New-onset atrial fibrillation in chronic coronary syndrome outpatients. Insights from the international CLARIFY registry

A. Gautier1, F. Picard2, G. Ducrocq1, Y. Elbez3, K.M. Fox4, R. Ferrari5, I. Ford6, J.C. Tardif7, M. Tendera8, P.G. Steg1

1Hospital Bichat-Claude Bernard, Paris, France
2Hospital Cochin, Cardiology, Paris, France
3Significance, Puteaux, France
4National Heart and Lung Institute Imperial College, London, United Kingdom of Great Britain & Northern Ireland
5University Hospital of Ferrara, Ferrara, Italy
6Robertson Centre for Biostatistics, Glasgow, United Kingdom of Great Britain & Northern Ireland
7Montreal Heart Institute, Montreal, Canada
8School of Medicine in Katowice, Medical University of Silesia, Katowice, Poland

On behalf of CLARIFY investigators

Funding Acknowledgements: Type of funding sources: Private grant(s) and/or Sponsorship. Main funding source(s): The CLARIFY registry was supported by Servier. The sponsor had no role in the study design, data analysis and interpretation, or decision to submit the manuscript for publication, but assisted with the set-up, data collection, and management of the study in each country.

Background and Aims: Data on new-onset atrial fibrillation (NOAF) in patients with chronic coronary syndromes (CCS) are scarce. This study aims to describe the incidence, predictors and impact on cardiovascular outcomes of NOAF in CCS patients.

Methods: Data from the international (45 countries) CLARIFY registry (prospective observational Longitudinal Registry of patients with stable coronary artery disease) were used. Among 29,001 CCS outpatients without previously reported AF at baseline, patients with at least one episode of AF/flutter diagnosed during 5-year follow-up were compared with patients in sinus rhythm throughout the study.

Results: The incidence rate of NOAF was 1.12 [95% confidence interval (CI) 1.06-1.18] per 100 patients-year (cumulative incidence at five years: 5.0%). Independent predictors of NOAF were increasing age, increasing body mass index, treated hypertension, history of peripheral artery disease, alcohol intake and low left ventricular ejection fraction, while high triglycerides were associated with lower incidence. NOAF was associated with a substantial increase in the risk of adverse outcomes, with adjusted hazard ratios of 2.52 (95%CI 2.11-3.01) for the composite of cardiovascular death, myocardial infarction or stroke, 3.22 (95%CI 2.63-3.94) for cardiovascular death, 1.55 (95%CI 1.08-2.22) for myocardial infarction, 2.80 (95%CI 2.0-3.91) for stroke, 2.64 (95%CI 2.23-3.11) for all cause death, 9.38 (95%CI 8.02-10.97) for hospitalization for heart failure and 4.33 (95%CI 2.94-6.39) for major bleeding.

Conclusion: Among CCS patients, NOAF is common and is strongly associated with worse outcomes. Whether more intensive preventive measures and more systematic screening for AF would improve prognosis in this population deserves further investigation.
Graphical Abstract