

Atrial Fibrillation and Ischemia: Early Detection and Integral Management

Fibrilación auricular e isquemia: detección precoz y manejo integral

ADRIAN BARANCHUK^{1,2}, JUAN FARINA²

We have read with great interest the article by Garmendia et al. published in the present issue of the Argentine Journal of Cardiology. (1) In this sub-analysis of the original Buenos Aires I Registry (2) the authors analyzed the incidence, predisposing factors and prognostic implications of *de novo* atrial fibrillation (AF) in the context of a non-ST-segment elevation acute coronary syndrome (ACS). Some of the most relevant findings of this study were the significant incidence of AF (7.7%) and the identification of certain predictive clinical factors such as advanced age (which is not surprising, as age is an independent factor for the development of AF in any population), the presentation as acute myocardial infarction and the need for revascularization surgery, both factors possibly associated with higher ischemic “burden”. (1) The most significant data is that the detection of AF resulted a powerful predictor of total mortality, cardiovascular mortality and bleeding events.

This study by Garmendia et al. (1) should not remain unnoticed for the Argentine Journal of Cardiology reader. The occurrence of *de novo* AF in an ACS has been the subject of previous investigations and is undoubtedly a relevant topic for several reasons. In the first place, the development of this arrhythmia in the context of an ACS entails substantial short- and long-term prognostic implications, as has been demonstrated by the authors and is widely supported in the literature. In other research studies, the emergence of *de novo* AF has been independently associated with greater rate of mortality, ischemic events and bleeding. (3-5) On the other hand, the diagnosis of AF in the context of an ACS often implies the need for changes in the antithrombotic/anticoagulant therapy of these patients. (6)

We understand that the question of the incidence of AF in the context of an ACS deserves special attention. The data described by the authors of this study agree with previous reports in other groups of

patients with similar characteristics, (4, 5) though an overall incidence ranging between 3% and 22% is reported. (7) This variability seems to be mostly associated with problems related to the types of ischemic events considered, the severity of patients included, the revascularization strategy used and the follow-up time in each individual investigation. Garmendia et al. (1) indicate that the incidence of *de novo* AF found in their research might be overestimated by the presence of not previously diagnosed AF events. Although this seems a fitting clarification, we could ask if this phenomenon might occur in an opposite sense; i.e. if there could be a chance of underdiagnosis of arrhythmic events due to the absence of, or difficulty in applying, sensitive tools for their diagnosis during the ambulatory follow-up. Despite the development of current constantly updated guidelines for optimal treatment and adjustment of the antithrombotic/anticoagulant strategy in patients with AF and coronary heart disease (6) (even though the present study has great heterogeneity in the treatments indicated and low indication of anticoagulation in *de novo* AF patients), there are few recommendations on how to investigate this arrhythmia in the clinical scenario of ACS. (8) This means that we have enough evidence on how to face the problem, but the recommendations on how to identify it are scarce.

Ideal screening strategies to detect AF are currently in discussion; a series of recent studies in different clinical scenarios have demonstrated that using more prolonged ambulatory monitoring, implantable recording or intelligent devices increases the diagnostic chances, even in asymptomatic patients. (9, 10) The development of these new technologies has placed the focus of discussion on the possibility of studying this arrhythmia in the general population or in risk groups. (10, 11) In the specific context of an ACS, considering the elevated incidence of AF and the implications of its diagnosis, it seems vital to adopt screening strate-

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Address for reprints: Adrian Baranchuk M861 Apple Down Dr - Kingston, ON, Canada - K7P1C7 - Email: barancha@kgh.kari.net - Twitter: @adribaran

¹ Division of Cardiology, Kingston Health Sciences Center, Kingston, Ontario, Canada

² Department of Cardiovascular and Thoracic Surgery, Mayo Clinic, Phoenix, Arizona, USA

gies adjusted for the risk of each specific patient and follow-up setting. In this sense, another essential contribution of Garmendia et al. (1) is the identification of predisposing factors for the development of AF in our country. These variables, in agreement with previously published studies, (4) are associated with the ischemic burden of the event and the severity of the patient in question. Considering these factors at the time of “adjusting the focus” to identify AF could have vital importance during the follow-up of a patient who has suffered a coronary event. Non-conventional predictors, as the presence of interatrial blocks observed in the same ECG used to evaluate the acute ischemic event, have been recently associated with the development of AF after the ischemic episode, and could provide, even more precision in decision-making. (12)

As an additional comment, we wish to express our acknowledgement to the authors of this substudy and of the Buenos Aires I registry for promoting research in the national setting. It seems also appropriate to clarify that by including 21 high-complexity care centers and not centers with less diagnostic capacity in a certain geographical area, it is difficult to extrapolate these conclusions at a national level in the context of a heterogeneous health care system. On the other hand, having included only patients with non-ST-segment elevation ACS in the registry could question the ability to extrapolate these findings to all types of ACS; however, in this point, it is suitable to emphasize that previous large-scale investigations support the prognostic implications of AF in all the spectrum of coronary acute events (either with or without ST-segment elevation). (5)

In conclusion, an accurate and timely research of AF after an ACS is imperative, as the strategies for its control, correction of predisposing factors and adequate antiarrhythmic and embolic event prevention therapy are of vital importance to improve the prognosis and quality of life of our patients. How to perform screening after an ACS and the way to conduct a thorough research in particularly susceptible populations, with strategies adapted to the patient and the health care system available, seems to be a challenge in daily medical practice. Establishing the potential prognostic implications of a more intensive investigation of AF after an acute coronary event, undoubtedly emerges as a future field of research.

Conflicts of interest

None declared.

(See authors' conflicts of interest forms on the website/ Supplementary material)

Ethical considerations

Not applicable.

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