Conclusions: When added to age, gender and heart failure on initial admission, the GRACE score improves prediction of heart failure readmission among people admitted to hospital with acute coronary syndrome.

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Impact of smoking and excessive drinking on the risk of incident atrial fibrillation in the Suita study: an urban cohort study
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Purpose: Atrial fibrillation (AF) is associated with an increased risk of mortality and stroke. However, few prospective studies have examined the association of smoking and drinking on AF in Western populations. No studies have examined the two combined effects on the risk of AF. We assessed the combined effect of smoking and drinking status on the risk of incident AF in a 12.6-year prospective study of an urban general population in Japan.

Methods: A total of 6,798 participants (30 to 79 years old) in the Suita Study were initially free of AF and prospectively followed up for incident AF. Participants were diagnosed with AF if AF or atrial flutter was present on an electrocardiogram from a routine health check-up examination (every 2 years) or if AF was indicated as a present illness by questionnaires or by registration of cardiovascular disease events during follow-up. Smoking status was classified into 3 categories: nonsmokers and former and current smokers. Alcohol consumption was classified into 5 categories: nondrinkers and former and current drinkers, which were divided into further three categories: weekly alcohol consumption of 1 to 160 g/week (moderate drinkers; <1 g/week in average, a Japanese unit), 161 to 320 g/week (moderate drinkers; >1 g/week), and >320 g/week (excessive drinkers; >2 g/day). Blood pressure (BP) categories were defined by the following criteria: optimal, normal, and high-normal BP, and hypertension. Cox proportional hazard ratios (HRs; 95% confidence intervals, CIs) were analyzed after adjusting for age, sex, BP categories, diabetes, hypertension, body mass index, and smoking and drinking status at baseline.

Results: During 12.6 years of follow-up, 237 incident AF events occurred (4.05 and 1.68 per 100 person-years for men and women, respectively). Compared with nonsmokers, the adjusted HR (95% CI) of incident AF for smokers was 1.48 (1.00 to 2.12). Adjusted hazard ratio for AF was 1.14 (1.02 to 1.28) per 10 cigarettes a day. Compared with nondrinkers, the adjusted HRs (95% CIs) of incident AF for moderate and excessive drinkers were 1.00 (0.70 to 1.41) and 1.63 (1.05 to 2.53), respectively. Compared with nonsmoker with non-excessive drinking, the adjusted HRs (95% CIs) of incident AF for smokers with non-excessive drinking and nonsmokers and smokers with excessive drinking were 1.42 (1.01 to 1.96), 1.97 (1.17 to 3.32), and 2.07 (1.27 to 3.37), respectively.

Conclusions: Cigarette smoking and excessive drinking are important risk factors for incidence of AF. Lifestyle modifications for moderate drinking and smoking cessation are important for preventing AF in general population.

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One-year outcomes in new versus permanent atrial fibrillation: Insights from the prospective, international GARFIELD registry
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Purpose: To compare outcomes at 1 year in patients with new versus permanent atrial fibrillation (AF) using data from the international GARFIELD registry.

Methods: Consecutive adults (≥18 years) diagnosed with non-valvular AF within the previous 6 weeks and ≥1 further investigator-defined stroke risk factor(s) were enrolled at 540 sites in 19 countries. A Cox proportional hazards model was used to investigate the effect of new versus permanent AF (classified at study entry) on 1-year outcomes.

Results: Of the 10,608 patients, 1-year data were available in 95%. Patients with new AF were younger than those with permanent AF (70±11 vs 73±10 y, p<0.001) and had lower prevalences of heart failure (21% vs 26%, p<0.001), diabetes (22% vs 24%, p=0.03), hypertension (75% vs 81%, p<0.001), previous stroke (19% vs 16%, p<0.001), and previous bleeding (2.9% vs 3.9%, p<0.001) but had higher pulse rates (94±28 vs 83±20 bpm, p<0.001) and were at higher risk of events at 1 year (Table).

Conclusion: These observational data indicate that patients with new AF are at lower cardiovascular risk than those with permanent AF but have higher rates of death and major bleeding, suggesting that other factors contribute to risk.

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Clinical profile and cardiovascular risk factors of patients treated with novel oral anticoagulants in atrial fibrillation - patterns of use in the European PREFER in AF registry
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Purpose: Several novel oral anticoagulants (NOACs) are currently available in Europe, and the current clinical development for the prevention of thromboembolic events in atrial fibrillation (AF). The last focused update of the ESC guidelines for the management of AF included the use of NOACs due to the existing evidence of efficacy and safety, and the overcoming of several drawbacks associated with conventional anticoagulants. Nevertheless, little is known about the impact of these indications on clinical practice and the risk profile of patients treated with NOACs in comparison with those who received vitamin K antagonists (VKA).

Methods: The PREvention of thromboembolic events – European Registry in Atrial Fibrillation (PREFER in AF) gathered data on unselected AF patients in Europe. PREFER in AF recruited patients in Austria, France, Germany, Italy, Spain, Italy, Belgium and the United Kingdom from January 2010 to January 2013. We report the data collected at enrolment into the study.

Results: 7243 consecutive patients were enrolled, 442 (6.1%) were treated with an NOAC (diabegir or rivaroxaban) and 4799 (66.3%) with a VKA (warfarin, phenprocoumon, acenocoumar or fludione). The rest received antiplatelet (AP) agents, a combination of antithrombotics or nothing. Patients treated with an NOAC were significantly younger (70.3±10.4 years) than those treated with a VKA (72.1±10.12 years, p<0.001), with a slightly higher proportion of males (61.8% vs. 58.4%). No significant differences were found in the thrombotic risk and bleeding risk between NOAC and VKA groups, with similar CHA2DS2-VASc scores (3.4±1.7 vs. 3.5±1.7), and HAS-BLED scores (2.1±1.1 vs. 1.9±1.1). Patients treated with NOACs were more likely to have a diagnosis of paroxysmal AF than VKA patients (43.0% vs. 23.5%, p<0.001), with a reverse prevalence of long-standing persistent and permanent AF (30.9% vs. 45.2%, p<0.001).

Conclusions: Patients treated with NOACs in the setting of a large European multicentre AF registry represent a different day-to-day practice workload. The current data showed less advanced forms (paroxysmal) of AF in comparison with those treated with a VKA. They had no differences regarding thromboembolic and bleeding risk. This suggests that younger patients are more likely to gain access to NOACs.

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The CHA2DS2-VASc score predicts 320-slice CT based coronary artery plaques and >50% stenosis in subjects with chronic and paroxysmal atrial fibrillation
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Purpose: In evaluating coronary arteries by 64-256 slice computed tomography (CT), atrial fibrillation (AF) is usually an exclusion criterion. Therefore, few studies have examined coronary artery stenosis in AF subjects. The CHA2DS2-VASc score is a simple means to evaluate risk of cerebral infarction in AF subjects, and we used this score to predict coronary artery stenosis as confirmed by 320 slice CT.

Methods: A total of 112 chronic (CAF) and 92 paroxysmal AF (PAS) subjects underwent retrospective electrocardiogram gated 320 slice CT (Aquilion One, Toshiba Medical) to evaluate the coronary arteries.

Results: Twenty-nine (all male, age 50.0±7.6 years), 51 (41 male, age 59.0±7.8 years), 41 (31, male 53.9±7.6 years) and 83 subjects (52 male, 72.0±7.0 years) had CHA2DS2-VASc scores of 0, 1, 2, and ≥3, respectively. On CT, the percentages of calcified plaques, non-calcified plaques, mixed plaques, non-calcified plaques with positive remodeling, and mixed plaques were 29%, 40%, 31% and 37%, respectively. The use of CHA2DS2-VASc scores of 0, 1, 2, and ≥3 showed less advanced forms (paroxysmal) of AF in comparison with those treated with a VKA. They had no differences regarding thromboembolic and bleeding risk. This suggests that younger patients are more likely to gain access to NOACs.
considering whether CAF or PAE, the subjects' body mass index, and the presence of hyperlipidemia and smoking habits were used to compare the CHA2DS2-VASc scores between groups. By Kaplan Meier analysis and log rank test, during a median follow-up of 19.2 months, the CHA2DS2-VASc scores ≥3 had significantly higher composite rate of sudden death or cardiac death compared with the CHA2DS2-VASc scores <3 (P=0.048).

Conclusions: The CHA2DS2-VASc score is useful to predict coronary artery notocess in AF patients.

PS1540 | BEDSIDE
Presence of a practice nurse to facilitate an intensive, structured care approach to hypertension management in primary care results in improved adherence to the strategy and better BP control
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Purpose: We have demonstrated that a structured and intensive care approach to the management of hypertension in primary care provides significant clinical benefits relative to usual care. We sought to determine the adjunctive impact of practice nurses (PN) in facilitating the application of this strategy and their potential impact on individual BP control.

Methods: Prospective, multi-centre randomised controlled trial (119 primary care clinics and 2185 participants). A total of 1038 participants were randomised to the study intervention; comprising automated risk profiling plus standardised guideline-based, stepwise pharmacological treatment (initial ARB mono-therapy or two forms of single pill ARB combination therapy) and computer-assisted intensified follow-up and treatment titration. Adherence to treatment prescription/up-titration plus adherence to the structured visits at 6, 10, 14 and 18 weeks post titration plus adherence to the structured visits at 6, 10, 14 and 18 weeks post treatment deviations (mostly failure to up-titrate therapy) occurred during 25.8% to 38.7% of clinic visits resulting in higher BP levels at the next visit (e.g. 26 week BP -137±13/81±10 vs. 133±13/79±10 mmHg, p=0.001). Alternatively, ideal protocol adherence to both schedule visits and up-titration of study treatment was highest in those participants managed by a PN (57.1% vs. 46.2%, adjusted OR 2.0, 95% CI 1.02-3.97; P=0.043). Overall, those exposed to PN-mediated care had a lower BP at 26 weeks (132±15/77±10 vs. 136±15/81±10 mmHg; p<0.001), were more likely to achieve their individual BP target (48.4% vs. 31.2%, OR 2.01, 95% CI 1.56-2.97; p<0.001) and reach the historical BP target of ≤140/90 mmHg (71.1% vs. 60.3%; OR 1.62, 95% CI 1.20-2.17; p<0.001).

Conclusions: PN-mediated application of a structured and intensive strategy in primary care resulted in more adherence to clinic visits, stricter adherence to intensive treatment up-titration (but not more adverse events) and, consequently, greater BP control within the intervention arm of one of the largest studies of its kind.