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Mass screening for silent atrial fibrillation in high risk patients preliminary results from the STROKESTOP trial

C.E. Svennberg¹, J. Engdahl², V. Frykman-Kull¹, L. Friberg¹, L.Å. Levin³, M. Rosenqvist¹. ¹Karolinska Institute, Danderyd Hospital, Department of Clinical Sciences, Stockholm, ²Central County Hospital, Halmstad, ³Linkoping University, Department of Medical and Health Sciences, Linkoping, Sweden

Background: Atrial fibrillation (AF) is a frequent source of cardiac emboli in patients with ischemic stroke. AF may be asymptomatic and therefore undiagnosed. As oral anticoagulation (OAC) treatment is highly effective for stroke prevention, screening for silent AF seems suitable in risk populations. Above the age of 75, the current guidelines recommend OAC for AF, even in the absence of other risk factors. We hypothesize that AF screening in this age group will reduce stroke incidence.

Methods: All inhabitants in Stockholm County and Region Halland, Sweden age 75-76 years (n=25 415) are randomized in a 1:1 fashion either to be invited to a screening program for AF or to act as a control group. In the screening group, participants are invited to undergo intermittent ambulatory ECG recordings during two weeks. Participants in whom AF is detected are offered OAC treatment. Screening-and control groups will be followed prospectively for 5 years with regard to thromboembolic events, bleeding and mortality.

Results: During a 10- month period, 10 503 inhabitants in the screening arm had been invited and 4783 (46%) participated. Previously undiagnosed AF was found in 131 (3%) of participants and another 85 (2%) have been identified with previously known AF but without OAC treatment. The total prevalence of AF in the screening group exceeds 11%. Participation in the screening program is lower in urban Stockholm (45%) in comparison to rural areas (64%). More than 90% of the patients with undiagnosed AF were started on OAC.

Conclusion: Population based AF screening in a 75-year old population identifies 5% of the population as new candidates for OAC treatment due to AF. There is considerable local and regional variation in participation in the screening program.

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R. Sorensen¹, G.H. Gislason², C. Torp-Pedersen³, J.B. Olesen², E.L. Fosbol⁴, M. Lamberts², M. Charlot⁵, L. Kober⁴, G.Y.H. Lip⁶, M.L. Hansen². ¹Bispebjerg Hospital of the Copenhagen University Hospital, Department of Cardiology, Copenhagen, Denmark; ²Copenhagen University Hospital Gentofte, Department of Cardiology, Copenhagen, Denmark; ³Aalborg Hospital of the Aarhus University Hospital, Department of Cardiology, Aalborg, Denmark; ⁴Rigshospitalet -Copenhagen University Hospital, Heart Centre, Copenhagen, Denmark; ⁵Hillerod Hospital, Department of Cardiology and Endocrinology, Hillerod, Denmark; ⁶University of Birmingham, Centre for Cardiovascular Sciences, City Hospital, Birmingham, United Kingdom

Purpose: Dabigatran was recently approved for anticoagulation in patients with Atrial Fibrillation (AF); data regarding real-world use, comparative effectiveness, and safety is sparse.

Methods: From nationwide registers, we identified patients with an in hospital or outpatient-clinic AF diagnosis who claimed a prescription of dabigatran 110 or 150 mg, or warfarin, between August 22nd and December 31th, 2011. Hazard ratios of thromboembolic events (ischemic stroke, transitory ischemic attack, and peripheral artery embolism) and bleedings were estimated using Cox regression analyses, in all patients and stratified by previous Vitamin K antagonist (VKA) use, defined as a claimed prescription of warfarin 180 days before the AF diagnosis. Results: Overall, 1 612 (3.1%) and 1 114 (2.1%) claimed a prescription of dabigatran 110 mg and 150 mg, and 49 640 (94.8%) of warfarin. Patients treated with dabigatran 150 mg were younger with less comorbidity than those treated with dabigatran 110 mg and warfarin, as was VKA naïve compared with VKA experienced patients. Recommendations set by the European Medicine Agency for dabigatran were met in 90.3% and 55.5% of patients treated with 110 mg and 150 mg. Patients treated with 150 mg dabigatran, who did not fulfill the recommendations by European Medicine Agency were >80 years (3.8%), patients with liver (1.5%) and kidney (3.2%) disease, and patients with previous bleeding (7.0%). Compared with warfarin the thromboembolic risk associated with dabigatran 110 mg and 150 mg was HR 3.52 (1.40-8.84) and HR 5.79 (1.81-18.56), in VKA experienced patients; and HR 0.95 (0.47-1.91) and HR 1.14 (0.60-2.16) in VKA naïve patients. Bleeding risk was increased in VKA experienced patients receiving dabigatran 110 mg, but not in patients with 150 mg dabigatran, nor in the VKA naïve users.

Conclusion: Deviations from recommended use of dabigatran were frequent among patients treated with 150 mg. With cautious interpretation, dabigatran use in VKA naïve patients seems safe. Increased risk of thromboembolism and bleeding with dabigatran amongst VKA experienced users may reflect patient selection and "drug switching" practices.

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Apixaban versus warfarin in patients with atrial fibrillation and valvular heart disease: findings from the ARISTOTLE study

A. Avezum¹, R.D. Lopes², P.J. Schulte², F. Lanas³, M. Hanna⁴, P. Pais⁵, C. Erol⁶, R. Diaz⁷, C.B. Granger², J.H. Alexander² on behalf of the ARISTOTLE Investigators. ¹Dante Pazzanese Institute of Cardiology, Sao Paulo, Brazil; ²Duke University Medical Center, Duke Clinical Research Institute, Durham, United States of America; ³University of La Frontera, Temuco, Chile; ⁴Bristol-Myers Squibb, Princeton, United States of America; ⁵St. John's Medical College, Bangalore, India; ⁶Ankara University, Ankara, Turkey; ⁷Estudios Cardiologicos Latinoamerica (ECLA), Rosario, Argentina

Purpose: Apixaban is indicated for the prevention of stroke and systemic embolism (SE) in pts with non-valvular AF. In this context, valvular refers only to clinically significant mitral stenosis (MS) and not other valvular heart disease (VHD). Little is known about the efficacy and safety of apixaban in pts with AF and VHD. **Methods:** We used data from 18,197 pts with AF and ≥ 1 risk factor for stroke in ARISTOTLE with available information on VHD. Pts with clinically significant MS and mechanical heart valves were not eligible. Of these, 4808 (26.4%) had VHD defined by any history of at least moderate mitral regurgitation (3526), MS (131), aortic regurgitation (887), aortic stenosis (384), tricuspid regurgitation (2124), or valve surgery (251). We compared the effect of apixaban vs. warfarin on rates of stroke or SE and major bleeding in pts with and without VHD using Cox proportional hazards modeling.

Results: Pts with VHD were older, had more prior MI and prior bleeding, had a higher mean CHADS2 score, and had less hypertension and diabetes than pts without VHD. Pts with VHD had higher rates of stroke or SE and bleeding than pts without VHD. The benefits of apixaban compared with warfarin in reducing stroke and SE (interaction p=0.38), causing less major bleeding (interaction p=0.23), and decreasing death (interaction p=0.10) were consistent irrespective of the presence of VHD (Fig).



Conclusions: Pts with AF and VHD are at high risk for thromboembolic events and bleeding. Apixaban was similarly efficacious and safe in AF pts with and without VHD. Additional research is needed on the efficacy and safety of apixaban in pts with AF and VHD, particularly those with clinically significant MS and mechanical prosthetic valves.

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Efficacy and safety of rivaroxaban compared with warfarin in patients with peripheral artery disease and non-valvular atrial fibrillation: insights from ROCKET AF

W.S. Jones¹, A.S. Hellkamp¹, J. Halperin², J.P. Piccini¹, G. Breithardt³, D.E. Singer⁴, K.A.A. Fox⁵, K.W. Mahaffey¹, R.M. Califf¹, M.R. Patel¹ on behalf of ROCKET AF. ¹Duke University School of Medicine, Durham, NC, United States of America; ²Mount Sinai Medical Center, New York, NY, United States of America; ³University of Munster, Department of Cardiovascular Diseases in Adult, Munster, Germany; ⁴Harvard Medical School, Massachusetts General Hospital, Boston, United States of America; ⁵University of Edinburgh, Edinburgh, United Kingdom

Purpose: We performed a post-hoc analysis of the association between peripheral artery disease (PAD) and outcomes in AF patients and the safety and efficacy of rivaroxaban in AF patients with PAD.

Methods: ROCKET AF was a double-blind, double-dummy, randomized con-

Abstract 4385 – Table 1. Efficacy and safety endpoints							
Outcomes	PAD			No PAD			P-value for interaction of
	Rivaroxaban Events/ 100 pt-yrs (total events)	Warfarin Events/ 100 pt-yrs (total events)	Rivaroxaban vs. Warfarin HR (95% CI)	Rivaroxaban Events/ 100 pt-yrs (total events)	Warfarin Events/ 100 pt-yrs (total events)	Rivaroxaban vs. Warfarin HR (95% CI)	PAD and Treatment
Stroke or systemic embolization	2.61 (20)	2.23 (19)	1.19 (0.63, 2.22)	1.93 (249)	2.25 (287)	0.86 (0.73, 1.02)	0.34
Stroke	2.34 (18)	1.75 (15)	1.35 (0.68, 2.69)	1.82 (235)	2.08 (266)	0.88 (0.74, 1.05)	0.23
All-cause death	7.29 (54)	8.61 (69)	0.82 (0.57, 1.17)	4.19 (528)	4.50 (563)	0.93 (0.83, 1.05)	0.50
Major or NMCR bleeding	21.02 (105)	15.12 (90)	1.40 (1.06, 1.86)	14.59 (1370)	14.48 (1359)	1.03 (0.95, 1.11)	0.037
Major bleeding	6.11 (35)	3.58 (24)	1.76 (1.04, 2.95)	3.46 (360)	3.45 (362)	1.03 (0.89, 1.19)	0.053