

Türkiye'de Yapılmış ve Yapılmakta Olan Atriyal Fibrilasyon Çalışmaları

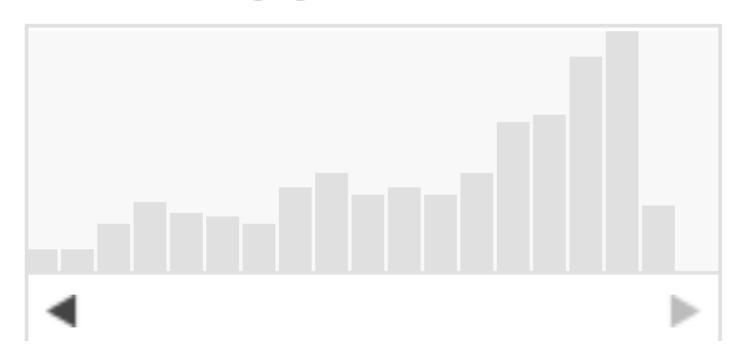
Dr. Uğur Önsel TÜRK, FESC, ECDS

EHRA Cardiac Device Specialist



Results by year





Prevalans

TEKHARF KOHORTLARI-TARF

Tüm			Erkek			Kadın			
Yaş grupları	Sayı	AF	Oran (%)	Sayı	AF	Oran (%)	Sayı	AF	Oran (%)
32-59	1961	9	0.46	969	3	0.31	992	6	0.60
60-69	767	16	2.09	365	6	1.64	402	10	2.49
≥70	722	18	2.49	373	7	1.88	349	11	3.15
Tüm	3450	43	1.25	1707	16	0.94	1743	27	1.55

TRAF

Prevalans (>18 y); 1.08 (507 136); NVAF/VAF=0,80/0.28

NEDEN PREVALANS DÜŞÜK?

TRAF ARAŞTIRMACILARI: «ÇÜNKÜ DAHA GENCİZ»

OLASI DİĞER NEDENLER: *GSS KAPSAMI? *ASEMPTOMATİK OLGULAR?

*TANI ÖNCELİĞİ, TANI GİRİLMEMESİ, YANLIŞ TANI?

Arch Turk Soc Cardiol 2008;36(4):214-222 Europace (2017) **0**, 1–7

AF KARAKTERİSTİKLERİ

ÇALIŞMA ADI	TASARIM	POPULASYON	SAYI	YAŞ	CINSIYET (K/E)	NVAF/VAF (%)	FA/PAROX/ PERS/ PERM
AFTER (2012)	KESİTSEL	>18 y, POLİKLİNİĞE BAŞVURAN AF OLGULARI (3. BASAMAK)	2242	66,8±12,3	1,49	77,8/22,2	4,1/14,6/81,3
TRAF (2013)	GSS VERİTABANI KAYDI	>18 y, MEDULA SISTEMINDE AF TANISI ALAN OLGULAR	507 136	66,04±0,02	1,33	83,4/16,6	VERİ YOK
TREQ-AF (2014)	PROSPEKTİF GÖZLEMSEL	>18 y, NVAF OLGULARI	213	65	0,75	NA	/32,9/23,3/43,8
REALISE AF (TR KOHORT) (2015)	KESİTSEL	SON 1 YILDA DÖKÜMANTE AF EPİZODU (EKG/HOLTER)	510	67,1±12,3	1,28	VERİ YOK	10,5/12,6/20,7/56
WATER (2015)	PROSPEKTİF GÖZLEMSEL	≥6 AY WARFARİN KULLANAN AF OLGULARI	572	67.28±12.4	1,49	70,5/29,5	/32/68
RAMSES (2016)	KESİTSEL	>18 y, NVAF OLGULARI	6273	69.6±10.7	1,27	NA	5/14/81
NOAC-TURK (2017)	KESİTSEL	NOAK TEDAVİSİ ALTINDAKİ OLGULAR (>95 AF)	2862	70,3±10,2	1,53	NA	/11,4/83,3
NOAC-TR (2017)	KESİTSEL	NOAK TEDAVİSİ ALTINDAKİ NVAF OLGULARI	2738	70±10	1,44	NA	VERİ YOK

Komorbiditeler

ÇALIŞMA ADI	нт	HF	IS/TIA/PE	DM	KAH/IHD	RENAL DIS/CKD	MI HISTORY	THYROID DISEASE	PAD/VASC DISEASE	COPD/PULM DISEASE
TRAF	80,1	44,7	9,77	20,4	68,5*	8,2	7,9	6,8	20,9	30,3
AFTER	66,9	28,6	15,3	22	25,2*	Veri yok	Veri yok	5,3	25,2*	Veri yok
NOAC-TR	78	25	12	25	27	7	Veri yok	Veri yok	3	Veri yok
NOAC- TURK	81,1	26,7	11,4	19,8	26,6	7,8	Veri yok	Veri yok	6,2	Veri yok
REALISE AF (TR KOHORT)	70	43,8	14	24,3	33,3	3(>s3)	Veri yok	8,6	2,4 (SVD:13)	16
WATER	57,3	35,3	11	22,5	28	Veri yok	11,8	Veri yok	8,7	Veri yok
RAMSES	69	22	13,5	22	29	Veri yok	Veri yok	Veri yok	Veri yok	23

BEKLEME SALONUNDA OTURAN 10 AF HASTASININ;

- 6 kadın, 4 erkek
- 1-2'si VAF'li
- 8'i hipertansif, 4'ü kalp yetmezlikli
- 2'si diyabetik, 3'ü koroner arter hastası
- 1'i böbrek yetmezliğinden muzdarip, 2'sinin KOAH'ı var.
- 1'i paroksismal AF'li. 1-2'si ritm kontrol stratejisi ile izleniyor.
- Şanssız olan bir tanesi de daha önce inme geçirmiş.

AF YÖNETİMİ

HIZ/RİTM KONTROLÜ

• INMEDEN KORUNMA STRATEJILERI

HIZ/RİTM KONTROLÜ REALISE-AF TR KOHORT

Table 4. AF Management in relation to rhythm-control and rate control strategies applied before and after the enrollment visit

	Rhythr	n control	Rate	control	N	one	Т	otal
	n	%	n	%	n	%	n	%
Strategy at visit 0								
Rhythm-control	65	83.3	15	4.2	18	23.4	98	19.2
Rate-control	11	14.1	340	95.8	39	50.6	390	76.5
None	2	2.6	0	0.0	20	26.0	22	4.3
Total	78	15.3	355	69.6	77	15.1	510	100.0

ANTİKOAGÜLAN TEDAVİ ve YÖNETİMİ

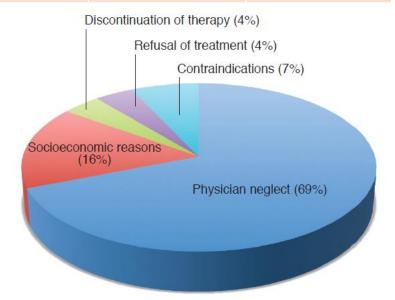
- KULLANIM DURUMU NEDİR?
- ❖ UNDERTREATMENT/OVERTREATMENT MESELES!?
- NE KADAR İYİ YÖNETİLMEKTEDİR?
- ❖ WARFARİN İÇİN TTR ORANLARI NEDİR?
- ❖ NOAC'LAR POZOLOJİYE NE KADAR UYGUN VERİLMEKTEDİR?
- ❖ TEDAVİ UYUNCU/TAKİBİ (HASTA/HEKİM) NASILDIR?
- TEDAVİNİN ETKİNLİK VE GÜVENLİK DURUMU NEDİR?

OAK KULLANIM DURUMU

ÇALIŞMA ADI	WARFARİN	NOAC	АР	UT	ОТ
REALISE AF (TR KOHORT) (2015)	40,4	NA	Veri yok	Veri yok	Veri yok
AFTER (2012)	49,7	NA	59,2	58 (NVAF)	23 (NVAF)
RAMSES (2016)	35	37	32	27	72

Table 2. Multivariate Logistic Regression Analysis of the Warfarin Use.

Variable	Odds Ratio	95% Confidence Interval	<i>P</i> Value
Age <75	1.454	1.167-1.811	.001
Female gender	1.099	0.891-1.355	.379
Body mass index	1.017	0.998-1.037	.080
Persistent/permanent AF	1.617	1.228-2.128	.001
Hypertension	1.356	1.069-1.720	.012
Preserved left ventricular function	1.303	1.028-1.653	.029
Diabetes mellitus	1.382	1.091-1.752	.007
Stroke	2.109	1.605-2.772	<.001
Vascular disease	1.067	0.845-1.347	.586
Major bleeding	1.246	0.895-1.736	.193
Left atrial diameter	1.285	1.092-1.512	.003



VKA TEDAVİSİ NASIL YÖNETİLİYOR?

ÇALIŞMA ADI	TASARIM	POPULASYON	TAKİP SÜRESİ (Ay) (median)	TTR TAYINI	TTR % (median)
AFTER (2012)	KESİTSEL	>18 y, POLİKLİNİĞE BAŞVURAN AF OLGULARI (3. BASAMAK)	NA	Cross sectional	41,3
WATER (2015)	PROSPEKTİF, GÖZLEMSEL	≥6 AY WARFARİN KULLANAN AF OLGULARI	24.21 ± 14 (22)	Traditional	42.26 ± 18.4 (40)
PROPER (2015)	PROSPEKTİF, GÖZLEMSEL	OAK KULLANAN, >18 y, NVAF OLGULARI	16 (3-35)	Rosendaal M.	40.5 ± 24.4
TREQ-AF (2014)	PROSPEKTİF, GÖZLEMSEL	>18 y, NVAF OLGULARI, TERSİYER MERKEZLER	12 ay (?)	Veri yok	77
WARFARİN-TR (2016)	PROSPEKTİF, GÖZLEMSEL	12 AYDIR (2014) DÜZENLİ WARFARİN KULLANAN OLGULAR (NVAF %38,4)	10.2±3.4 (INR ÖLÇÜM SAYISI)	Rosendaal M.	50.1±22.9 (?)

	Tüm Populasyon (n=572)	VAF (n=169; %29.5)	NVAF (n=403; %70.5)	p değeri
İzlem Süresi (Ay)	46.89±18.9 (22)	25.8±16 (21)	23.5±13 (22)	0.096
TTR (%)	42.26±18.4 (40)	46.89±18.9	40.32±17.8	<0.001
Ölüm (n; %)	26 (%4.55)	6 (%3.5)	20 (%5)	0.52
İnme/GIA	31 (%5.42)	7 (%4)	24 (%6)	0.43
İntrakranial Kanama	2 (%.3.5)	0 (%0)	2 (%.5)	1
Major Kanama	29 (%5.1)	6 (%3.5)	23 (%5.7)	0.4
Minör Kanama	222 (%38.8)	64 (%38)	158 (%39)	0.78
Kardiyak Hospitalizasyon	181 (%31.6)	53 (%31)	128 (%32)	1



NOAK Pozolojisine Ne Kadar Uyuluyor?

PROPER (2015);

- Prospektif; median 12 ay; W/R/D, Overtreatment (R %8; D%6) görece düşük.
- Düşük doz kullanım yaygın (R %22, D%42)
- Nonadherenece (<%80) düşük; R %10, D%14

NOAC-TURK (2017);

- Kesitsel, min 3 ay NOAC kullanan olgular (%95 NVAF); A,D,R
- Düşük doz kullanım yaygın (Tüm olgularda %47,6; A %33, R %44, D %60)
- Uyuma ilişkin veri yok

NOAC-TR (2017);

- Kesitsel, min 3 ay NOAC kullanan NVAF olguları; A,D,R
- Adherence; %23 High, %26 Mod, %51 Low

Neden İlaç Uyuncu Kötü?

Table 4. Multivariate Logistic Regression Analysis of Predictors for Poor NOAC Adherence.

	OR	95% CI	P
Depression	1.94	1.47-2.57	<.001
Dementia	1.66	1.21-2.27	.001
Age (\geq 65 years)	1.57	1.27-1.94	<.001
Given drug by someone else	1.51	1.22-1.87	<.001
Side effect	1.46	1.10-1.94	.009
5 and more additional drug use	1.46	1.23-1.73	<.001
Living in village	1.46	1.16-1.84	.001
Twice daily use	1.32	1.11-1.57	.001
Higher education	0.41	0.22-0.66	.005
Knowledge about drug usage and disease	0.50	0.41-0.61	<.001

NOAK Pozolojisine Ne Kadar Uyuluyor?

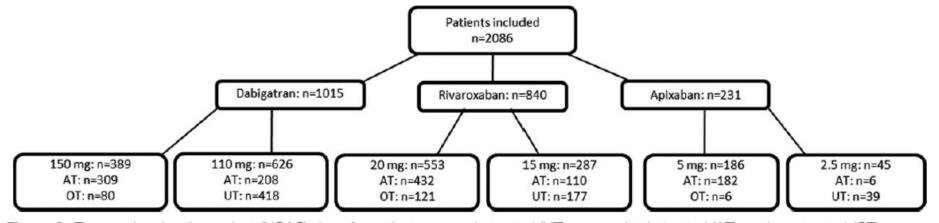
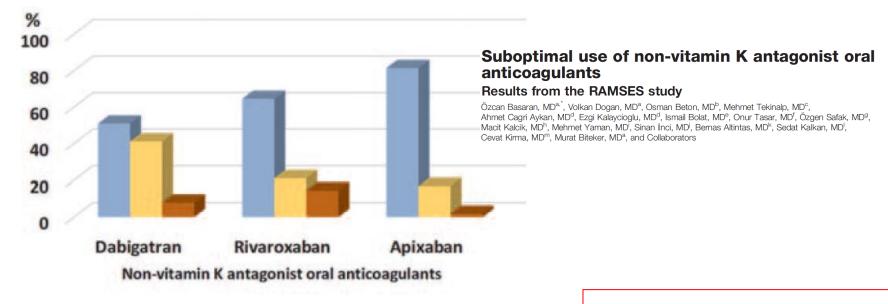


Figure 2. The novel oral anticoagulant (NOAC) dose for patients per undertreated (UT), appropriately treated (AT), and overtreated (OT) groups.



Overtreatment

Undertreatment

Appropriately treated

Medicine (2016) 95:35(e4672)

OAK TEDAVISININ ETKINLIK VE GÜVENLILIK DURUMU NEDIR?

- WARFARIN
 - TREQ-AF
 - WATER
 - WARFARİN TR (%38,4 NVAF)

- NOAC
 - NOAC-TURK

WARFARİN TEDAVİSİNİN ETKİNLİK VE GÜVENLİLİK DURUMU NEDİR?

Table 3. The analysis of bleeding complications of patients within a year

Type of bleeding	n		%
Intracranial bleeding	58		5.8
Gastrointestinal bleeding	100		10.0
Gingival bleeding	191		19.0
Intra-articular bleeding	16		1.6
Nosebleed	264		26.3
Ecchymosis	238		23.7
Hematuria	120		11.9
Menorrhagia	18		1.8
Total	1005 100		100.0
Data are presented as numbers of patients (percentage)			=4987

The awareness, efficacy, safety, and time in therapeutic range of warfarin in the Turkish population: WARFARIN-TR

Anatol J Cardiol 2016; 16: 595-600

TREQ-AF;

- WARFARIN TEDAVISI ILE 1 YILLIK MORTALITE %7.6
- TÜM POPULASYON (W+D+R+AP)
 - AE; %64,7
 - MAJOR KANAMA; %10,8
 - INME; %5,9
 - HOSPİTALİZASYON; %25,5

WATER Registry

Table 3. Clinical events according to median time in therapeutic range (TTR) level.

	TTR ≥ 40% (n = 318; 56%)	TTR < 40% (n = 254; 44%)	Р
Death	11 (3.5%)	15 (5.9%)	0.0003
Stroke/TIA	18 (5.7%)	13 (5.1%)	0.14
Intracranial bleeding	2 (0.6%)	0 (0%)	1
Major bleeding	18 (5.7%)	11 (4.3%)	0.085
Minor bleeding	116 (36.5%)	106 (41.7%)	< 0.0001
Cardiac hospitalization	91 (28.6%)	90 (35.4%)	< 0.0001

Cardiol J 2015; 22, 5: 567–575)

NOAC TEDAVİSİNİN ETKİNLİK VE GÜVENLİLİK DURUMU NEDİR?

- PROSPEKTİF VERİ YOK !!!
- RETROSPEKTİF VERİ; NOAC-TURK
 - Ort. Kullanım süresi 10,8±7,6 ay.

Table 3. Bleeding and embolic complications in patients under NOACs treatment

Complications	Number of patients (n=2862)
Bleeding	217 (7.6%)
Admission count due to bleeding in a year period	1 (1–5)
Bleeding complication in a year period, month	5 (1–33)
Embolism	37 (1.3%)
TIA	17 (0.6%)
Stroke	16 (0.6%)
Peripheral embolism	4 (0.1%)

Some risk factors	Odds ratio	95% Confidence interval	P
DVT	4.614	1.328-16.032	0.016
CVA	2.813	1.322-5.982	0.007
Smoking	2.736	1.373-5.453	0.004
Rivaroxabana	1.000	_	_
Apixaban	3.609	1.457-8.941	0.006
Dabigatran	1.720	0.716-4.135	0.225
Low-dose NOACs	2.913	1.385–6.127	0.005

Table 7. Predictors of bleeding in patients under NOACs treatment

	Odds ratio	95% Confidence interval	P
Diabetes mellitus	s mellitus 0.557 0.370–0.839 0.005		0.005
Hyperlipidemia	1.873	1.376-2.551	<0.001
PAD	3.396	2.276-5.065	<0.001
Smoking	1.781	1.282-2.472	<0.001
HAS-BLED score	1.426	1.225–1.659	<0.001
Apixabanª	1.000	_	_
Dabigatran	2.233	1.389–3.590	<0.001
Rivaroxaban	2.325	1.463-3.697	<0.001
High-dose NOACs	1.530	1.126-2.078	0.006

BU HASTALARA NE OLUYOR? AKIBETLERI ???

Table 2. Clinical events during follow-up.						
	All patients (n = 572)	VAF (n = 169; 29.5%)	NVAF (n = 403; 70.5%)	Р		
Follow-up duration (months-median)	24.21 ± 14 (22)	25.8 ± 16 (21)	23.5 ± 13 (22)	0.096		
TTR [%] (median)	$42.26 \pm 18.4 (40)$	46.89 ± 18.9	40.32 ± 17.8	< 0.001		
Death	26 (4.55%)	6 (3.5%)	20 (5%)	0.52		
Stroke/TIA	31 (5.4%)	7 (4%)	24 (6%)	0.43		
Intracranial bleeding	2 (0.35%)	0 (0%)	2 (0.5%)	1		
Major bleeding	29 (5.1%)	6 (3.5%)	23 (5.7%)	0.4		
Minor bleeding	222 (38.8%)	64 (38%)	158 (39%)	0.78		
Cardiac hospitalization	181 (31.6%)	53 (31%)	128 (32%)	1		

Cardiol J 2015; 22, 5: 567–575

Demographics, treatment and outcomes of atrial fibrillation in a developing country: the population-based TuRkish Atrial Fibrillation (TRAF) cohort

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Received 1 July 2016; editorial decision 29 October 2016; accepted 14 December 2016

Aims

Although atrial fibrillation (AF) is increasingly common in developed countries, there is limited information regarding its demographics, co-morbidities, treatments and outcomes in the developing countries. We present the profile of the TuRkish Atrial Fibrillation (TRAF) cohort which provides real-life data about prevalence, incidence, comorbidities, treatment, healthcare utilization and outcomes associated with AF.

Methods and results

The TRAF cohort was extracted from MEDULA, a health insurance database linking hospitals, general practitioners, pharmacies and outpatient clinics for almost 100% of the inhabitants of the country. The cohort includes 507 136 individuals with AF between 2008 and 2012 aged >18 years who survived the first 30 days following diagnosis. Of 507 136 subjects, there were 423 109 (83.4%) with non-valvular AF and 84 027 (16.6%) with valvular AF. The prevalence was 0.80% in non-valvular AF and 0.28% in valvular AF; in 2012 the incidence of non-valvular AF (0.17%) was higher than valvular AF (0.04%). All-cause mortality was 19.19% (97 368) and 11.47% (58 161) at 1-year after diagnosis of AF. There were 35 707 (7.04%) ischaemic stroke/TIA/thromboembolism at baseline and 34 871 (6.87%) during follow-up; 11 472 (2.26%) major haemorrhages at baseline and 10 183 (2.01%) during follow-up, and 44 116 (8.69%) hospitalizations during the follow-up.

Conclusion

The TRAF cohort is the first population-based, whole-country cohort of AF epidemiology, quality of care and outcomes. It provides a unique opportunity to study the patterns, causes and impact of treatments on the incidence and outcomes of AF in a developing country.

TRAF;

- 2 360 191.75 PY İZLEM [55.85 (±0.0304) ay]
- Tüm nedenlere bağlı mortalite; %19,19
 - Tanıdan 1 yıl sonra %11,47 (NVAF; %12,07)
- İzlemde inme/TIA/SE; %6,87
 - NVAF; %6,59
 - VAF; %8,28
- İzlemde major kanama; %2.01
- İzlemde hospitalizasyon; %8,69
 - NVAF; tanıdan bir yıl sonra hosp; %3,22
 - VAF; tanıdan bir yıl sonra hosp; %5,58

Yoldakiler...

Risk of Stroke and Silent Cerebrovascular Thromboembolism After Cardioversion of Atrial Fibrillation (AFTER-CV)

This study is ongoing, but not recruiting participants.

Sponsor:

Suleyman Demirel University

Information provided by (Responsible Party):

Mehmet Ozaydin, MD, Suleyman Demirel University

Clinical Trials.gov Identifier:

NCT01924065

First received: August 7, 2013 Last updated: January 18, 2017 Last verified: January 2017

History of Changes

Full Text View

Tabular View

No Study Results Posted

Disclaimer

How to Read a Study Record



Patients with atrial fibrillation undergoing cardioversion will be randomized to undergo transesophageal echocardiography or they will receive warfarin for 3 weeks with an international normalized ratio (INR) value between 2.0-3.0. Those who do not want to use warfarin will be given an approved new oral anticoagulant agent istead of warfarin for 3 weeks.

If thrombus is detected in left atrium or in left atrial appendage, no cardioversion will be performed. Other patients in the both groups will undergo electrical cardioversion. After the procedures all the patients will be given oral anticoagulant for at least 4 Weeks. All patients will have neurological examination and diffusion magnetic resonance imaging (MRI) at baseline and at postprocedural 7th day. Clinical and subclinical cerebral thromboembolic events detected by diffusion MRI will be recorded. Any bleeding events during this period will also be recorded.

Atrial Fibrillation in Turkey: Epidemiologic Registry-2 (AFTER-2)

This study is currently recruiting participants. (see Contacts and Locations)

Verified January 2016 by Dicle University

Sponsor:

Dicle University

Information provided by (Responsible Party):

Hasan Kaya, Dicle University

Full Text View

Tabular View

No Study Results Posted

Disclaimer

Clinical Trials.gov Identifier:

NCT02354456

First received: January 26, 2015 Last updated: January 20, 2016 Last verified: January 2016 History of Changes

How to Read a Study Record

Purpose

Atrial fibrillation (AF) is one of the most common cause of preventable ischemic stroke and associated with increased cardiovascular morbidity and mortality. Our previous AFTER study demonstrated the general epidemiological data about the patients with valvular and nonvalvular AF in Turkey. However, data is lacking about the use of new oral anticoagulants (NOACs), time in therapeutic INR range (TTR) in vitamin K antagonist users and AF management modality in our country. In this multicenter trial the investigators aimed to analyze, follow and evaluate the epidemiological data in non-valvular AF patients.

✓ Only show open studies

Rank	Status	Study
1	Recruiting	Atrial Fibrillation in Turkey: Epidemiologic Registry-2
		Condition: Atrial Fibrillation
		Intervention:
2 Recruiting		Global Anticoagulant Registry in the Field
		Condition: Atrial Fibrillation
		Intervention:
3	Recruiting	Patient Convenience Study- NIS RELATE
		Condition: Atrial Fibrillation
		Interventions: Drug: Pradaxa (dabigatran); Drug: Vitamin K antagonist
4	Recruiting	Searching for Explanations for Cryptogenic Stroke in the Young: Revealing the Etiology, Triggers, and Outcome
		Conditions: Brain Infarction; Ischemic Stroke; Thrombosis; Foramen Ovale, Patent
		Intervention:

ORIGINAL ARTICLE

Design and rationale of dabigatran's stroke prevention in real life in Turkey (D-SPIRIT)

Türkiye'de gerçek yaşamda dabigatran ile inmeden korunmanın temel ve tasarımı (D-SPIRIT)

Uğur Önsel Türk, M.D., Emin Alioğlu, M.D.,* Eşref Tunçer, M.D.,* Mehmet Emre Özpelit, M.D.,* Nihat Pekel, M.D.,* İstemihan Tengiz, M.D.,* Nurullah Çetin, M.D.,† Onur Dalgıç, M.D.,† Caner Topaloğlu, M.D.,† Nazile Bilgin, M.D.,‡ Cihan Altın, M.D.,§ Tolga Özdemirkıran, M.D., Kamil Tülüce, M.D.,¶ Ebru İpek Türkoğlu, M.D.,** Ebru Özpelit, M.D.,††

Özetle...

 Literatürü tekrarlamak yerine, literatürü yazmak için daha yapacak çok iş var...

- Clinical Trial/Clinical Research-Study
 - Preklinik/ Erken Faz «hypothesis generating» çalışmaları unutuyoruz...

Kayıp paydaşlar nerede ???

Para her şey değildir ancak para çok şeydir...



Cost-effectiveness of dabigatran for stroke prevention in non-valvular atrial fibrillation in Turkey

UO. Turk¹, K. Yuksel¹, E. Alioglu² - (1) Ege University, Medicine Development and Pharmacokinetic Research and Application Center (ARGEFAR), Izmir, Turkey (2) Central Hospital, Izmir, Turkey

Objective

Atrial fibrillation is a major risk factor for ischemic stroke and anticoagulation therapy is indicated to reduce risk. Dabigatran is a new oral anticoagulant that does not require INR monitoring. Economic evaluation of dabigatran is done mostly in Western countries. It remains to be seen whether dabigatran will be cost effective in a practice environment where warfarin is significantly underused and the costs of both warfarin and international normalized ratio (INR) monitoring are cheap. This study evaluated the cost-effectiveness of dabigatran versus vitamin K antagonists for stroke prevention in atrial fibrillation (SPAF) as a first time in Turkey.

Methods

A Markov model simulating the course of treatment and occurrence of clinical events in three treatment arms (warfarin, dabigatran 110 mg bid, dabigatran 150 mg bid) over the lifetime of patients was adapted to the Turkish context. Modelled outcomes also included quality-adjusted life years (QALYs), total costs and incremental cost-effectiveness ratios (ICERs). The adaptation included the cost of anticoagulation therapy and clinical events in Turkey. The cost of inpatient care was estimated on data of all inpatient hospital stays in 2014. The calculation of outpatient care costs was based on WATER Registry², expert interviews and local tariffs.

Results

Compared with warfarin, low dose and high dose dabigatran were associated with positive incremental net benefits of 0.059 and 0.1 QALYs respectively. In the economic analysis, high dose dabigatran dominated the low dose, had an ICER of 49720 € (€18014) per QALY gained versus warfarin. ICER value of low dose dabigatran strategy versus warfarin was 87719 € (€31782). (Figure 1a) Cost-effectiveness acceptability curves of three treatment strategies were presented in Figure 1b.

Prevalence and Predictors of Atrial Fibrillation in Rheumatic Valvular Heart Disease

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he overall prevalence of atrial fibrillation (AF) in the adult population is 0.4%, but the frequency increases with age to approximately 2% to 4% in those aged >60 years. In the past, rheumatic heart disease (RHD) was the most common cause of AF. Surgical series report AF prevalence rates of approximately 75% in patients with rheumatic valvular heart disease.2 In recent years, there has been a decline in the frequency of both RHD and the resultant AF in western countries. Currently, the most common underlying abnormalities associated with chronic AF are hypertensive heart disease and congestive heart failure.3 On the other hand, there is limited information regarding the factors that determine the occurrence of AF in rheumatic valvular heart disease. Moreover, there is paucity of data as to which valvular lesion causes what frequency of AF. This study constitutes a search for the frequency of AF and the factors that determine the occurrence of AF in patients with valvular heart disease diagnosed by M-mode, 2-dimensional, Doppler and color Doppler echocardiography. Results were evaluated by multivariate analysis.

The study involves the retrospective evaluation of 1,110 patients with RHD who were referred to our clinic for different reasons between May 1990 and July 1994. The diagnosis of RHD was based on M-mode, 2-dimensional, Doppler and color Doppler echocardiographic findings in addition to a history of acute rheumatic fever in all patients. Patients with other kinds of heart disease (coronary artery disease, hypertensive heart disease, and so forth) accompanying RHD and those who had undergone any type of valvular surgery were excluded from

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the study. Patients of all functional classes as defined by the New York Heart Association were included. Those with AF demonstrable in serial electrocardiograms obtained at 3-month intervals were regarded as having chronic AF. No patient had paroxysmal AF.

Predefined criteria were used to diagnose the valvular lesions by M-mode, 2-dimensional and color Doppler echo. Measurements of left atrial and left ventricular diameters, mean transmitral gradient, and quantification of regurgitant lesions were performed as defined. The farthest distance reached by the regurgitant jet from the mitral orifice on color Doppler was taken into account to grade mitral jet. A distance <1.5 cm was termed 1+. 1.5 to 3 cm was 2+, 3 to 4.5 cm was 3+, and >4.5 cm was graded as 4+.4 A similar grading system based on the farthest distance reached by regurgitant jet from the tricuspid orifice on color Doppler was used to grade the severity of tricuspid regurgitation. A distance <1.5 cm was graded as 1+, 1.5 to 3.5 cm as 2+, and >3.5 cm as 3+ for tricuspid regurgitation.5 The mitral valvular area was calculated planimetrically.6 Mitral and tricuspid regurgitation of ≥1+ degree seen on parasternal long and short axes or on the apical 4-chamber view were counted in the analysis.

Data are reported as mean ± SD for continuous variables and percent prevalence for discrete or dichotomized variables. Group differences were assessed by the Student's t test for continuous variables. All p values in this study are 2-sided. Stepwise logistic regression analysis was used to determine the independent association of clinical characteristics and echocardiographic variables with AF. A stepwise procedure was used to build the model using a cutoff of p = 0.05 to determine entry. Clinical variables entered in the analysis were age and gender; the echocardiographic variables were left atrial diameter, mean transmitral gradient, left ventricular end-diastolic dimension, left ventricular end-