Incidence and risk factors for residual adverse events despite anticoagulation in atrial fibrillation: results from phase II/III of the GLORIA-AF registry

W.Y. Ding¹, D.A. Lane¹, D. Gupta¹, M.V. Huisman², G.Y.H. Lip¹

¹University of Liverpool, Liverpool, United Kingdom; ²Leiden University Medical Center, Leiden, The Netherlands

On behalf of GLORIA-AF Investigators

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Background: Residual risk of ischaemic stroke despite anticoagulation in patients with atrial fibrillation (AF) remains poorly investigated. We aimed to evaluate the incidence and risk factors for residual adverse events in AF.

Methods: Using data from phase II/III of the prospective GLORIA-AF registry, we studied anticoagulated patients from 935 centres across 38 participating who were consecutively enrolled with newly diagnosed AF and an increased risk of stroke (CHA2DS2-VASc ≥1). The primary outcome of interest was ischaemic stroke. Secondary outcomes were all-cause death, cardiovascular (CV) death and myocardial infarction. Risk factors for residual ischaemic stroke were identified using Cox proportional hazards analyses.

Results: 22410 patients were included; median age 65 (IQR 71–78) and 10044 (44.8%) females. Over 3.0 (IQR 2.2–3.1) years, the incidence per 100-PYs of ischaemic stroke was 0.60 (95% CI, 0.54–0.67), all-cause death 3.22 (95% CI, 3.08–3.37), CV death 1.08 (95% CI, 1.00–1.16) and myocardial infarction 0.59 (95% CI, 0.53–0.66). Using multivariable Cox proportional hazards analysis, independent predictors of residual ischaemic stroke were age (HR 1.05 [95% CI, 1.03–1.06]), diabetes mellitus (HR 1.42 [95% CI, 1.09–1.85]), prior thromboembolism (HR 2.32 [95% CI, 1.79–3.00]), chronic obstructive pulmonary disease (HR 1.53 [95% CI, 1.04–2.26]) and use of anti-arrhythmic drugs (HR 0.70 [95% CI, 0.51–0.96]). The incidence of ischaemic stroke was comparable among patients treated with non-vitamin K antagonist oral anticoagulants vs. vitamin K antagonist; however, there were differences in the independent predictors between both groups.

Conclusion: Patients with AF remain at significant risk of ischaemic stroke despite anticoagulation therapy. Risk factors for residual ischaemic stroke were prior thromboembolism, age, persistent AF, diabetes mellitus, chronic obstructive pulmonary disease and non-use of anti-arrhythmic drug therapy. This emphasises the need to treat these risk factors, if modifiable, beyond antithrombotic therapy.