

Association between thromboembolic and bleeding risk with adverse outcomes in contemporary European atrial fibrillation patients: final analysis from the ESC-EHRA EORP AF general long-term registry

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Introduction: The ESC-EHRA EORP AF General Long-Term Registry provides a contemporary snapshot of European atrial fibrillation (AF) patients' characteristics and management. Aims: We present data about the final 2-years follow-up observation of AF patients enrolled in the ESC-EHRA EORP AF General Long-Term Registry.

Methods: A contemporary evaluation of residual risk of adverse outcomes in a cohort of largely anticoagulated AF patients according to the baseline thromboembolic and bleeding risk, defined according to CHA2DS2-VASc and HAS-BLED scores. We determined cardiovascular (CV) events, CV death and all-cause death as outcomes.

Results: Among the original 11069 patients enrolled, 8409 (76.0%) patients had available follow-up status at the end of the 2-years follow-up. Patients age, female sex and most comorbidities were progressively more prevalent across the spectrum of thromboembolic and bleeding risk. Data on adverse outcomes were available for 10087 (91.1%), over the 2-year observation period. Outcome rates were progressively higher across CHA2DS2-VASc and HAS-BLED scores (all $p < 0.0001$). A fully adjusted Cox multivariable regression analysis, adjusted for clinical covariates selected by a univariate procedure and not included in the scores, showed that increasing baseline CHA2DS2-VASc score was associated with an higher risk for CV events (hazard ratio [HR]: 1.25, 95% confidence interval [CI]: 1.21-1.30), CV death (HR: 1.31, 95%CI: 1.25-1.38) and all-cause death (HR: 1.30, 95%CI: 1.25-1.36). Similarly, increasing baseline HAS-BLED score was associated with an increased risk for all 3 outcomes (HR: 1.21, 95%CI: 1.13-1.28; HR: 1.24, 95%CI: 1.14-1.34; HR: 1.22, 95%CI: 1.14-1.31, respectively). An association with a progressively higher risk was found for all outcomes across the spectrum of thromboembolic and bleeding risk [Figure]. Both CHA2DS2-VASc and HAS-BLED scores showed a modest to good predictive ability for cardiovascular (CV) events, CV death and all-cause death, in terms of c-index and 95% CI [0.66 (0.64-0.68) and 0.62 (0.61-0.64), 0.70 (0.68-0.72) and 0.65 (0.63-0.67), 0.69 (0.68-0.71) and 0.64 (0.63-0.66) for CHA2DS2-VASc and HAS-BLED for each outcome respectively].

Conclusions: In this large contemporary European-wide cohort of AF patients, both baseline thromboembolic and bleeding risks were associated to an increased risk of major clinical outcomes. Both scores are reflective of high risk clinical states, and are predictive of major adverse outcomes even in a large cohort of largely anticoagulated patients with a lower residual risk of adverse outcomes.

Abstract Figure.

