV	Eosinophiles
RDW	

BIOCHEMICAL PARAMETERS

Urea	GGT
Creatinine	CRP
AST	FT3
ALT	FT4
Uric acid	TSH
I. Bil	PTZ
T. Bil.	INR
LDL	Triglyceride
HDL	T.cholesterol
Glucose	

DRUGS USED

Warfarin	Digoksin
ASA	ACE inh
Ticlopidine	ARB
Clopidogrel	Diuretic
B-blocker	Alfa-blocker
Non-dihydropyridine CCB	Dihydropyridine CCB
Amiodarone	Propofenon
Statin	Other.....

WHY DO THE PATIENTS WITH ORAL ANTICOAGULATION INDICATION NOT USE THE DRUG?

Doctor didn't prescribe
Medical contraindication
Patient cessation without consulting the doctor
Socio-economic causes
Patient refused using the drug
Patient applying the doctor for the first time
Bleeding history
Other (please write the cause)

IS THE INR VALUE IN BETWEEN THE EFFECTIVE INTERVAL IN PATIENTS USING WARFARIN?

Yes	No
-----	----

WHAT DID THE DOCTOR DO / WHAT WAS OFFERED TO THE PATIENT AFTER QUESTIONNAIRE?

Patient is hospitalized
Anticoagulant (with warfarin) treatment initialized
Dosage of the anticoagulant drug that the patient use is adjusted
Anticoagulant drug that the patient use is stopped
Other (please write)

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Türk Kardiyol Dern Arş - Arch Turk Soc Cardiol 2013;41(2):99-104 doi: 10.5543/tkda.2013.18488

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Epidemiology of atrial fibrillation in Turkey: preliminary results of the multicenter AFTER* study

Türkiye’de atriyum fibrilasyonu epidemiyolojisi; çok merkezli AFTER* çalışmasının ön sonuçları

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ÖZET

Amaç: Atriyum fibrilasyonu (AF) klinik pratiğimizde en sık rastlanan ritm bozukluğu olup ülkemizde bu konuda yapılmış çok merkezli bir epidemiyolojik çalışma bulunmamaktadır. Bu çalışmanın amacı ülkemizde ilk kez yapılmış olan çok merkezli, ileriye dönük Atrial Fibrillation in Turkey: Epidemiologic Registry (AFTER) çalışmasının kayıtlarından yararlanarak AF'ye klinik yönden yaklaşımımızı değerlendirmektir.

Çalışma planı: Ülkemizde nüfus dağılımı göz önünde bulundurularak 17 ayrı üçüncü basamak merkezden, elektrokardiyografisinde en az bir defa AF atağı tespit edilmiş olan ardışık 2242 hasta çalışmaya alındı. Acil polikliniğine başvuran ya da yatmakta olan hastalar çalışmadan dışlandı. Hastaların epidemiyolojik verileri ve uygulanan tedaviler değerlendirildi.

Bulgular: Çalışma popülasyonunu oluşturan hastaların %60'ı kadındı, hastaların ortalama yaşı 66.8 ± 12.3 yıl olarak saptandı. Türk nüfusunda en sık görülen AF tipi non-valvular AF (%78) olup, AF'li hastaların %81'i ısrarcı-kalıcı AF'li idi. AF'ye en sık eşlik eden komorbid durum hipertansiyon (%67) olarak bulundu. Hastaların %15.3'ünde inme, geçici iskemik atak ve sistemik tromboemboli hikayesi mevcut iken kanama öyküsü hastaların %11.2'sinde kaydedildi. Çalışma süresinde hastaların %50'si warfarin, %53'ü de aspirin kullanıyordu. Oral antikoagülan ilaç kullanan hastaların %41.3'ünde etkin INR düzeyi saptandı. Oral antikoagülan ilaç kullanmamanın en sık nedeni (%69) hekim ihmali olarak saptandı.

Sonuç: Bu veriler klinik pratiğimizde özellikle AF'li hastaların antitrombotik tedavileri konusunda daha dikkatli olunması gerektiğini göstermektedir.

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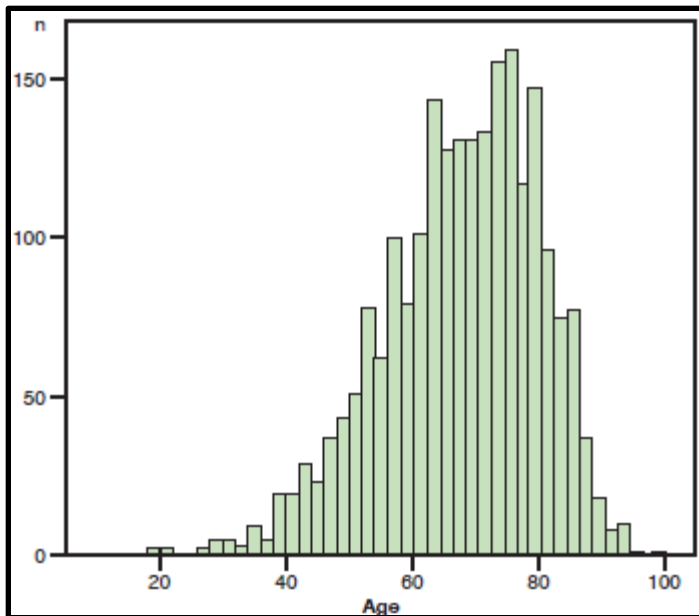
	n	%	Mean±SD
Gender (Male / Female)	900 / 1342	40.1 / 59.9	
Age	2242		66.8±12.3
Age ≥75	669	29.8	
Body mass index	2227		27.8±5.3
Atrial fibrillation type			
Non-valvular	1745	77.8	
Valvular	497	22.2	
Prosthetic valve	280	12.5	
First attack	91	4.1	
Paroxysmal	328	14.6	
Persistent-permanent	1823	81.3	
Hypertension	1501	66.9	
Heart failure / LV dysfunction	641	28.6	
Type II diabetes mellitus	494	22	
Vascular disease	566	25.2	
Thyroid dysfunction	118	5.3	
Smoking	280	12.5	
Stroke / TIA / Thromboembolism	342	15.3	
Bleeding history	250	11.2	
Labile INR	252	11.2	
Effective INR	460	41.3	

LV: Left ventricle; TIA: Transient ischemic attack; INR: International normalized ratio.

Demographic characteristics of patients

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Age distribution of patients with atrial fibrillation.

	n	%	Mean±SD
EF	2242		52.6±12.2
LA diameter	2242		4.7±0.8
LA SEC-thrombus	130	5.8	
Glucose	2226		119.9±46.3
Creatinine	2241		1.0±0.6
Total cholesterol	2228		177±43
Triglyceride	2228		136±80
HDL	2233		42±13
LDL	2233		111±34
INR	1115		2.43±1.54

EF: Ejection fraction; LA: Left atrium; SEC: Spontaneous echo contrast; HDL: High density lipoprotein; LDL: Low density lipoprotein; INR: International normalized ratio.

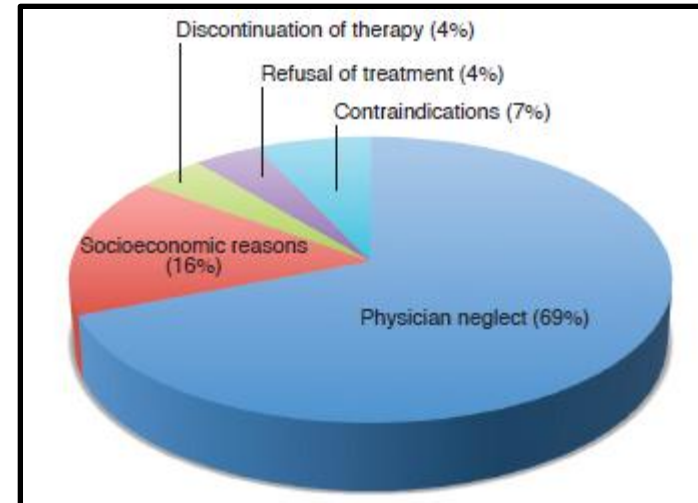
Echocardiographic and biochemical variables of the patients

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Medications	n	%
Warfarin	1115	49.7
Acetylsalicylic acid	1183	52.7
Clopidogrel	134	6
Ticlopidine	12	0.5
ACE-I	723	32.2
ARB	427	19.0
Beta-blockers	1316	58.7
Non-dihydropyridine CCB	355	15.8
Dihydropyridine CCB	171	7.6
Digoxin	622	27.7
Diuretics	1047	46.7
Statins	318	14.2
Alfa-blockers	40	1.8
Nitrates	65	2.9
Amiodarone	97	4.3
Propafenone	33	1.5

ACE-I: Angiotensin converting enzyme inhibitor; ARB: Angiotensin receptor blocker; CCB: Calcium channel blocker.



Reasons for not receiving oral anticoagulant therapy

Medications used by the patients

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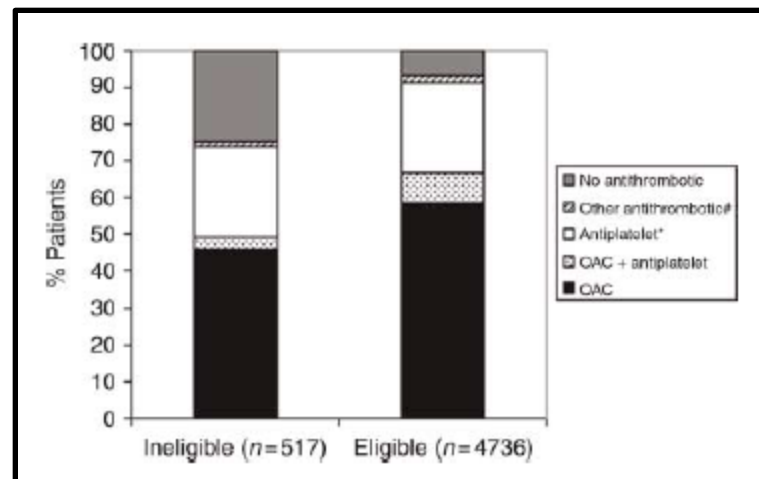
EUROPEAN
SOCIETY OF
CARDIOLOGY*

European Heart Journal (2005) 26, 2422-2434
doi:10.1093/eurheartj/ehi505

Clinical research

Atrial fibrillation management: a prospective survey in ESC Member Countries The Euro Heart Survey on Atrial Fibrillation

Robby Nieuwlaat^{1*}, Alessandro Capucci², A. John Camm³, S. Bertil Olsson⁴, Dietrich Andresen⁵,
D. Wyn Davies⁶, Stuart Cobbe⁷, Günter Breithardt⁸, Jean-Yves Le Heuzey⁹, Martin H. Prins¹⁰,
Samuel Lévy¹¹, and Harry J.G.M. Crijns¹ on behalf of the Euro Heart Survey Investigators



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Baczek et al. BMC Family Practice 2012, 13:5
<http://www.biomedcentral.com/1471-2296/13/5>



RESEARCH ARTICLE

Open Access

Predictors of warfarin use in atrial fibrillation in the United States: a systematic review and meta-analysis

Victoria L Baczek¹, Wendy T Chen¹, Jeffrey Kluger² and Craig I Coleman^{1*}

Abstract

Background: Despite warfarin's marked efficacy, not all eligible patients receive it for stroke prevention in AF. The aim of this meta-analysis was to evaluate the association between prescriber and/or patient characteristics and subsequent prescription of warfarin for stroke prevention in patients with atrial fibrillation (AF).

Methods: Observational studies conducted in the US using multivariate analysis to determine the relationship between characteristics and the odds of receiving warfarin for stroke prevention were identified in MEDLINE, EMBASE and a manual review of references. Effect estimates of prescriber and/or patient characteristics from individual studies were pooled to calculate odds ratios (ORs) with 95% confidence intervals.

Results: Twenty-eight studies reporting results of 33 unique multivariate analyses were identified. Warfarin use across studies ranged from 9.1%-79.8% (median = 49.1%). There was a moderately-strong correlation between warfarin use and year of study ($r = 0.60$, $p = 0.002$). Upon meta-analysis, characteristics associated with a statistically significant increase in the odds of warfarin use included history of cerebrovascular accident (OR = 1.59), heart failure (OR = 1.36), and male gender (OR = 1.12). Those associated with a significant reduction in the odds of warfarin use included alcohol/drug abuse (OR = 0.62), perceived barriers to compliance (OR = 0.87), contraindication(s) to warfarin (OR = 0.81), dementia (OR = 0.32), falls (OR = 0.60), gastrointestinal hemorrhage (OR = 0.47), intracranial hemorrhage (OR = 0.39), hepatic (OR = 0.59), and renal impairment (OR = 0.69). While age per 10-year increase (OR = 0.78) and advancing age as a dichotomized variable (cut-off varied by study) (OR = 0.57) were associated with significant reductions in warfarin use; qualitative review of results of studies evaluating age as a categorical variable did not confirm this relationship.

Conclusions: Warfarin use has increased somewhat over time. The decision to prescribe warfarin for stroke prevention in atrial fibrillation is based upon multiple prescriber and patient characteristics. These findings can be used by family practice prescribers and other healthcare decision-makers to target interventions or methods to improve utilization of warfarin when it is indicated for stroke prevention.

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Atrial Fibrillation in Turkey:
Epidemiologic Registry



Circulation Journal
Official Journal of the Japanese Circulation Society
<http://www.j-circ.or.jp>

ORIGINAL ARTICLE
Arrhythmia/Electrophysiology

Present Status of Anticoagulation Treatment in Japanese Patients With Atrial Fibrillation

– A Report From the J-RHYTHM Registry –

Hirotsugu Atarashi, MD, PhD; Hiroshi Inoue, MD, PhD; Ken Okumura, MD, PhD;
Takeshi Yamashita, MD, PhD; Naoko Kumagai; Hideki Origasa, PhD
for the J-RHYTHM Registry Investigators

Background: Underuse and an inadequate range for the international normalized ratio (INR) for warfarin use are still problems in the management of the patients with atrial fibrillation (AF) in Japan.

Methods and Results: From January to July 2009, a total of 7,937 AF patients [5,468 men (68.6±10.0 years) and 2,469 women (72.2±9.0 years)] were registered from 158 institutions for the J-RHYTHM Registry. Overall, 34.2% of the patients were over the age of 75. The associated cardiovascular diagnoses were hypertension in 59.1%, coronary artery disease in 10.1%, cardiomyopathy in 8.3%, valvular heart disease in 13.7% and artificial cardiac valves in 3.1% of the patients. The type of AF was paroxysmal in 37.1%, persistent in 14.4%, and permanent in 48.5%. Overall, 87.3% of patients were taking warfarin (2.9±1.2 mg/day), of whom 66.0% had an INR between 1.6 and 2.6, and 35.4% were in the INR range from 2.0 to 3.0 at the time of registration. Aspirin was prescribed in 22.3% of cases. The CHADS₂ score was 0 in 15.7% of patients, 1 in 34.0%, and ≥2 in 50.3%.

Conclusions: At present, warfarin is used extensively in patients with AF whose stroke risk is relatively low (ie, in Japan) and half of them had CHADS₂ scores of 0 to 1 (UMIN Clinical Trials Registry UMIN000001569). (*Circ J* 2011; 75: 1328–1333)

Key Words: Atrial fibrillation; CHADS₂ score; International normalized ratio (INR); Multicenter registry; Warfarin

AFTER

Atrial Fibrillation in Turkey:
Epidemiologic Registry

Cardiology Journal
2013, Vol. 20, No. 4, pp. 447–452
DOI: 10.5603/CJ.a2013.0055
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ISSN 1897–5593



ORIGINAL ARTICLE

The Atrial Fibrillation in Turkey: Epidemiologic Registry (AFTER)

Faruk Ertas¹, Nihan Kahya Eren², Hasan Kaya¹, Alpay Aribas³, Goksel Acar⁴,
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AFTER

Atrial Fibrillation in Turkey:
Epidemiologic Registry

Abstract

Background: *AFTER (Atrial Fibrillation in Turkey: Epidemiologic Registry) is a prospective, multicenter study designed with the aim of describing the prevalence and epidemiology of AF practice in Turkey. This study aims to evaluate stroke risk in non-valvular atrial fibrillation (AF) and anticoagulant drug utilization within conformity to AF guidelines.*

Methods: *Patients were recruited in 17 referral hospitals reflecting all the population of 7 geographical regions of Turkey. 2242 consecutive patients who had been admitted with AF on ECG were included in the study. 1745 of these patients, who had non-valvular AF, were included in the statistical evaluation. Stroke risk was evaluated with the CHA₂DS₂-VASc score.*

Results: *The average age of participants was determined to be 69.2 ± 11.5 years (56% female). Persistent-permanent AF was found to be the most common type of non-valvular AF (78%). The most common comorbid disorder was hypertension (73%). It was found that oral anticoagulant therapy was used by 40% of all patients, 37% of whom had effective INR (2.0–3.0). Upon multivariate analysis, age was found to be the only independent predictor of stroke among the variables' effects on thromboembolic events that created CHA₂DS₂-VASc abbreviations (OR 1.026, p < 0.001).*

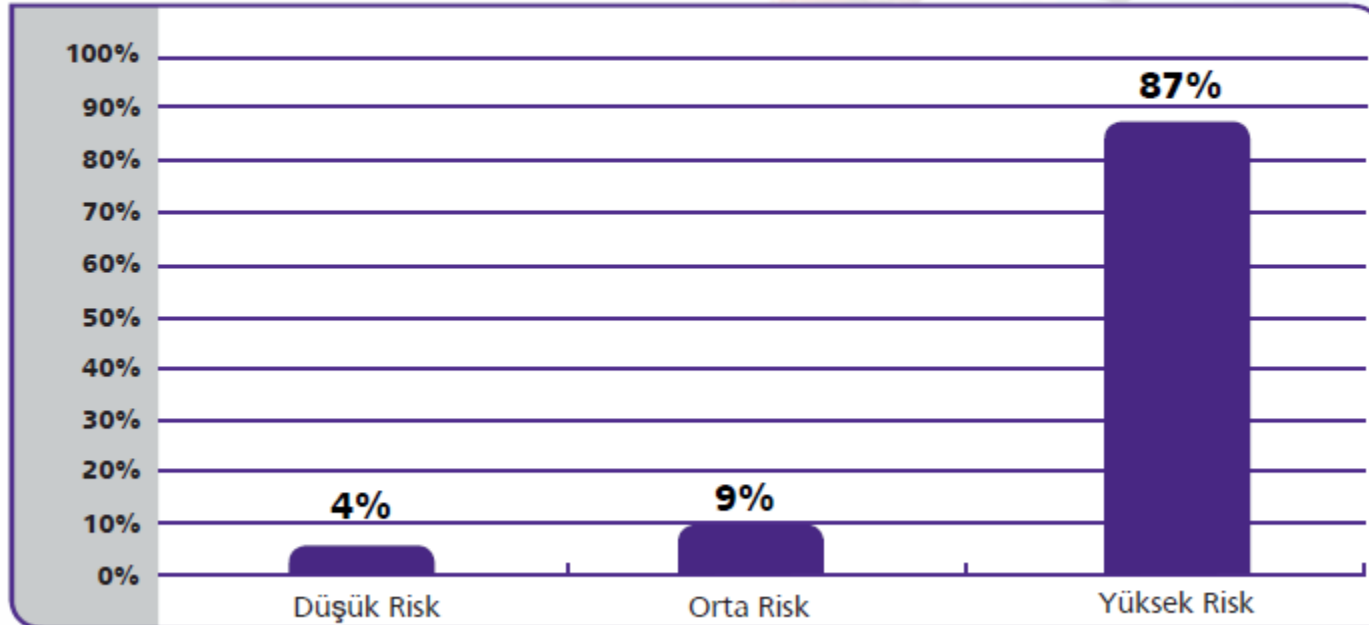
Conclusions: *These results suggest that stroke risk scores should be thoroughly heeded based on guidelines, and that anticoagulation must be applied according to their guidance. (Cardiol J 2013; 20, 4: 447–452)*

Key words: atrial fibrillation, stroke, anticoagulant, epidemiology

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Atrial Fibrillation in Turkey:
Epidemiologic Registry

CHADS₂ -VASC Skoruna göre Türkiye Popülasyonu



■ CHADS₂-VASC Skoruna göre Türkiye Popülasyonu

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Atrial Fibrillation in Turkey:
Epidemiologic Registry

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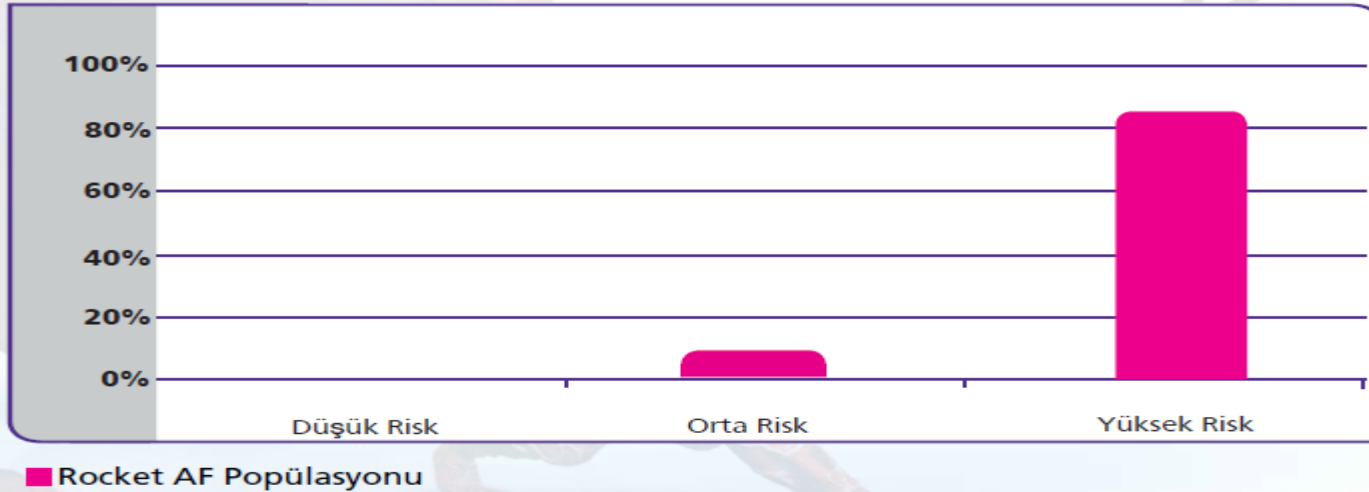
SEPTEMBER 8, 2011

VOL. 365 NO. 10

Rivaroxaban versus Warfarin in Nonvalvular Atrial Fibrillation

Manesh R. Patel, M.D., Kenneth W. Mahaffey, M.D., Jyotsna Garg, M.S., Guohua Pan, Ph.D., Daniel E. Singer, M.D., Werner Hacke, M.D., Ph.D., Günter Breithardt, M.D., Jonathan L. Halperin, M.D., Graeme J. Hankey, M.D., Jonathan P. Piccini, M.D., Richard C. Becker, M.D., Christopher C. Nessel, M.D., John F. Paolini, M.D., Ph.D., Scott D. Berkowitz, M.D., Keith A.A. Fox, M.B., Ch.B., Robert M. Califf, M.D., and the ROCKET AF Steering Committee, for the ROCKET AF Investigators*

Rocket AF Popülasyonu



AFTeR

Atrial Fibrillation in Turkey:
Epidemiologic Registry



Circulation Journal
Official Journal of the Japanese Circulation Society
<http://www.j-circ.or.jp>

ORIGINAL ARTICLE
Arrhythmia/Electrophysiology

Present Status of Anticoagulation Treatment in Japanese Patients With Atrial Fibrillation

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Key Words: Atrial fibrillation; CHADS2 score; International normalized ratio (INR); Multicenter registry; Warfarin

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Atrial Fibrillation in Turkey: Epidemiologic Registry

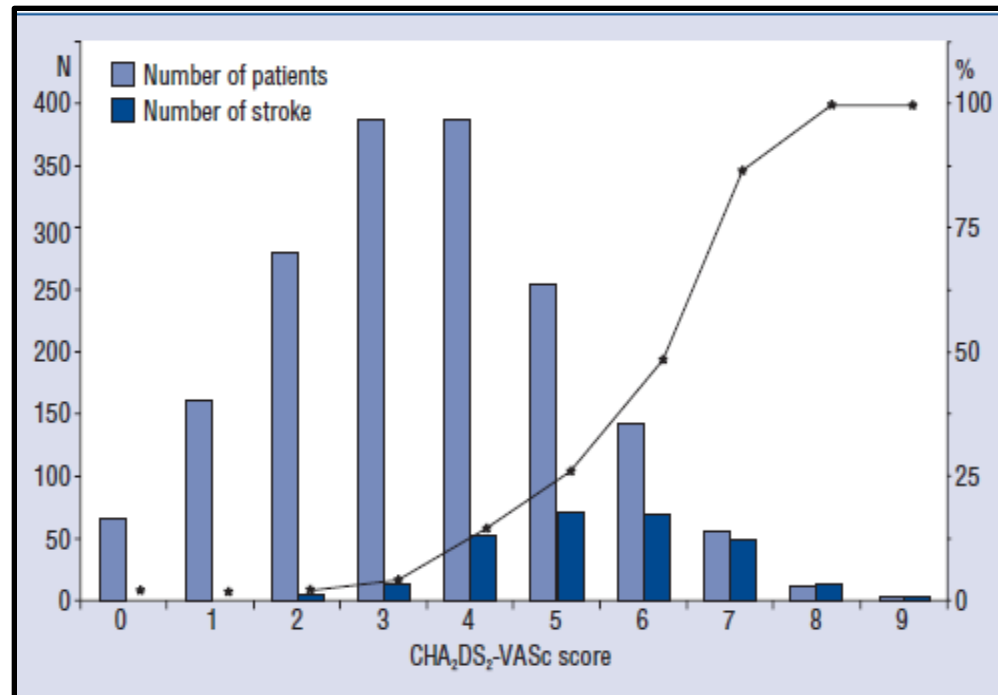
Variable	Low-intermediate CHA ₂ DS ₂ -VASc score (n = 227)	High CHA ₂ DS ₂ -VASc score (n = 1518)	P
Age [years]	54.6 ± 11.1	71.4 ± 9.8	< 0.001
Female	55	929	< 0.001
Body mass index	27.8 ± 4.4	28.0 ± 5.5	0.490
AF type:			< 0.001
First attack	40 (18%)	51 (3%)	
Paroxysmal	76 (34%)	213 (14%)	
Persistent	19 (8%)	245 (16%)	
Permanent	92 (40%)	1009 (67%)	
Hypertension	55 (24%)	1219 (80%)	< 0.001
Heart failure-LV dysfunction	15 (7%)	522 (34%)	< 0.001
Diabetes mellitus	6 (3%)	412 (27%)	< 0.001
Vascular disease	12 (5%)	510 (34%)	< 0.001
Stroke-TIA-thromboembolism	0	266 (18%)	< 0.001
History of stroke	0	216 (14%)	< 0.001
Labile INR	9 (4%)	161 (11%)	0.002
Effective INR (n = 702)	31 (50%)	231 (36%)	0.031
Ejection fraction	58.3 ± 8.7	51.2 ± 12.8	< 0.001

AF — atrial fibrillation; LV — left ventricular; TIA — transient ischemic attack; INR — international normalized ratio

Demographic characteristics of the patients

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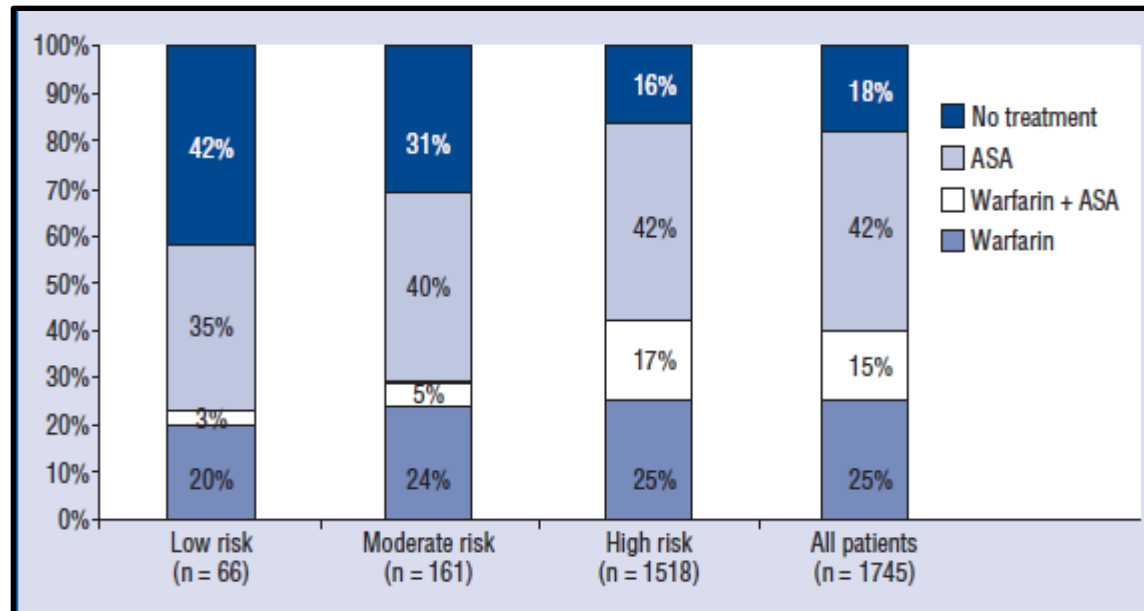
Atrial Fibrillation in Turkey: Epidemiologic Registry



The relationship between CHA₂DS₂-VASc scores and number of patients with stroke; *percentage of stroke

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Atrial Fibrillation in Turkey:
Epidemiologic Registry



The use of oral anticoagulant/antiplatelet medications according to the stroke risk groups

AFTER

Atrial Fibrillation in Turkey:
Epidemiologic Registry



ORIGINAL ARTICLE

Cardiology Journal
2014, Vol. 21, No. 2, pp. 158–162
DOI: 10.5603/CJ.a2013.0085
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ISSN 1897–5593

Epidemiology, anticoagulant treatment and risk of thromboembolism in patients with valvular atrial fibrillation: Results from Atrial Fibrillation in Turkey: Epidemiologic Registry (AFTER)

Hasan Kaya¹, Faruk Ertaş¹, Zekeriya Kaya², Nihan Kahya Eren³, Murat Yüksel¹,
Bayram Köroğlu⁴, Nuri Köse⁵, Abdulkadir Yıldız¹, Tolga Çimen⁶,
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AFTER

Atrial Fibrillation in Turkey:
Epidemiologic Registry

Abstract

Background: *The aim of this study was to perform a multicenter, prospective investigation regarding the epidemiology, the current effectiveness of therapeutic anticoagulation, and the risk of thromboembolism in patients with valvular atrial fibrillation (AF) based on the records of the Atrial Fibrillation in Turkey: Epidemiologic Registry (AFTER) study.*

Methods: *Patients were selected from a total of 2,242 consecutive admissions that presented with AF diagnosed via electrocardiogram. Those diagnosed with non-valvular AF were excluded from the AFTER study population, which left 497 patients with valvular AF for analysis.*

Results: *The etiology of valvular AF in patients was either attributed to rheumatic mitral valve stenosis ($n = 217$) or possessing a prosthetic heart valve ($n = 280$). Out of all the patients with valvular AF, 83.1% were taking warfarin for anticoagulation. Only 36.1% demonstrated a therapeutic international normalized ratio (INR), and among those patients it was found that 19.1% exhibited a labile INR. Multivariate analysis revealed that age was the only independent predictor of thromboembolic events in patients with valvular AF.*

Conclusions: *Many valvular AF patients are not maintained at therapeutic INR levels, which poses a threat to patient health as they age and are at greater risk for thromboembolism. (Cardiol J 2014; 21, 2: 158–162)*

Key words: atrial fibrillation, valvular, predictor, anticoagulant treatment

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Atrial Fibrillation in Turkey: Epidemiologic Registry

Mean age [years]	58.4 ± 11.5
Gender:	
Male	139 (28%)
Female	358 (72%)
Age ≥ 75 years	37 (7.4%)
Body mass index [kg/m ²]	27.0 ± 4.7
Atrial fibrillation type:	
Mitral stenosis	217 (43.7%)
Prosthetic valve	280 (56.3%)
Paroxysmal	39 (7.8%)
Persistent-permanent	458 (92.2%)
Hypertension	227 (45.7%)
Heart failure/LV dysfunction	104 (20.9%)
Type II diabetes mellitus	76 (15.3%)
Vascular disease	44 (8.9%)
Thyroid dysfunction	18 (3.6%)
Smoking	60 (12.1%)
Stroke/TIA/thromboembolism	76 (15.3%)
History of stroke	66 (13.3%)
Bleeding history	79 (15.9%)
Anticoagulant use	413 (83.1%)
Effective INR (n = 413)	149 (36.1%)
Labile INR (n = 413)	79 (19.1%)

Continuous data are expressed as mean ± standard deviation; categorical data are expressed as n (%); INR — international normalized ratio; LV — left ventricle; TIA — transient ischemic attack

Baseline patient demographics

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Atrial Fibrillation in Turkey: Epidemiologic Registry

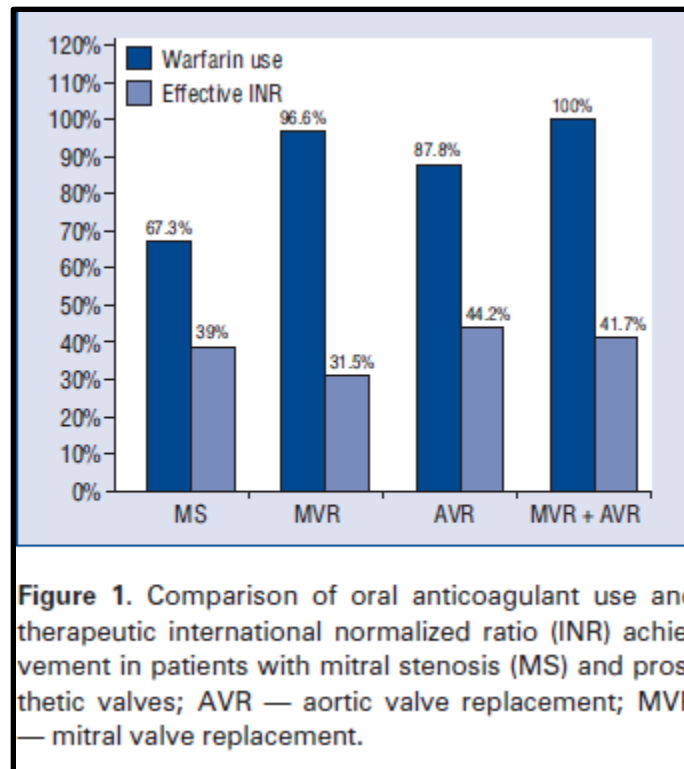
Variables	Mitral stenosis (n = 217)	Prosthetic valve (n = 280)	P*
Mean age [years]	59.1 ± 11.9	57.9 ± 11.2	0.247
Female	160 (73.7%)	198 (70.7%)	0.457
Body mass index [kg/m ²]	27.2 ± 4.9	26.9 ± 4.6	0.403
Atrial fibrillation type:			0.002
Paroxysmal	26 (12%)	13 (5%)	
Persistent	41 (19%)	39 (14%)	
Permanent	150 (69%)	228 (81%)	
Hypertension	102 (47%)	125 (45%)	0.600
Heart failure/LV dysfunction	34 (16%)	70 (25%)	0.011
Diabetes mellitus	34 (16%)	42 (15%)	0.837
Vascular disease	21 (10%)	23 (8%)	0.569
Stroke/TIA/thromboembolism	35 (16%)	41 (15%)	0.648
History of stroke	32 (15%)	34 (12%)	0.396
Bleeding history	30 (14%)	49 (18%)	0.266
Anticoagulant use	146 (67.3%)	267 (95.4%)	< 0.001
Effective INR (n = 413)	57 (39%)	92 (35%)	0.354
Labile INR (n = 413)	25 (17%)	54 (20%)	0.444
Ejection fraction [%]	58.3 ± 8.7	51.2 ± 12.8	< 0.001
LA diameter [cm]	5.1 ± 0.9	5.2 ± 0.9	0.461
SEC-thrombus	31 (14%)	12 (4%)	< 0.001

Continuous data are expressed as mean ± standard deviation; categorical data are expressed as n (%); *Student's t-test, Mann-Whitney U test and χ^2 test; INR — international normalized ratio; LV — left ventricle; LA — left atrium; SEC — spontaneous echo contrast; TIA — transient ischemic attack

Demographic characteristics of patients with mitral valve stenosis and prosthetic valves

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Atrial Fibrillation in Turkey: Epidemiologic Registry



AFTER

Atrial Fibrillation in Turkey:
Epidemiologic Registry

Nisan 2014...

AFTER Çalışması'nın 2 yıllık sonuçları hazırlık aşamasında, yakın zamanda verilerimizi tıp literatürüne kazandırmak dileğiyle ...

AFTER

Atrial Fibrillation in Turkey:
Epidemiologic Registry



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Sayın Dr. Faruk Ertaş

"AFTER (Atrial Fibrillation in Turkey: Epidemiologic Registry) Çalışması; Non-valvüler atriyal fibrilasyonlu hastalarda CHA₂DS₂-VASc skoru ile inme riski ve profilaktik ilaç kullanımının değerlendirilmesi" isimli çalışmanız "28. Ulusal Kardiyoloji Kongresi En İyi Sözlü Bildiri İkincilik Ödülü"ne değer bulunmuştur. Kutlar, başarılarınızın devamını dileriz.

Prof. Dr. M. Kemal EROL
TKD Genel Sekreteri

Prof. Dr. Ömer KOZAN
TKD Başkanı

AFTER

Atrial Fibrillation in Turkey:
Epidemiologic Registry




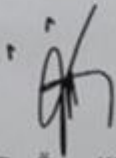
Dr. Faruk Ertaş

Stroke risk classification according to the CHA2DS2-VASc score and profile of oral anticoagulation use in patients with non-valvular atrial fibrillation: Result of AFTER (Atrial Fibrillation in Turkey: Epidemiologic Registry) study isimli çalışmanız

TKD Prof. Dr. Remzi Özcan Genç Araştırmacı Teşvik İkincilik Ödülüne değer bulunmuştur.

Kutlar, başarılarınızın devamını dileriz.


Prof. Dr. Mustafa Kemal EROL
Genel Sekreter


Prof. Dr. Ömer KOZAN
Başkan

AFTeR

Atrial Fibrillation in Turkey:
Epidemiologic Registry




Dr. Faruk Ertuş

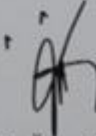
The Atrial Fibrillation in Turkey: Epidemiologic Registry (AFTER)

isimli çalışmanız

TKD - Servier En İyi Yayın İkincilik Ödülüne değer bulunmuştur.

Kutlar, başarılarınızın devamını dileriz.


Prof. Dr. Mustafa Kemal EROL
Genel Sekreter


Prof. Dr. Ömer KOZAN
Başkan

AFTER

Atrial Fibrillation in Turkey:
Epidemiologic Registry



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Sayın Yrd. Doç. Dr. Ertaş,

Bildiğiniz gibi Türk Kardiyoloji Derneği Yönetim Kurulu her yıl Türk Kardiyoloji Derneği Arşivi'nde yayınlanan 5 araştırma makalesine uluslararası A sınıfı dergilerde yayınlanan makalelere verilen düzeyde ödül vermektedir. Bu yıldan itibaren bu ödül, geçen yıl yitirdiğimiz değerli üyemiz ve araştırmacımız **Dr. Ümit Aker'in** adıyla anılacaktır.

Yayın Kurulumuz 2013 yılı içinde yayınlanan makaleler üzerinde yaptığı değerlendirme sonucunda sizin TKD Arşivi'nin Mart sayısındaki, "**Türkiye'de Atriyum Fibrilasyonu Epidemiyolojisi; Çok Merkezli AFTER Çalışmasının Ön Sonuçları**" başlıklı yazınıza bu ödüllerden birinin verilmesini önermiş ve Yönetim Kurulumuz da bu öneriyi uygun bulmuştur.

Bu başarınızdan dolayı sizi kutluyor ve dergimize olan ilginizin gelecekte de sürmesini diliyoruz.

Saygılarımızla.

Prof. Dr. Mustafa Kemal Erol

Prof. Dr. Vedat Sansoy

TKD Genel Sekreteri

TKD Arşivi Editörü

AFTER

Atrial Fibrillation in Turkey:
Epidemiologic Registry

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- Prof.Dr. Hakan ÖZHAN
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- Dicle Üniversitesi Kalp Hastanesi Öğretim üyelerine
- Tüm “AFTER” araştırmacılarına teşekkürlerimi sunarım...



TEŞEKKÜRLER