Novinky FS ESC 2015: Implementace do doporučených postupů a klinické praxe

M. Táborský

České kardiologické dny

26.11.2015

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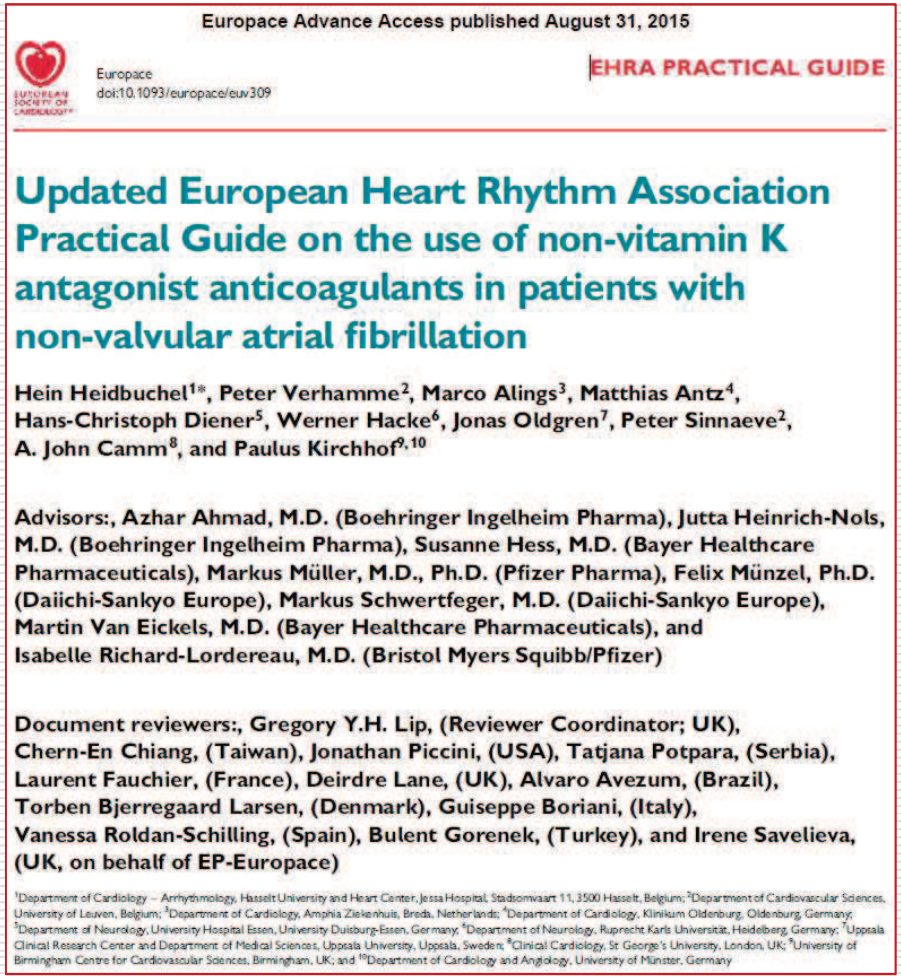
Praktická doporučení EHRA DOAC 2015



Europace Advance Access published August 31, 2015

Europace
doi:10.1093/europace/euv309

EHRA PRACTICAL GUIDE

Updated European Heart Rhythm Association Practical Guide on the use of non-vitamin K antagonist anticoagulants in patients with non-valvular atrial fibrillation

Hein Heidbuchel[1]*, Peter Verhamme[2], Marco Alings[3], Matthias Antz[4], Hans-Christoph Diener[5], Werner Hacke[6], Jonas Oldgren[7], Peter Sinnaeve[2], A. John Camm[8], and Paulus Kirchhof[9,10]

Advisors:, Azhar Ahmad, M.D. (Boehringer Ingelheim Pharma), Jutta Heinrich-Nols, M.D. (Boehringer Ingelheim Pharma), Susanne Hess, M.D. (Bayer Healthcare Pharmaceuticals), Markus Müller, M.D., Ph.D. (Pfizer Pharma), Felix Münzel, Ph.D. (Daiichi-Sankyo Europe), Markus Schwertfeger, M.D. (Daiichi-Sankyo Europe), Martin Van Eickels, M.D. (Bayer Healthcare Pharmaceuticals), and Isabelle Richard-Lordereau, M.D. (Bristol Myers Squibb/Pfizer)

Document reviewers:, Gregory Y.H. Lip, (Reviewer Coordinator; UK), Chern-En Chiang, (Taiwan), Jonathan Piccini, (USA), Tatjana Potpara, (Serbia), Laurent Fauchier, (France), Deirdre Lane, (UK), Alvaro Avezum, (Brazil), Torben Bjerregaard Larsen, (Denmark), Guiseppe Boriani, (Italy), Vanessa Roldan-Schilling, (Spain), Bulent Gorenek, (Turkey), and Irene Savelieva, (UK, on behalf of EP-Europace)

[1]Department of Cardiology – Arrhythmology, Hasselt University and Heart Center, Jessa Hospital, Stadsomvaart 11, 3500 Hasselt, Belgium; [2]Department of Cardiovascular Sciences, University of Leuven, Belgium; [3]Department of Cardiology, Amphia Ziekenhuis, Breda, Netherlands; [4]Department of Cardiology, Klinikum Oldenburg, Oldenburg, Germany; [5]Department of Neurology, University Hospital Essen, University Duisburg-Essen, Germany; [6]Department of Neurology, Ruprecht Karls Universität, Heidelberg, Germany; [7]Uppsala Clinical Research Center and Department of Medical Sciences, Uppsala University, Uppsala, Sweden; [8]Clinical Cardiology, St George's University, London, UK; [9]University of Birmingham Centre for Cardiovascular Sciences, Birmingham, UK; and [10]Department of Cardiology and Angiology, University of Münster, Germany

Heidbuchel H, et al. Europace. doi:10.1093/europace/euv309

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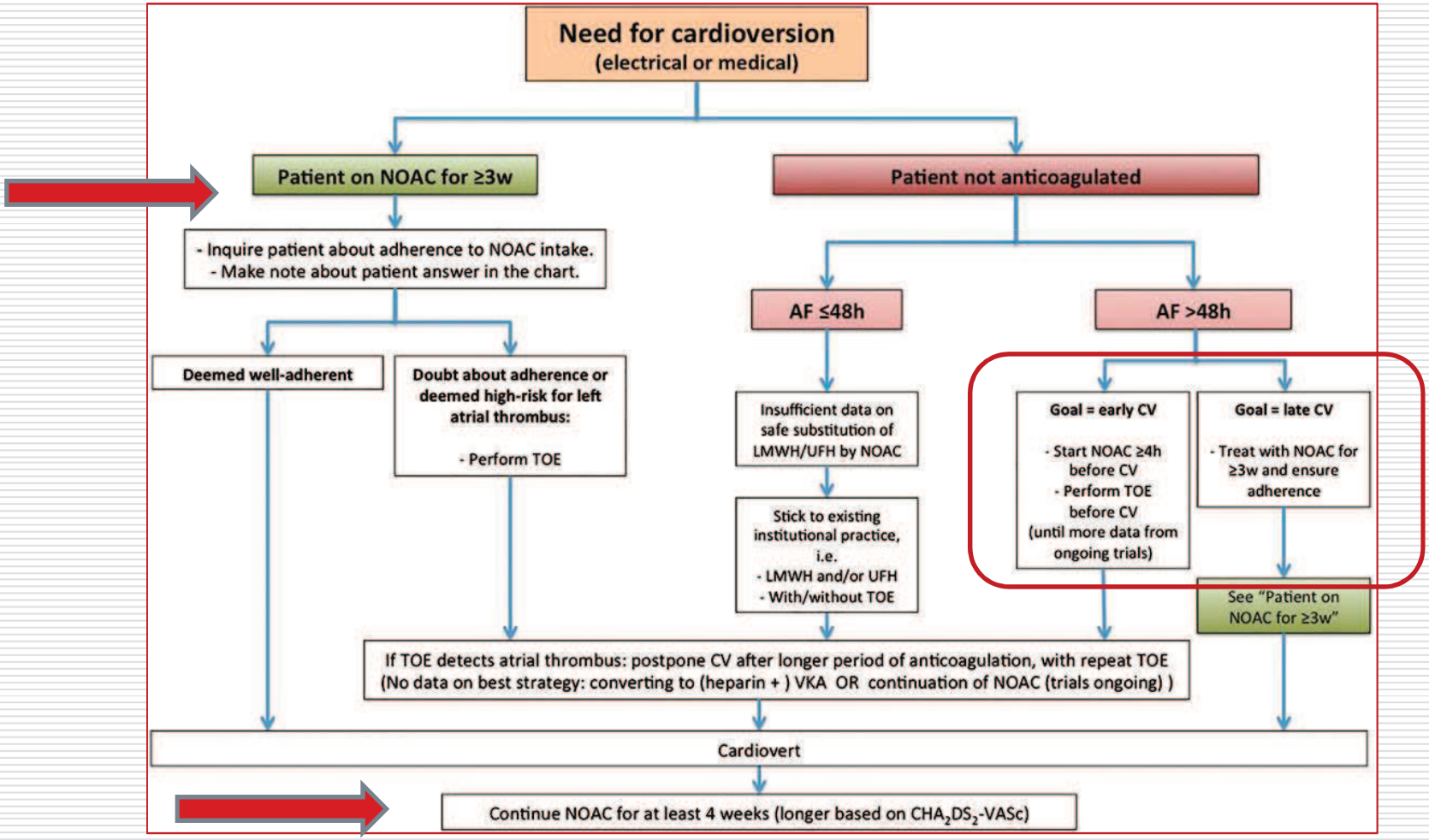
I: Kardioverze

Kardioverze FS 2015:



Heidbuchel H, et al. Europace.
doi:10.1093/europace/euv309

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Kardioverze FS - souhrn:

1. kardioverze na DOAC je možná
2. doba trvání FS – rozhodující pro strategii
3. u FS < 48 hod: dle protokolu daného pracoviště – LMWH nebo UFH – bez nebo s TOE
4. u FS > 48 hod: schéma časné nebo opožděné kardioverze na DOAC
5. Strategie AK terapie po verzi:
   a. minimum 4 týdny
   b. dlouhodobě dle rizika TE – CHA_2DS_2-VASc

Jaké máme data pro nové schéma kardioverze ?

Rivaroxaban

Rivaroxaban vs. vitamin K antagonists for cardioversion in atrial fibrillation

Riccardo Cappato[1†], Michael D. Ezekowitz[2†*], Allan L. Klein[3], A. John Camm[4], Chang-Sheng Ma[5], Jean-Yves Le Heuzey[6], Mario Talajic[7], Maurício Scanavacca[8], Panos E. Vardas[9], Paulus Kirchhof[10,11,12], Melanie Hemmrich[13], Vivian Lanius[14], Isabelle Ling Meng[13], Peter Wildgoose[15], Martin van Eickels[13], and Stefan H. Hohnloser[16], on behalf of the X-VeRT Investigators

[1]Arrhythmia and Electrophysiology Center, University of Milan, IRCCS Policlinico San Donato, San Donato Milanese, Milan, Italy; [2]The Sidney Kimell Medical College at Thomas Jefferson University, 1999 Sproul Rd, Suite 25, Broomall, PA 19008, USA; [3]Department of Cardiovascular Medicine, Cleveland Clinic Heart and Vascular Institute, Cleveland, OH, USA; [4]Division of Clinical Sciences, St George's, University of London, London, UK; [5]Cardiology Division, Beijing AnZhen Hospital, Capital Medical University, Beijing, China; [6]Division of Cardiology and Arrhythmology, Hôpital Européen Georges Pompidou, Université Paris V René-Descartes, Paris, France; [7]Department of Medicine, Research Center, Montreal Heart Institute, Université de Montréal, Montreal, Canada; [8]Arrhythmia Clinical Unit of Heart Institute (InCor), University of São Paulo Medical School, São Paulo, Brazil; [9]Department of Cardiology, Heraklion University Hospital, Heraklion (Crete), Greece; [10]Centre for Cardiovascular Sciences, School of Clinical and Experimental Medicine, University of Birmingham, Birmingham, UK; [11]SWBH NHS Trust, Birmingham, UK; [12]Department of Cardiovascular Medicine, Hospital of the University of Münster, Münster, Germany; [13]Global Medical Affairs, Bayer HealthCare, Berlin, Germany; [14]Global Research and Development Statistics, Bayer HealthCare, Berlin, Germany; [15]Janssen Scientific Affairs, LLC, Raritan, NJ, USA; and [16]Department of Cardiology, Division of Clinical Electrophysiology, J.W. Goethe University, Frankfurt, Germany

Received 23 July 2014; revised 7 August 2014; accepted 11 August 2014; online publish-ahead-of-print 2 September 2014

Aims X-VeRT is the first prospective randomized trial of a novel oral anticoagulant in patients with atrial fibrillation undergoing elective cardioversion.

Methods and results We assigned 1504 patients to rivaroxaban (20 mg once daily, 15 mg if creatinine clearance was between 30 and 49 mL/min) or dose-adjusted vitamin K antagonists (VKAs) in a 2:1 ratio. Investigators selected either an early (target period of 1–5 days after randomization) or delayed (3–8 weeks) cardioversion strategy. The primary efficacy outcome was the composite of stroke, transient ischaemic attack, peripheral embolism, myocardial infarction, and cardiovascular death. The primary safety outcome was major bleeding. The primary efficacy outcome occurred in 5 (two strokes) of 978 patients (0.51%) in the rivaroxaban group and in 5 (two strokes) of 492 patients (1.02%) in the VKA group [risk ratio 0.50; 95% confidence interval (CI) 0.15–1.73]. In the rivaroxaban group, four patients experienced primary efficacy events following early cardioversion (0.71%) and one following delayed cardioversion (0.24%). In the VKA group, three patients had primary efficacy events following early cardioversion (1.08%) and two following delayed cardioversion (0.93%). Rivaroxaban was associated with a significantly shorter time to cardioversion compared with VKAs ($P < 0.001$). Major bleeding occurred in six patients (0.6%) in the rivaroxaban group and four patients (0.8%) in the VKA group (risk ratio 0.76; 95% CI 0.21–2.67).

Conclusion Oral rivaroxaban appears to be an effective and safe alternative to VKAs and may allow prompt cardioversion.

Cappato R: Eur Heart J 2014; 35:3346-3355

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X-VeRT: Primární bezpečnostní cíle

	Rivaroxaban (N=988)		VKA (N=499)		Risk ratio (95% CI)
	%	n*	%	n*	
Závažné krvácení	**0.61**	**6**	**0.80**	**4**	**0.76 (0.21–2.67)**
Fatální	0.1	1	0.4	2	
Krvácení do kritického místa	0.2	2	0.6	3	
Intrakraniální krvácení	0.2	2	0.2	1	
Hb - pokles ≥2 g/dl	0.4	4	0.2	1	
Transfúze ≥2 units erytorcytární masy nebo plné krve	0.3	3	0.2	1	

*počet pacientů s příhodou; u pacientů se mohl vyskytnout více než jeden bezpečnostní cíl
Safety population

Cappato R et al. Eur Heart J 2014:
doi: 10.1093/eurheartj/ehu367

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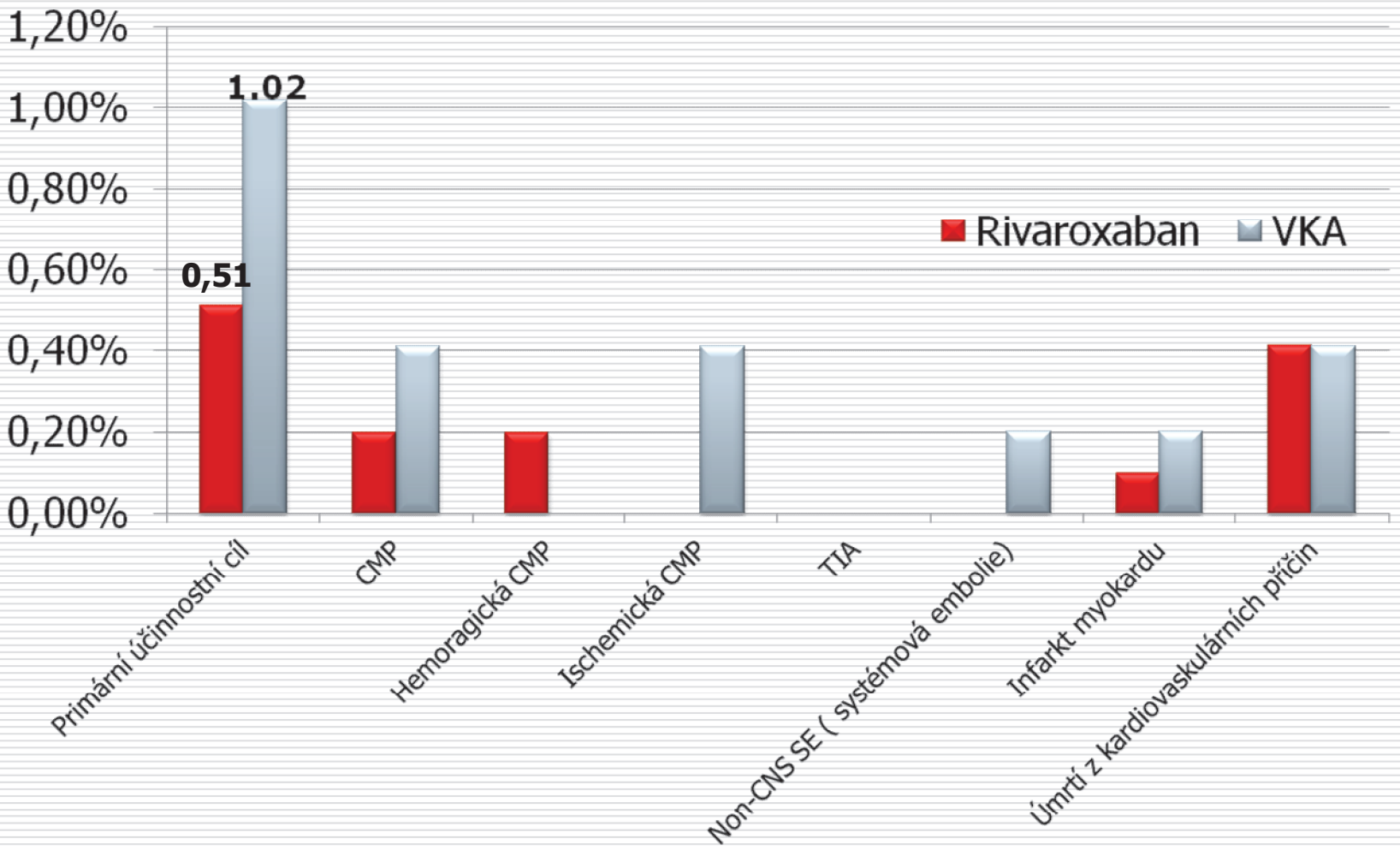
X-VeRT: Primární účinnostní cíle - trend k lepší účinnosti ve srovnání s warfarinem



Dabigatran

Is one month treatment with dabigatran before cardioversion of atrial fibrillation sufficient to prevent thromboembolism?

Anna-Karin Johansson[1]*, Tord Juhlin[2], Johan Engdahl[3], Stefan Lind[4], Kristina Hagwall[5], Cecilia Rorsman[6], Emöke Fodor[7], Anna Alenholt[8], Astrid Paul Nordin[1], Mårten Rosenqvist[5], and Mats Frick[1]

[1]Department of Clinical Sciences and Education, Södersjukhuset, Karolinska Institutet, 118 83 Stockholm, Sweden; [2]Department of Cardiology, Skåne University Hospital, Malmö, Sweden; [3]Department of Medicine, Halland Hospital, Halmstad, Sweden; [4]Department of Cardiology, Karolinska University Hospital, Stockholm, Sweden; [5]Department of Clinical Science, Danderyd University Hospital, Karolinska Institutet, Stockholm, Sweden; [6]Department of Cardiology, Varberg County Hospital, Varberg, Sweden; [7]Department of Cardiology, Köping County Hospital, Köping, Sweden; and [8]Department of Cardiology, Västerås Central Hospital, Västerås, Sweden

Received 24 February 2015; accepted after revision 8 April 2015; online publish-ahead-of-print 27 May 2015

Aims The use of direct oral anticoagulants (DOACs) in patients undergoing elective direct current (DC) cardioversion of non-acute atrial fibrillation (AF) can potentially shorten the time from initiation of anticoagulation treatment to cardioversion, compared with warfarin. The safety of this strategy needs to be investigated. Data from subgroup analysis from clinical trials with DOAC do not clarify whether 4-week treatment with DOAC is sufficient to prevent thromboembolism (TE) after cardioversion. The aim of this retrospective study was to assess the incidence of TE in anticoagulant naive patients converted after one month's pre-treatment with dabigatran.

Methods and results We scrutinized the medical records of 631 patients where dabigatran had been used prior to elective DC cardioversion. Transoesophageal echocardiography was rarely performed. Thromboembolism within 30 days of cardioversion was the primary endpoint. A total of 570 patients were naive to OAC when dabigatran was initiated. The mean age in this group was 64.2 ± 11 years and 31.7% were women. The mean CHA_2DS_2-VASc score was 2.0 ± 1.5. The dose of dabigatran was 150 mg b.i.d. in 94% of the patients. The median time from initiation of dabigatran to cardioversion was 32.0 ± 15 days. In 91% cardioversion resulted in sinus rhythm. During the 30-day follow-up, three TE occurred for an incidence of 0.53% (0.18–1.54).

Conclusion In this retrospective study from clinical material, we found a low incidence of TE when dabigatran was used as TE prophylaxis in association with elective cardioversion. These results indicate that dabigatran is a safe alternative strategy to warfarin during cardioversion in patients with AF.

Europace (2015) 17, 1514–1517
doi:10.1093/europace/euv123

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Dabigatran – 30 denní data

- 631 pacientů – dabigatran /786 kardioverzí
- Incidence TE komplikací u všech EKV: 0.51 % (0.20-1.30)
- Incidence TE komplikací u pouze 1. EKV: 0.70 % (0.27 – 1.78)
- Kontrolní skupina – warfarin:
- Incidence TE komplikací u všech EKV: 0.60 % (0.11-3.33)

Europace (2015) 17, 1514–1517
doi:10.1093/europace/euv123

Apixaban

Efficacy and Safety of Apixaban in Patients After Cardioversion for Atrial Fibrillation

Insights From the ARISTOTLE Trial (Apixaban for Reduction in Stroke and Other Thromboembolic Events in Atrial Fibrillation)

Greg Flaker, MD,* Renato D. Lopes, MD, PHD,† Sana M. Al-Khatib, MD, MHS,† Antonio G. Hermosillo, MD,‡ Stefan H. Hohnloser, MD,§ Brian Tinga, MS,† Jun Zhu, MD,‖ Puneet Mohan, MD, PHD,¶ David Garcia, MD,# Jozef Bartunek, MD, PHD,** Dragos Vinereanu, MD, PHD,†† Steen Husted, MD, DMSc,‡‡ Veli Pekka Harjola, MD, PHD,§§ Marten Rosenqvist, MD,‖‖ John H. Alexander, MD, MHS,† Christopher B. Granger, MD,† for the ARISTOTLE Committees and Investigators

Columbia, Missouri; Durham, North Carolina; Tlalpan, Mexico; Frankfurt, Germany; Beijing, China; Princeton, New Jersey; Albuquerque, New Mexico; Aalst, Belgium; Bucharest, Romania; Århus, Denmark; Helsinki, Finland; and Stockholm, Sweden

Objectives The aim of this study was to determine the risk of major clinical and thromboembolic events after cardioversion for atrial fibrillation in subjects treated with apixaban, an oral factor Xa inhibitor, compared with warfarin.

Background In patients with atrial fibrillation, thromboembolic events may occur after cardioversion. This risk is lowered with vitamin K antagonists and dabigatran.

Methods Using data from the ARISTOTLE (Apixaban for Reduction in Stroke and Other Thromboembolic Events in Atrial Fibrillation) trial, we conducted a post-hoc analysis of patients undergoing cardioversion.

Results A total of 743 cardioversions were performed in 540 patients: 265 first cardioversions in patients assigned to apixaban and 275 in those assigned to warfarin. The mean time to the first cardioversion for patients assigned to warfarin and apixaban was 243 ± 231 days and 251 ± 248 days, respectively; 75% of the cardioversions occurred by 1 year. Baseline characteristics were similar between groups. In patients undergoing cardioversion, no stroke or systemic emboli occurred in the 30-day follow-up period. Myocardial infarction occurred in 1 patient (0.2%) receiving warfarin and 1 patient receiving apixaban (0.3%). Major bleeding occurred in 1 patient (0.2%) receiving warfarin and 1 patient receiving apixaban (0.3%). Death occurred in 2 patients (0.5%) receiving warfarin and 2 patients receiving apixaban (0.6%).

Conclusions Major cardiovascular events after cardioversion of atrial fibrillation are rare and comparable between warfarin and apixaban. (Apixaban for Reduction in Stroke and Other Thromboembolic Events in Atrial Fibrillation [ARISTOTLE]; NCT00412984) (J Am Coll Cardiol 2014;63:1082–7)

J Am Coll Cardiol. 2014;63:1082-7.
doi:10.1016/j.jacc.2013.09.062

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Apixaban – post hoc analýza

Outcomes	Warfarin (n = 412)	Apixaban (n = 331)	Total (n = 743)
Stroke or systemic embolism	0	0	0
Myocardial infarction	1 (0.2)	1 (0.3)	2 (0.2)
Major bleeding	1 (0.2)	1 (0.3)	2 (0.2)
Death	2 (0.5)	2 (0.6)	4 (0.5)

J Am Coll Cardiol. 2014;63:1082-7.
doi:10.1016/j.jacc.2013.09.062

II: Katetrizační ablace na nepřerušované terapii DOAC

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Antitrombotická léčba pacientů podstupujících kat. ablace a implantace KS/ICD

Europace (2015) **17**, 1197–1214
doi:10.1093/europace/euv190

EHRA POSITION PAPER

Antithrombotic management in patients undergoing electrophysiological procedures: a European Heart Rhythm Association (EHRA) position document endorsed by the ESC Working Group Thrombosis, Heart Rhythm Society (HRS), and Asia Pacific Heart Rhythm Society (APHRS)

Christian Sticherling (Chair; Switzerland), Francisco Marin (Co-chair; Spain), David Birnie (Canada), Giuseppe Boriani (Italy), Hugh Calkins (USA), Gheorghe-Andrei Dan (Romania), Michele Gulizia (Italy), Sigrun Halvorsen (Norway), Gerhard Hindricks (Germany), Karl-Heinz Kuck (Germany), Angel Moya (Spain), Tatjana Potpara (Serbia), Vanessa Roldan (Spain), Roland Tilz (Germany), and Gregory Y.H. Lip (UK)

Document reviewers: Bulent Gorenek (Reviewer Coordinator;Turkey), Julia H. Indik (USA), Paulus Kirchhof (UK), Chang-Shen Ma (China), Calambur Narasimhan (India), Jonathan Piccini (USA), Andrea Sarkozy (Belgium), Dipen Shah (Switzerland), and Irene Savelieva (on behalf of EP-Europace, UK)

Online publish-ahead-of-print 23 June 2015

Sticherling C., et al. Europace. 2015;17,1197-1214.

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Koncensus EHRA/HRS/APHRS

- All patients undergoing AF catheter ablation who present for the procedure in AF should be anticoagulated with a NOAC, or a VKA with a therapeutic INR of 2.0–3.0 for 3 weeks prior to the procedure; or undergo a TEE to screen for thrombi prior to the procedure; post procedure, patients should receive anticoagulation for at least 2 months.
- In patients receiving a VKA, the ablation should be performed without interruption of VKA therapy.
- During the ablation procedure, patients should receive unfractionated heparin with an ACT of >300 s.
- **Uninterrupted NOAC therapy may be considered in some patients undergoing ablation.**
- Ablation is not recommended in patients in whom no anticoagulation can be administered during and after the procedure.

Sticherling C. Europace 2015; 17:1797- 1214.

Katetrizační ablace FS na nepřerušovaném rivaroxabanu

European Heart Journal (2015) 36, 1805–1811
doi:10.1093/eurheartj/ehv177

FASTTRACK CLINICAL RESEARCH
Atrial fibrillation

Uninterrupted rivaroxaban vs. uninterrupted vitamin K antagonists for catheter ablation in non-valvular atrial fibrillation

Riccardo Cappato[1,2], Francis E. Marchlinski[3], Stefan H. Hohnloser[4], Gerald V. Naccarelli[5], Jim Xiang[6], David J. Wilber[7], Chang-Sheng Ma[8], Susanne Hess[9], Darryl S. Wells[10], George Juang[11], Johan Vijgen[12], Burkhard J. Hügl[13], Richard Balasubramaniam[14], Christian De Chillou[15], D. Wyn Davies[16], L. Eugene Fields[17], and Andrea Natale[18]*, on behalf of the VENTURE-AF Investigators

[1]Arrhythmia and Electrophysiology Center, IRCCS Humanitas Research Hospital, Rozzano, Milan, Italy; [2]Gavazzeni Hospital, Second Arrhythmia and EP Unit, Bergamo, Italy; [3]Section of Cardiac Electrophysiology, Hospital of the University of Pennsylvania, Philadelphia, PA, USA; [4]Department of Cardiology, Division of Clinical Electrophysiology, JW Goethe University, Frankfurt, Germany; [5]Heart and Vascular Institute, Penn State University College of Medicine, Hershey, PA, USA; [6]Biostatistics and Programming, Janssen Research & Development, LLC, Raritan, NJ, USA; [7]Department of Medicine, Cardiovascular Institute, Loyola University, Chicago, IL, USA; [8]Cardiology Division, Beijing AnZhen Hospital, Capital Medical University (CMU), Beijing, China; [9]Medical Affairs, Bayer Healthcare Pharmaceuticals, Berlin, Germany; [10]Cardiac Electrophysiology, Swedish Heart & Vascular Institute, Seattle, WA, USA; [11]Heart and Arrhythmia Care of New York, Manhasset, NY, USA; [12]Division of Cardiac Electrophysiology, Jessa Hospitals, Hasselt, Belgium; [13]Department of Cardiology and Rhythmology, Marienhaus Klinikum St. Elisabeth, Neuwied, Germany; [14]Department of Cardiology, Royal Bournemouth Hospital, Bournemouth, United Kingdom; [15]Département de Cardiologie, CHU de Nancy, Nancy, France; [16]Waller Department of Cardiology, St. Mary's Hospital, Imperial College NHS Trust, London, United Kingdom; [17]Medical Affairs, Janssen Scientific Affairs, LLC, Raritan, NJ, USA; and [18]Texas Cardiac Arrhythmia Institute at St. David's Medical Center, 3000 N. I-35, Suite 720, Austin, TX 78705, USA

Received 8 April 2015; revised 18 April 2015; accepted 24 April 2015; online publish-ahead-of-print 14 May 2015

Aims VENTURE-AF is the first prospective randomized trial of uninterrupted rivaroxaban and vitamin K antagonists (VKAs) in patients with non-valvular atrial fibrillation (NVAF) undergoing catheter ablation (CA).

Methods and results Trial size was administratively set at 250, the protocol-specified target. Events were independently and blindly adjudicated. We randomly assigned 248 NVAF patients to uninterrupted rivaroxaban (20 mg once-daily) or to an uninterrupted VKA prior to CA and for 4 weeks afterwards. The primary endpoint was major bleeding events after CA. Secondary endpoints included thromboembolic events (composite of stroke, systemic embolism, myocardial infarction, and vascular death) and other bleeding or procedure-attributable events. Patients were 59.5 ± 10 years of age, 71% male, 74% paroxysmal AF, and had a CHA2DS2-VASc score of 1.6. The average total heparin dose used to manage activated clotting time (ACT) was slightly higher (13 871 vs. 10 964 units; $P < 0.001$) and the mean ACT level attained slightly lower (302 vs. 332 s; $P < 0.001$) in rivaroxaban and VKA arms, respectively. The incidence of major bleeding was low (0.4%; 1 major bleeding event). Similarly, thromboembolic events were low (0.8%; 1 ischemic stroke and 1 vascular death). All events occurred in the VKA arm and all after CA. The number of any adjudicated events (26 vs. 25), any bleeding events (21 vs. 18), and any other procedure-attributable events (5 vs. 5) were similar.

Conclusion In patients undergoing CA for AF, the use of uninterrupted oral rivaroxaban was feasible and event rates were similar to those for uninterrupted VKA therapy.

Cappato R, et al. European Heart Journal. 2015;36,1805–1811. doi:10.1093/eurheartj/ehv177

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VENTURE AF: Bezpečnostní kritéria

	Rivaroxaban	VKA	Total
Any adjudicated event	26	25	51
	n=123	n=121	N=244
Any bleeding event*	21	18	39
Major bleeding event	0	1	1
Vascular pseudoaneurysm	0	1	1
Non-major bleeding event	21	17	38
Most relevant:			
Arteriovenous fistula	0	1	1
Catheter/puncture site haemorrhage	1	1	2
Haematoma/vessel puncture site haematoma	8	10	18
Vascular pseudoaneurysm	3	1	4
	n=124	n=124	N=248
Any thromboembolic events (composite)#	0	2	2
Ischaemic stroke	0	1	1
Vascular death	0	1	1
	n=114	n=107	N=221
Any other procedure-attributable event†	5	5	10
Pericardial effusion without tamponade	0	1	1

**safety population; #ITT population; †per-protocol population*
For full list see publication or back-up-slide
Adapted from Cappato R et al. Eur Heart J 2015; doi:10.1093/eurheartj/ehv177 [E-Pub ahead of print]

Dabigatran: RE-CIRCUIT™ Study

Primary Outcome Measures: The incidence of Major Bleeding Events according to the ISTH definition [Time Frame: during ablation and up 2 months post ablation]

Arms	Assigned Interventions
Experimental: Dabigatran Etexilate 150mg Patients receiving Dabigatran Etexilate 150mg BID	Drug: Dabigatran Etexilate 150mg Patients receiving Dabigatran Etexilate 150mg BID
Active Comparator: Warfarin Patients receiving Warfarin to keep INR between 2.0 - 3.0	Drug: Warfarin Patients receiving Warfarin to keep INR between 2.0 - 3.0

Clinical Trials.gov. Uninterrupted Dabigatran Etexilate in Comparison to Uninterrupted Warfarin in Pulmonary Vein Ablation (RE-CIRCUIT). https://clinicaltrials.gov/ct2/show/NCT02348723

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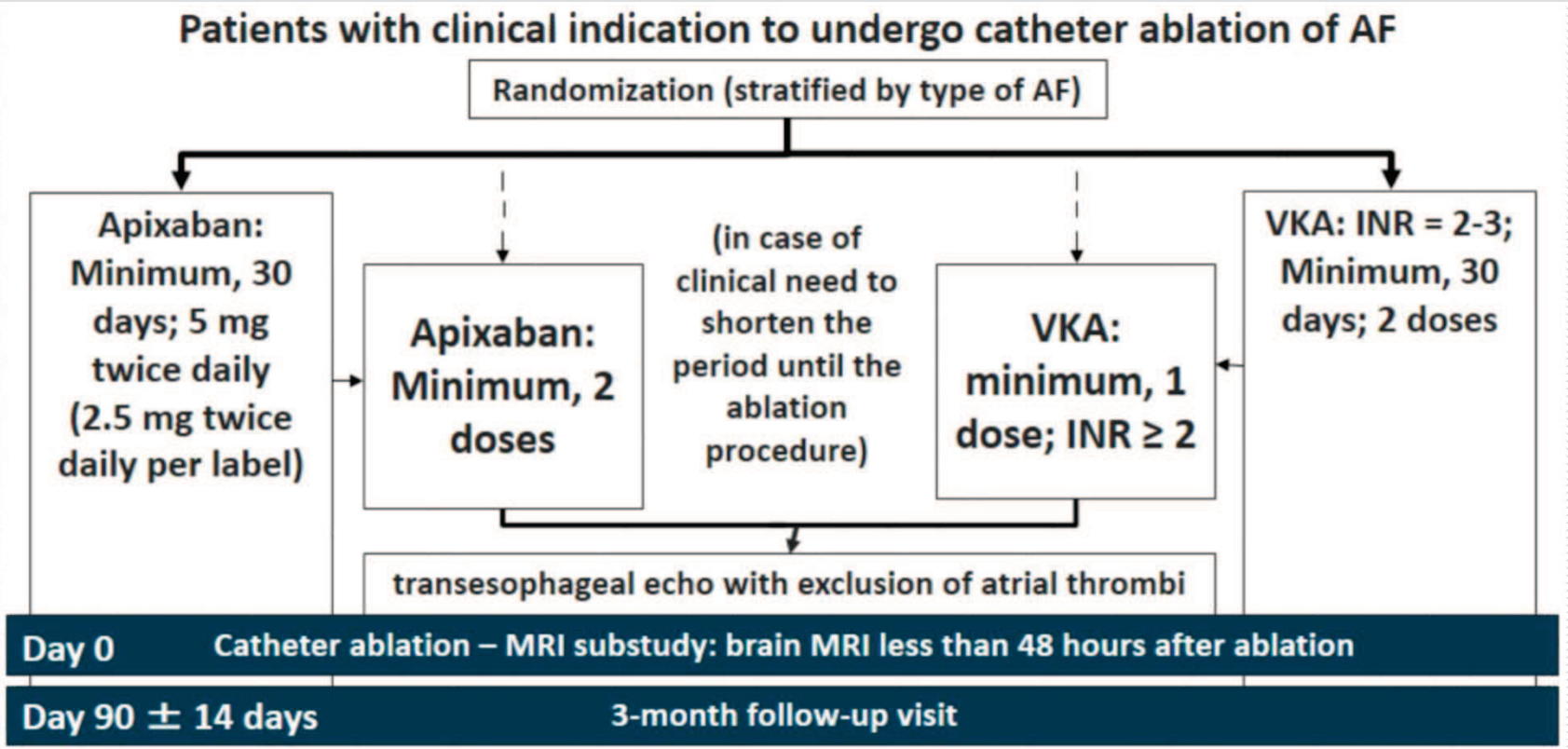
AXAFA Study
Apixaban

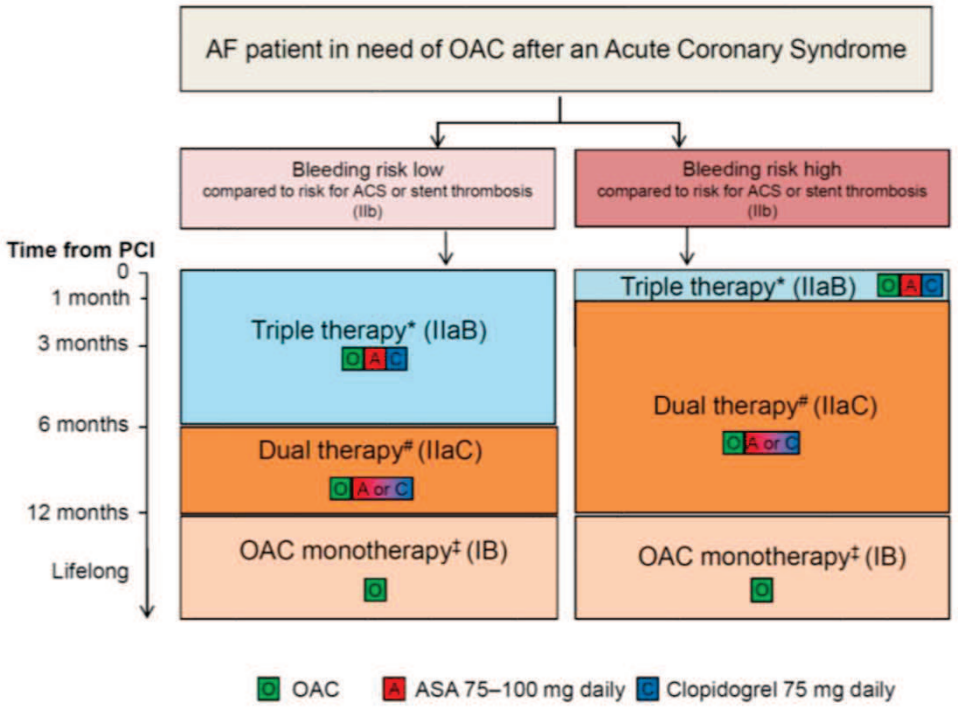


- Primary end point: composite of all-cause death, stroke, and major bleeding events (BARC type 2 or higher)

ClinicalTrials.gov. NCT02227550.

III: Nová definice triple therapy u pacientů s FS a ICHS

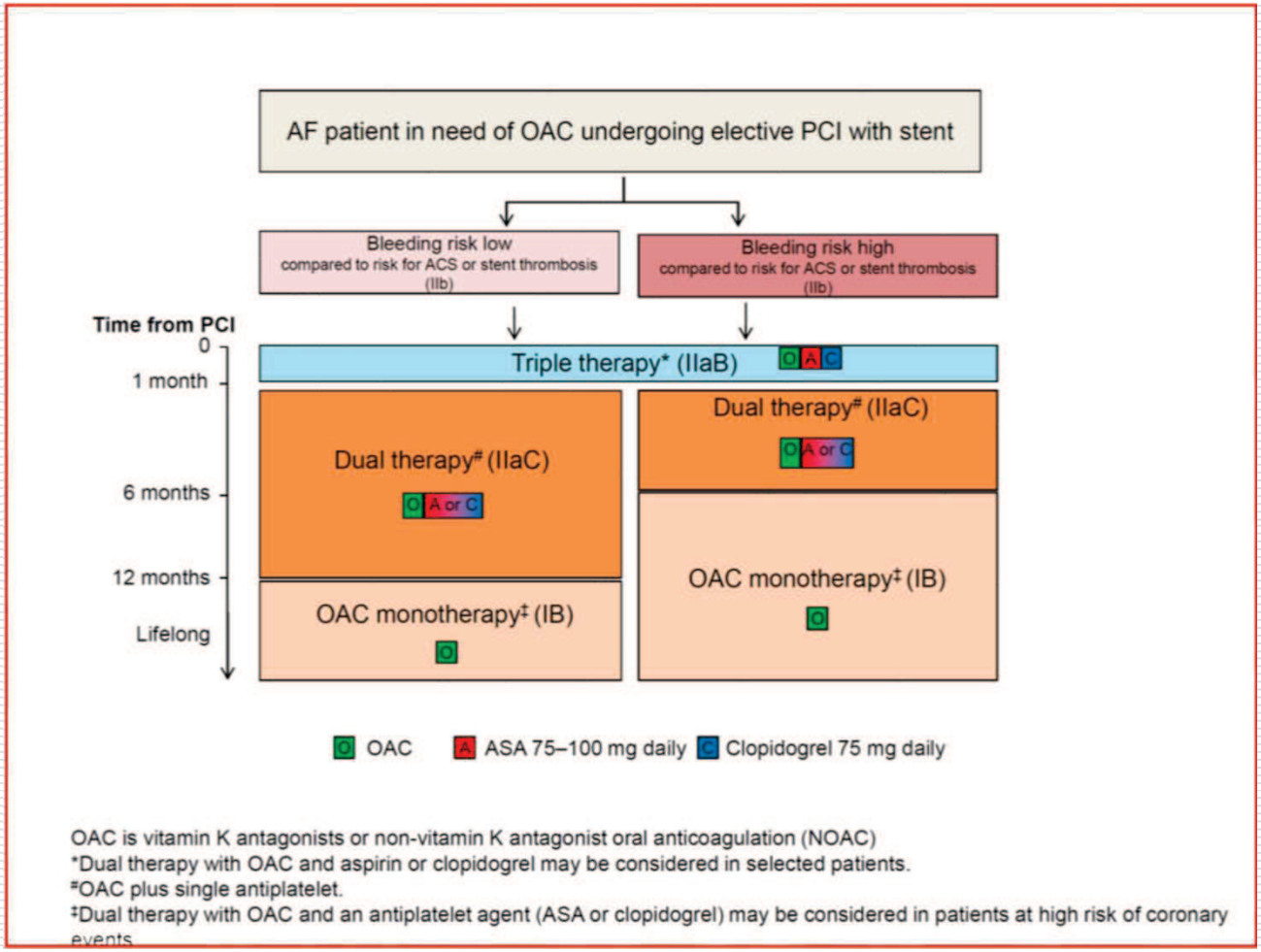
Strategie AK terapie u AKS



OAC stands for oral anticoagulation (using vitamin K antagonists or non-vitamin K antagonist oral anticoagulants)
*Dual therapy with OAC and aspirin or clopidogrel may be considered in selected patients, especially at longer distance from index event.
#OAC plus single antiplatelet.
‡Dual therapy with OAC and an antiplatelet agent (ASA or clopidogrel) may be considered in patients at high risk of coronary events

ESC 2016

Strategie AK terapie u elektivní PCI

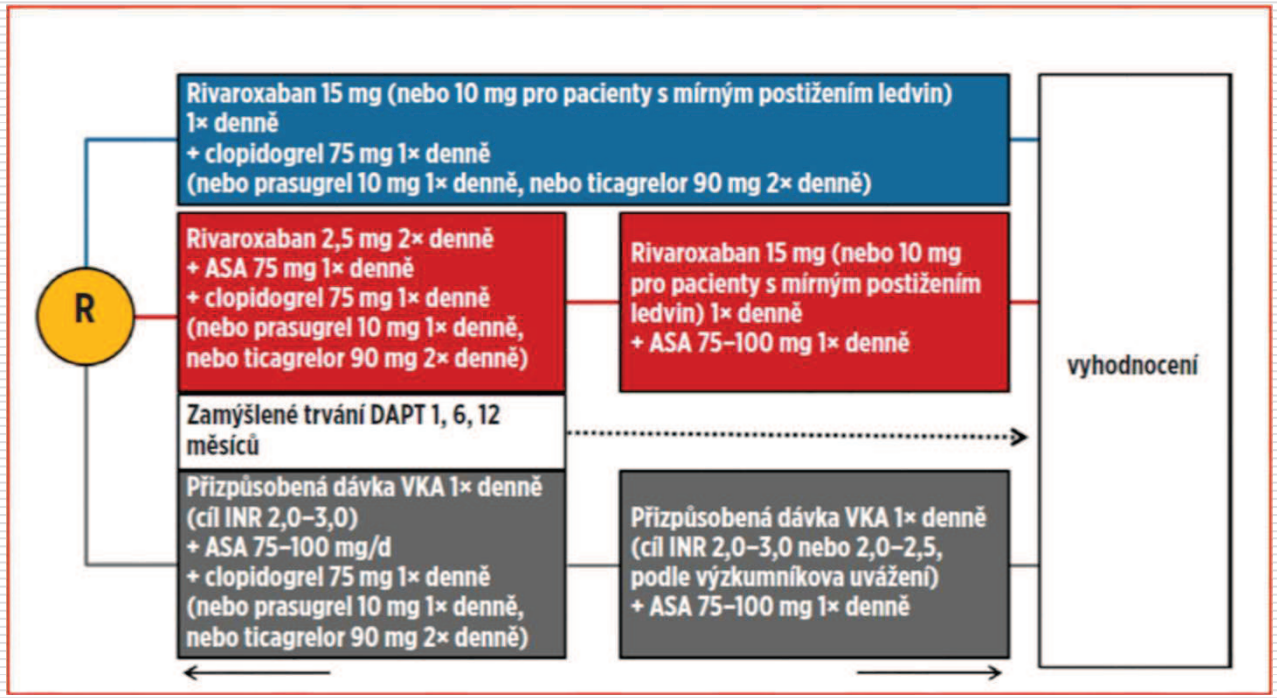


ESC 2016

Triple therapy: Souhrn

- Individuální rozhodnutí
- Nízké nebo vysoké riziko krvácení x riziko AKS nebo instent trombózy
- Dle guidelines je OAC definována jako léčba VKA nebo DOAC
- V současné době data pro kombinaci AK pouze s ASA /klopidogrel
- Kombinace s prasugrelem/ticagrelorem není zatím doporučována (běžící studie)

PIONEER AF - PCI Study



Táborský M: Novinky v kardiologii 2015, ISBN 978-80-204-3712-9, str. 151
Gibson CM: http://dx.doi.org/10.1016/j.ahj.2014.12.006

IV: Registr GARFIELD

ESC 2015: Kohorta IV

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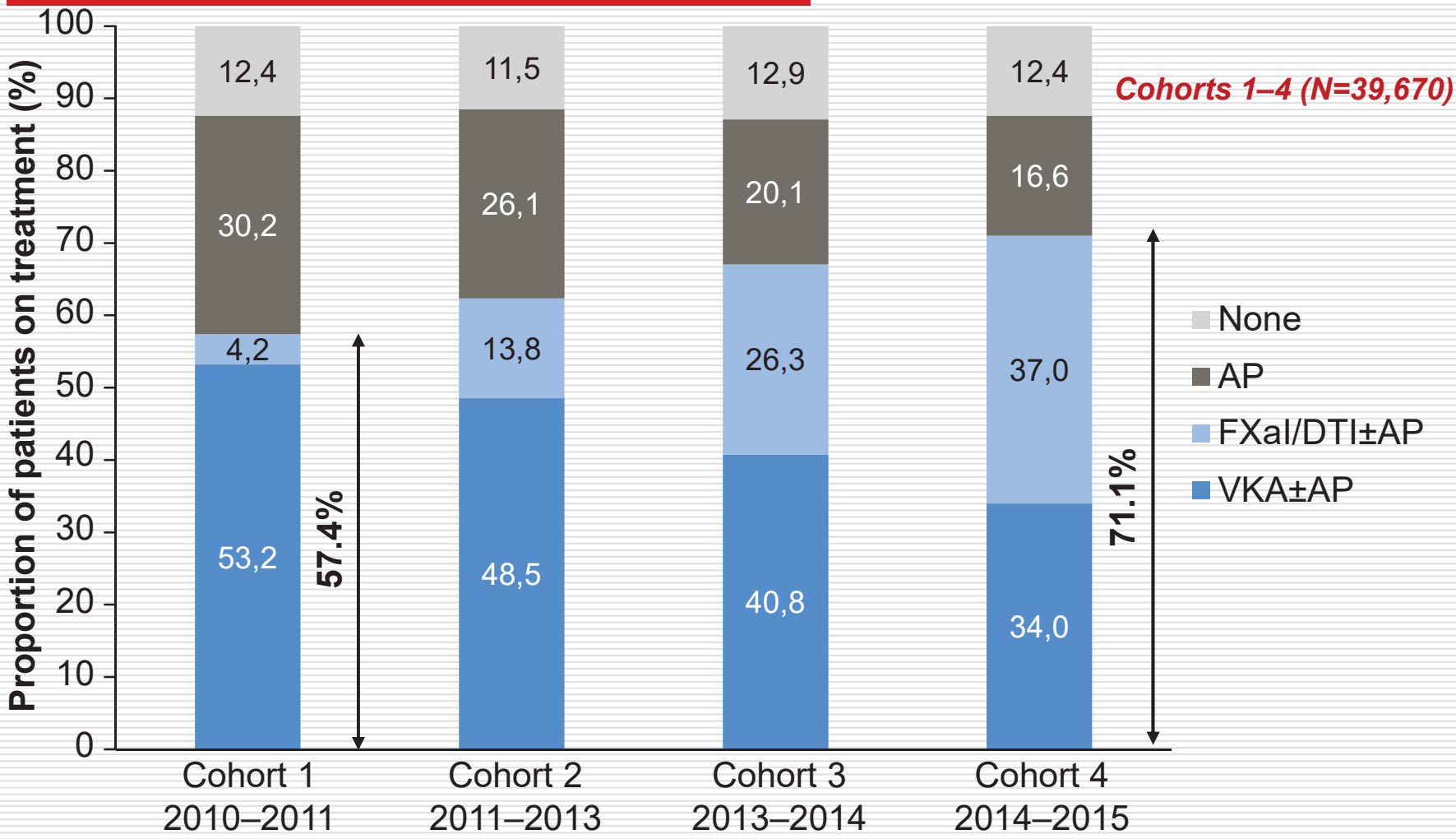
Evolution in Baseline Treatment for Patients Enrolled in Sequential Cohorts of GARFIELD-AF



Kakkar AK et al, Presented at ESC 2015.

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Patterns of Uptake of NOACs in Europe

Background/rationale

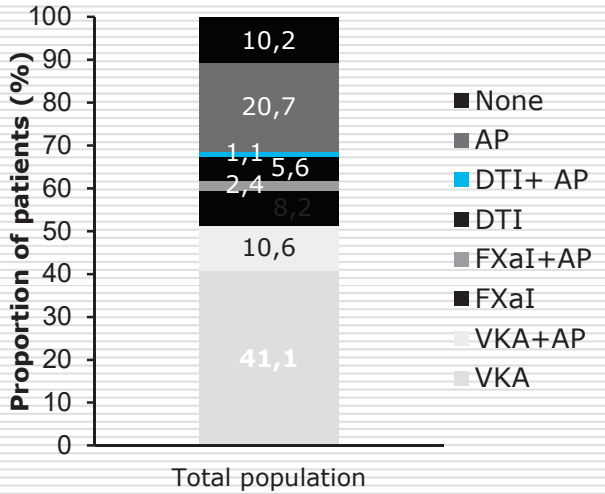
- To describe the evolution of the antithrombotic therapy patterns across different European NVAF populations

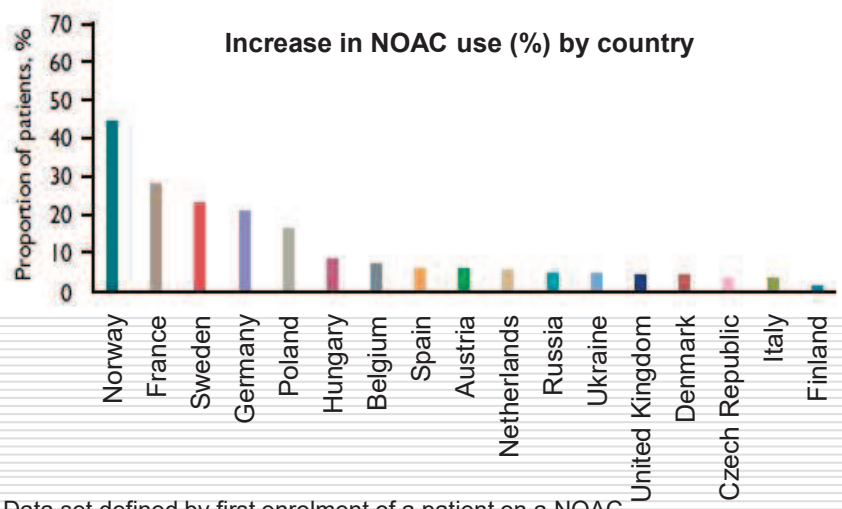
Results

- NOAC uptake was evaluated in a total of 17,475 NVAF patients, of whom 51.0% used a VKA and 17.0% a NOAC at enrolment
- Anticoagulant ± antiplatelet therapy was the most commonly used therapy at baseline (69.0%)
- In the NOAC group, almost half of patients used a Factor Xa inhibitor alone (47.2%)
- NOAC uptake has increased in all countries included in the analysis
- The greatest increases in NOAC uptake during the follow-up period were observed in Norway, Poland and Denmark (~45%, ~28% and ~22%)
- NOAC uptake varied considerably across countries, ranging between 2.6% (Finland) and 58.0% (Belgium)

Conclusion

- Large differences in the NOAC availability and arrangements for reimbursement may account for the variations in NOAC uptake between countries





Data set defined by first enrolment of a patient on a NOAC

Camm AJ et al, Presented at ESC 2015; P85323

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V: Nová data o FS

Obezita a FS: **LEGACY Study**

Long-Term Effect of Goal-Directed Weight Management in an Atrial Fibrillation Cohort

A Long-Term Follow-Up Study (LEGACY)

Rajeev K. Pathak, MBBS,* Melissa E. Middeldorp,* Megan Meredith,* Abhinav B. Mehta, MAcrSt,†
Rajiv Mahajan, MD, PhD,* Christopher X. Wong, MBBS, PhD,*† Darragh Twomey, MBBS,* Adrian D. Elliott, PhD,*§
Jonathan M. Kalman, MBBS, PhD,¶ Walter P. Abhayaratna, MBBS, PhD,# Dennis H. Lau, MBBS, PhD,*
Prashanthan Sanders, MBBS, PhD*

ABSTRACT

BACKGROUND Obesity and atrial fibrillation (AF) frequently coexist. Weight loss reduces the burden of AF, but whether this is sustained, has a dose effect, or is influenced by weight fluctuation is unknown.

OBJECTIVES This study sought to evaluate the long-term impact of weight loss and weight fluctuation on rhythm control in obese individuals with AF.

METHODS Of 1,415 consecutive patients with AF, 825 had a body mass index ≥27 kg/m^2 and were offered weight management. After screening for exclusion criteria, 355 were included in this analysis. Weight loss was categorized as group 1 (≥10%), group 2 (3% to 9%), and group 3 (<3%). Weight trend and/or fluctuation was determined by yearly follow-up. We determined the impact on the AF severity scale and 7-day ambulatory monitoring.

RESULTS There were no differences in baseline characteristics or follow-up among the groups. AF burden and symptom severity decreased more in group 1 compared with groups 2 and 3 ($p < 0.001$ for all). Arrhythmia-free survival with and without rhythm control strategies was greatest in group 1 compared with groups 2 and 3 ($p < 0.001$ for both). In multivariate analyses, weight loss and weight fluctuation were independent predictors of outcomes ($p < 0.001$ for both). Weight loss ≥10% resulted in a 6-fold (95% confidence interval: 3.4 to 10.3; $p < 0.001$) greater probability of arrhythmia-free survival compared with the other 2 groups. Weight fluctuation >5% partially offset this benefit, with a 2-fold (95% confidence interval: 1.0 to 4.3; $p = 0.02$) increased risk of arrhythmia recurrence.

CONCLUSIONS Long-term sustained weight loss is associated with significant reduction of AF burden and maintenance of sinus rhythm. (Long-Term Effect of Goal directed weight management on Atrial Fibrillation Cohort: A 5 Year follow-up study [LEGACY Study]; ACTRN12614001123639) (J Am Coll Cardiol 2015;65:2159-69)

Pethak RK, et al. J Am Coll Cardiol 2015;65(20):2159–69.

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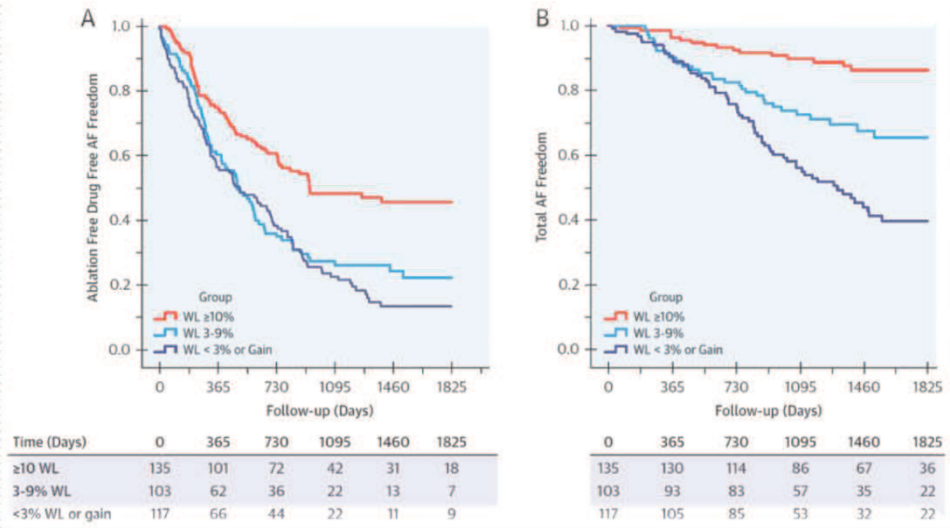
Obezita a FS

- Obezita – rizikový faktor FS
- Prediktor obtížného udržení SR po kardioverzi
- KI primární KCH/ hybridní ablace FS
- Významná redukce váhy = zlepšení šance dlouhodobé stabilizace SR



Time (Days)	0	365	730	1095	1460	1825
≥10 WL	135	101	72	42	31	18
3-9% WL	103	62	36	22	13	7
<3% WL or gain	117	66	44	22	11	9

	0	365	730	1095	1460	1825
	135	130	114	86	67	36
	103	93	83	57	35	22
	117	105	85	53	32	22

Pethak RK, et al. J Am Coll Cardiol 2015;65(20):2159–69.

Význam AA po ablaci FS

Effect of Antiarrhythmic Drug Initiation on Readmission After Catheter Ablation for Atrial Fibrillation

Peter A. Noseworthy, MD,*† Holly K. Van Houten, BS,† Lindsey R. Sangaralingham, MPH,† Abhishek J. Deshmukh, MBBS,* Suraj Kapa, MD,* Siva K. Mulpuru, MD,* Christopher J. McLeod, MBBS,* Samuel J. Asirvatham, MD,* Paul A. Friedman, MD,* Nilay D. Shah, PhD,†‡ Douglas L. Packer, MD*

ABSTRACT

OBJECTIVES This study sought to evaluate the impact on antiarrhythmic drug (AAD) initiation on the risk of readmission after catheter ablation for atrial fibrillation (AF) among patients not already treated with an AAD.

BACKGROUND Hospital readmission, a commonly tracked indicator of quality and efficiency of care delivery, occurs in about 15% patients within 90 days of undergoing catheter ablation for AF.

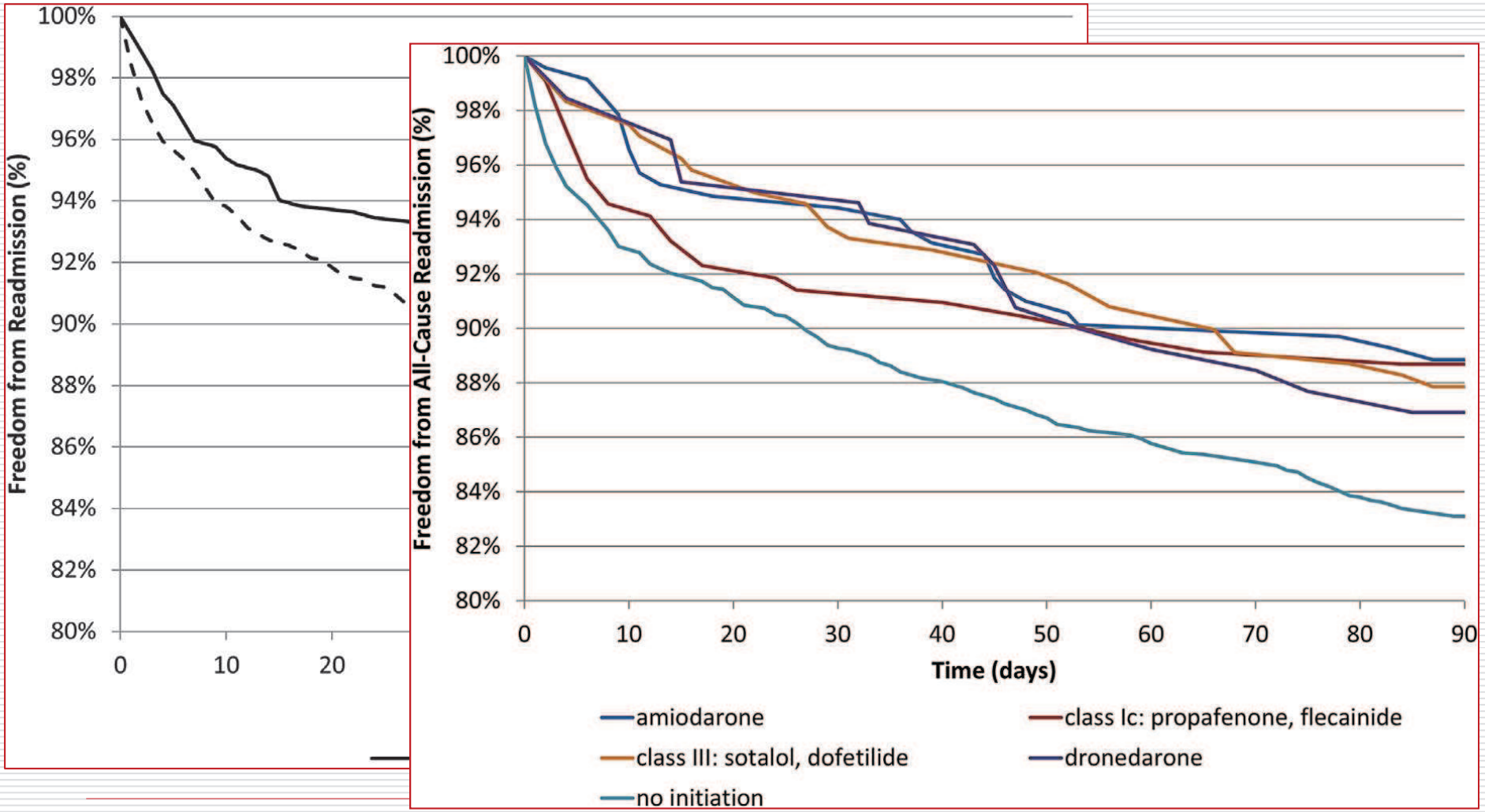
METHODS Using a large national administrative claims database, we identified all atrial fibrillation patients (≥18 years of age) who underwent catheter ablation between January 2005 and December 2013 (n = 7,442). We identified the subset of patients who had not been on an AAD in the 90 days before ablation (n = 2,542) and, among those, the patients in whom an AAD was initiated at discharge following the ablation (n = 519).

RESULTS The readmission rate was significantly lower among patients who were initiated on an AAD compared with those who were not (11.6% vs. 16.2%, p = 0.009). The association persisted after adjustment for age, sex, Charlson index, and $CHADS_2$ score (hazard ratio [HR]: 0.73, 95% confidence interval [CI]: 0.56 to 0.97; p = 0.03). In unadjusted time to event analysis, amiodarone (HR: 0.55, 95% CI: 0.32 to 0.94; p = 0.039) was associated with the greatest reduction in readmission whereas dronedarone, class II agents, and class IC agents had no statistically significant effect on readmission. AADs were discontinued in 44.5% of patients at 3 months.

CONCLUSIONS Initiation of an AAD at discharge of catheter ablation is associated with a significant reduction in readmission within 90 days. Routine initiation of an AAD after catheter ablation may reduce healthcare utilization in the periablation period; however, the high rate of medication discontinuation may suggest that side effects or inefficacy may limit long-term AAD use post-ablation. (J Am Coll Cardiol EP 2015;■:■-■) © 2015 by the American College of Cardiology Foundation.

Noseworthy PA: J Am Coll Cardiol EP 2015

Vliv AA léčby po ablaci FS na rehospitalizace pro recidivu arytmie



Noseworthy PA: J Am Coll Cardiol EP 2015

EHRA Survey: Strategie ablačních technik u perzistující FS

Current ablation techniques for persistent atrial fibrillation: results of the European Heart Rhythm Association Survey

Nikolaos Dagres[1]*, Maria Grazia Bongiorni[2], Torben Bjerregaard Larsen[3], Antonio Hernandez-Madrid[4], Laurent Pison[5], and Carina Blomström-Lundqvist[6] Conducted by the Scientific Initiatives Committee, European Heart Rhythm Association

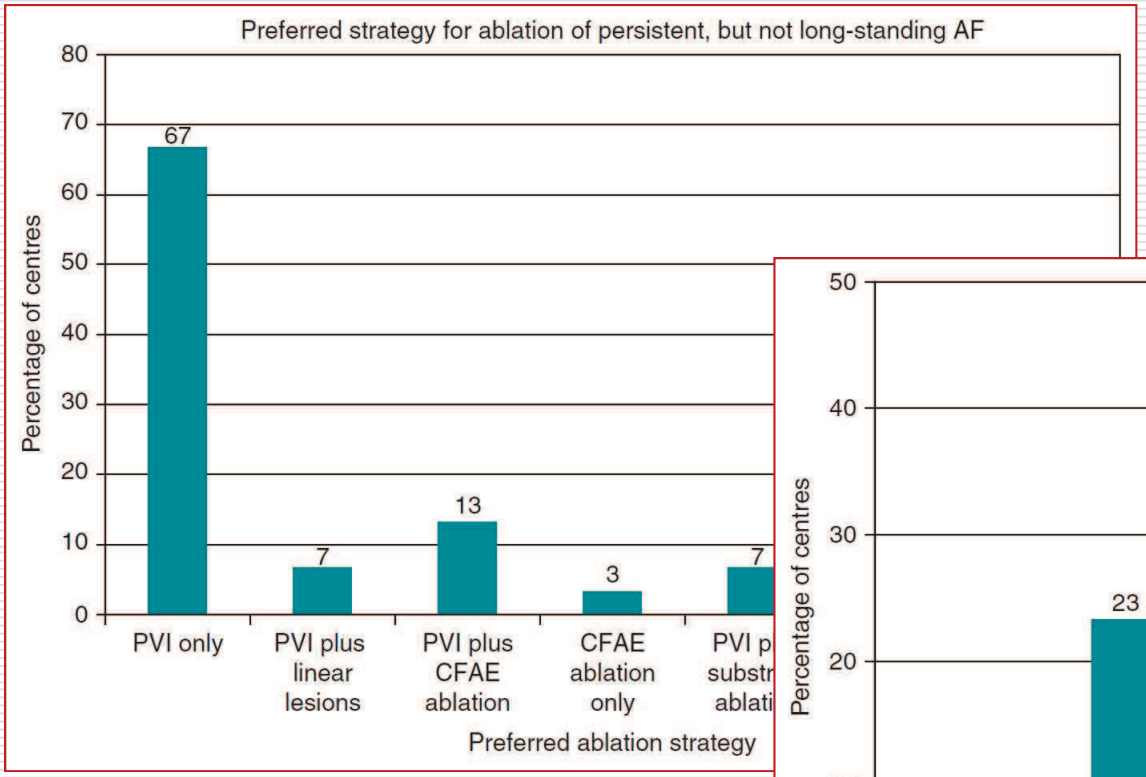
[1]Second Department of Cardiology, University of Athens, Greece; [2]CardioThoracic and Vascular Department, University Hospital-Pisa, Italy; [3]Department of Cardiology, Aalborg University Hospital, Aalborg, Denmark; [4]Cardiology Department, Ramon y Cajal Hospital, Alcalá University, Madrid, Spain; [5]Department of Cardiology, Maastricht University Medical Center, Maastricht, The Netherlands; and [6]Department of Cardiology, Institution of Medical Science, Uppsala University, Uppsala 75185, Sweden

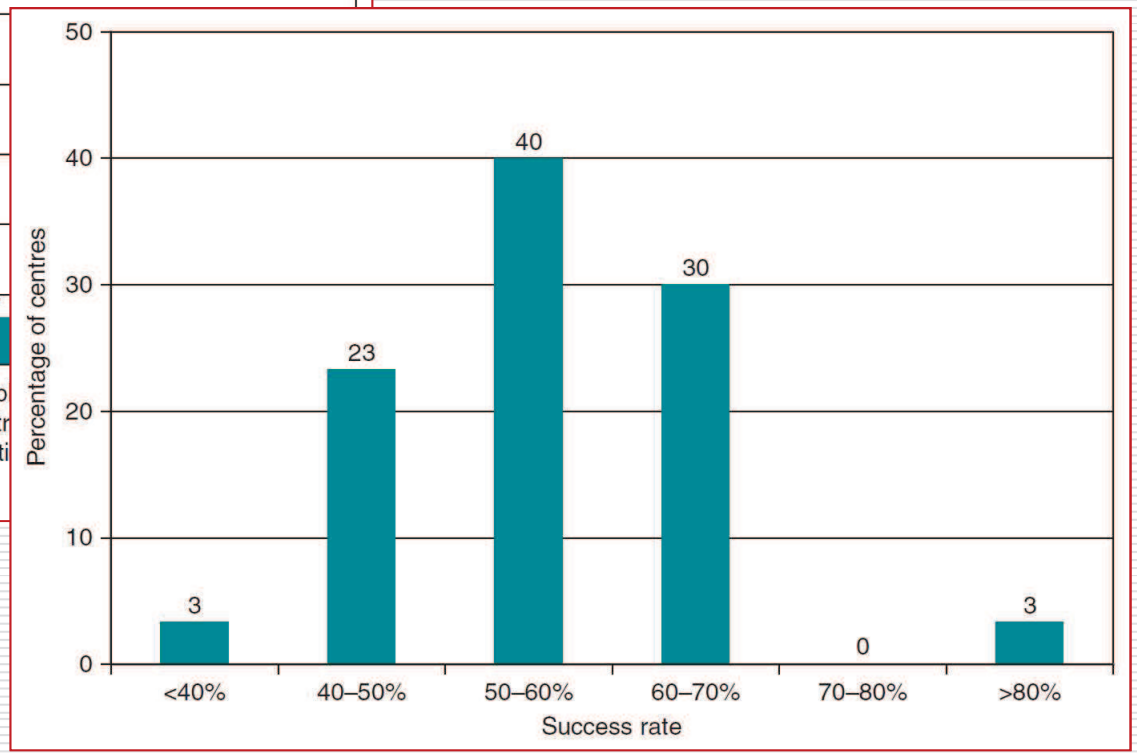
Received 26 August 2015; accepted after revision 27 August 2015

The aim of this survey was to provide insight into current practice regarding ablation of persistent atrial fibrillation (AF) among members of the European Heart Rhythm Association electrophysiology research network. Thirty centres responded to the survey. The main ablation technique for first-time ablation was stand-alone pulmonary vein isolation (PVI): in 67% of the centres for persistent but not long-standing AF and in 37% of the centres for long-standing persistent AF as well. Other applied techniques were ablation of fractionated electrograms, placement of linear lesions, stepwise approach until AF termination, and substrate mapping and isolation of low-voltage areas. However, the percentage of centres applying these techniques during first ablation did not exceed 25% for any technique. When stand-alone PVI was performed in patients with persistent but not long-standing AF, the majority (80%) of the centres used an irrigated radiofrequency ablation catheter whereas 20% of the respondents used the cryoballoon. Similar results were reported for ablation of long-standing persistent AF (radiofrequency 90%, cryoballoon 10%). Neither rotor mapping nor one-shot ablation tools were used as the main first-time ablation methods. Systematic search for non-pulmonary vein triggers was performed only in 10% of the centres. Most common 1-year success rate off antiarrhythmic drugs was 50–60%. Only 27% of the centres knew their 5-year results. In conclusion, patients with persistent AF represent a significant proportion of AF patients undergoing ablation. There is a shift towards stand-alone PVI being the primary choice in many centres for first-time ablation in these patients. The wide variation in the use of additional techniques and in the choice of endpoints reflects the uncertainties and lack of guidance regarding the most optimal approach. Procedural success rates are modest and long-term outcomes are unknown in most centres.

Dagres N: EUROPACE 2015; 17: 1596-1600

Strategie a výsledky





Dagres N: EUROPACE 2015; 17: 1596-1600

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Katetrizační ablace FS u pacientů s diabetem

Catheter ablation of atrial fibrillation in patients with diabetes mellitus: a systematic review and meta-analysis

Matteo Anselmino[1], Mario Matta[1], Fabrizio D'ascenzo[1], Carlo Pappone[2], Vincenzo Santinelli[2], T. Jared Bunch[3], Thomas Neumann[4], Richard J. Schilling[5], Ross J. Hunter[5], Georg Noelker[6], Martin Fiala[7], Antonio Frontera[8], Glyn Thomas[8], Demosthenes Katritsis[9], Pierre Jais[10], Rukshen Weerasooriya[10,11], Jonathan M. Kalman[12], and Fiorenzo Gaita[1]*

[1]Division of Cardiology, Department of Medical Sciences, Città Della Salute e Della Scienza Hospital, University of Turin, Corso Dogliotti 24, Torino 10126, Italy; [2]Department of Arrhythmology, Maria Cecilia Hospital, GVM Care & Research, Cotignola, Italy; [3]Intermountain Heart Institute, Intermountain Medical Center, Murray, UT, USA; [4]Department of Cardiology, Kerckhoff Heart and Thorax Center, Bad Nauheim, Germany; [5]Cardiovascular Biomedical Research Unit, St. Bartholomew's Hospital, Barts Health NHS Trust, London, UK; [6]Department of Cardiology, Heart and Diabetes Center North Rhine-Westphalia, Ruhr University Bochum, Bad Oeynhausen, Germany; [7]Department of Cardiology, Heart Centre, Hospital Podlesi as, Trinec, Czech Republic; [8]Department of Cardiology, Bristol Heart Institute, University Hospital Bristol NHS Trust, Bristol, UK; [9]Department of Cardiology, Athens Euroclinic, Athens, Greece; [10]Department of Cardiac Electrophysiology, Hopital Cardiologique du Haut-Leveque, Bordeaux-Pessac, France; [11]University of Western Australia, Crawley, Western Australia, Australia; and [12]Department of Cardiology, The Royal Melbourne Hospital, Melbourne, Australia

Received 26 February 2015; accepted after revision 22 May 2015

Aims Diabetes mellitus (DM) and atrial fibrillation (AF) share pathophysiological links, as supported by the high prevalence of AF within DM patients. Catheter ablation of AF (AFCA) is an established therapeutic option for rhythm control in drug resistant symptomatic patients. Its efficacy and safety among patients with DM is based on small populations, and long-term outcome is unknown. The present systematic review and meta-analysis aims to assess safety and long-term outcome of AFCA in DM patients, focusing on predictors of recurrence.

Methods and results A systematic review was conducted in MEDLINE/PubMed and Cochrane Library. Randomized controlled trials, clinical trials, and observational studies including patients with DM undergoing AFCA were screened and included if matching inclusion and exclusion criteria. Fifteen studies were included, adding up to 1464 patients. Mean follow-up was 27 (20–33) months. Overall complication rate was 3.5 (1.5–5.0)%. Efficacy in maintaining sinus rhythm at follow-up end was 66 (58–73)%. Meta-regression analysis revealed that advanced age ($P < 0.001$), higher body mass index ($P < 0.001$), and higher basal glycated haemoglobin level ($P < 0.001$) related to higher incidence of arrhythmic recurrences. Performing AFCA lead to a reduction of patients requiring treatment with antiarrhythmic drugs (AADs) from 55 (46–74)% at baseline to 29 (17–41)% ($P < 0.001$) at follow-up end.

Conclusions Catheter ablation of AF safety and efficacy in DM patients is similar to general population, especially when performed in younger patients with satisfactory glycemic control. Catheter ablation of AF reduces the amount of patients requiring AADs, an additional benefit in this population commonly exposed to adverse effects of AF pharmacological treatments.

Anselmino M: EUROPACE 2015; 17: 1518-1525

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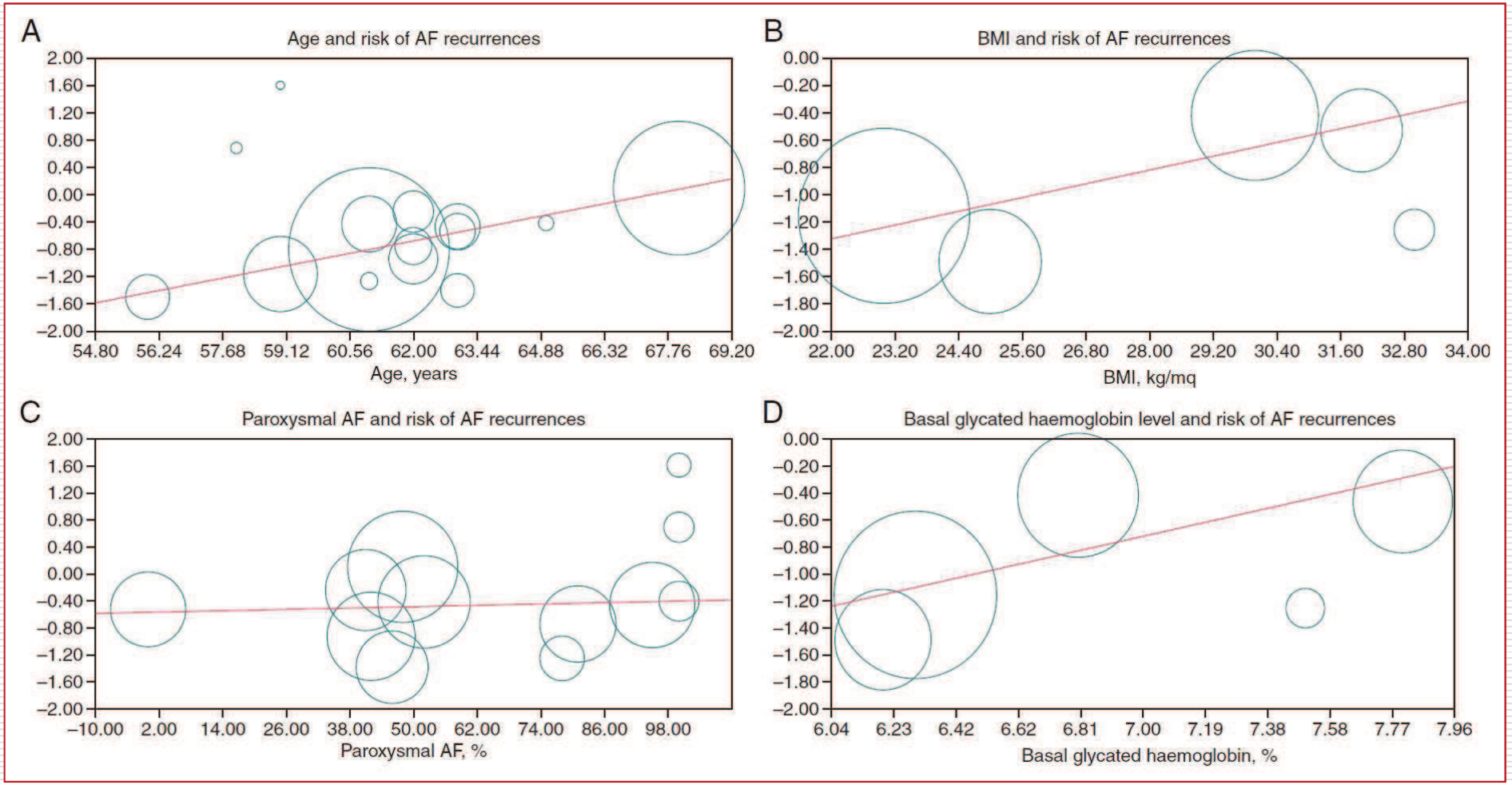
Vyšší věk, BMI a HbA1c: Rizikové faktory recidivy FS po ablaci



Anselmino M: EUROPACE 2015; 17: 1518-1525

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Translační medicína FS: EUTRAF Study

The European Network for Translational Research in Atrial Fibrillation (EUTRAF): objectives and initial results

Ulrich Schotten[1]*, Stephane Hatem[2], Ursula Ravens[3], Pierre Jaïs[4], Frank-Ulrich Müller[5], Andres Goette[6], Stephan Rohr[7], Gudrun Antoons[8], Burkert Pieske[8], Daniel Scherr[8], Ali Oto[9], Barbara Casadei[10], Sander Verheule[1], David Cartlidge[11], Klaus Steinmeyer[12], Thorsten Götsche[13], Dobromir Dobrev[14], Jens Kockskämper[15], Uwe Lendeckel[16], Larissa Fabritz[5,17], Paulus Kirchhof[5,18], and A. John Camm[19] on behalf of the EUTRAF investigators

[1]Department of Physiology, Cardiovascular Research Institute Maastricht, Maastricht University, PO Box 616, Maastricht 6200 MD, The Netherlands; [2]Université Pierre Marie Curie, Paris, France; [3]Technische Universität Dresden, Dresden, Germany; [4]Centre Hospitalier Universitaire, LYRIC (Institut de rythmologie et de modélisation cardiaque), Bordeaux, France; [5]University Clinic of the Westfälische Wilhelms-Universität Münster, Münster, Germany; [6]University Hospital Magdeburg, Magdeburg, Germany; [7]Universität Bern, Bern, Switzerland; [8]University Hospital of the Medical University Graz, Graz, Austria; [9]Medical Information Technology Solutions, Turkey; [10]University of Oxford, Oxford, UK; [11]UK Health & Environment Research Institute, UK; [12]Sanofi-Aventis Deutschland GmbH, Germany; [13]Osypka AG, Germany; [14]Universität Duisburg-Essen, Essen, Germany; [15]Philipps Universität, Marburg, Germany; [16]Ernst-Moritz-Arndt Universität, Greifswald, Germany; [17]University of Birmingham Centre for Cardiovascular Sciences and UHB NHS Trust, Birmingham, UK; [18]University of Birmingham Centre for Cardiovascular Sciences and SWBH NHS Trust, Birmingham, UK; and [19]St. George's University of London, London, UK

Received 7 May 2015; accepted after revision 29 June 2015; online publish-ahead-of-print 12 September 2015

Atrial fibrillation (AF) is the most common sustained arrhythmia in the general population. As an age-related arrhythmia AF is becoming a huge socio-economic burden for European healthcare systems. Despite significant progress in our understanding of the pathophysiology of AF, therapeutic strategies for AF have not changed substantially and the major challenges in the management of AF are still unmet. This lack of progress may be related to the multifactorial pathogenesis of atrial remodelling and AF that hampers the identification of causative pathophysiological alterations in individual patients. Also, again new mechanisms have been identified and the relative contribution of these mechanisms still has to be established. In November 2010, the European Union launched the large collaborative project EUTRAF (European Network of Translational Research in Atrial Fibrillation) to address these challenges. The main aims of EUTRAF are to study the main mechanisms of initiation and perpetuation of AF, to identify the molecular alterations underlying atrial remodelling, to develop markers allowing to monitor this processes, and suggest strategies to treat AF based on insights in newly defined disease mechanisms. This article reports on the objectives, the structure, and initial results of this network.

Schotten U: EUROPACE 2015; 17: 1457-1466

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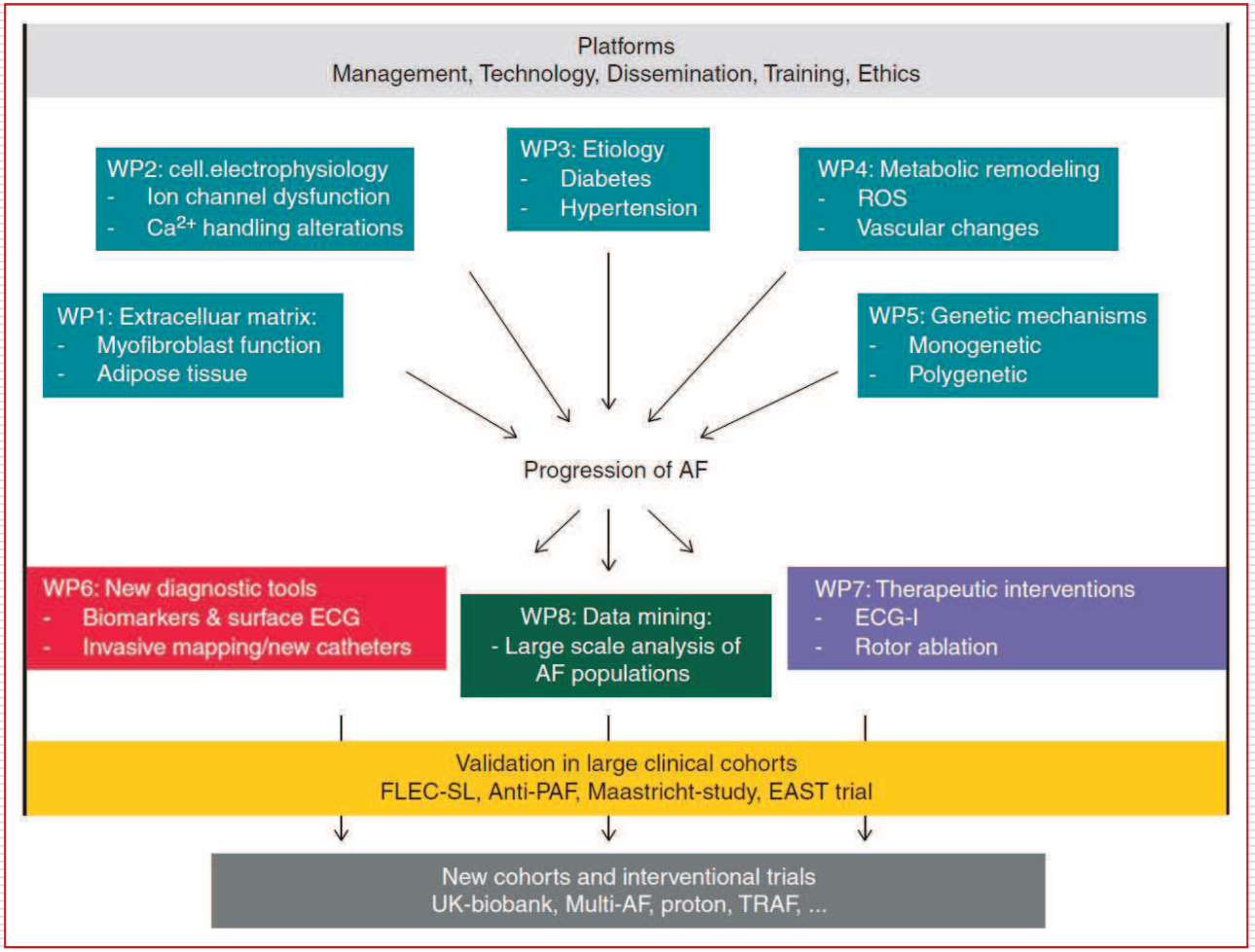
Cíle studie EUTRAF



Schotten U: EUROPACE 2015; 17: 1457-1466

Závěr

1. Kardioverze na DOAC je možná a bezpečná
2. Je možné zvážit katetrizační ablaci na DOAC
3. Nejvíce dat – prospektivní studie s rivaroxabanem
4. Interpretace triple therapy – individuální rozhodnutí, nekombinovat OAC s novými protidestičkovými léky
5. Obezita a diabetes limitují dlouhodobé udržení SR po katetrizační ablaci FS
6. Akcentace úlohy translační medicíny FS → individualizace léčby
7. Data z registrů ukazují bezpečnost, efektivitu a kontinuální zvyšování antikoagulační léčby DOAC

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