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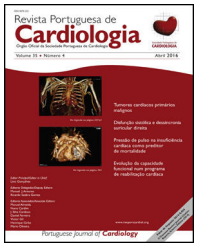

EDITORIAL COMMENT

Portuguese registries of acute coronary syndromes – Opportunities for improvement

Registos portugueses das síndromes coronárias agudas – oportunidades para melhoria

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Prospective clinical registries are essential to obtain knowledge of multiple demographic and clinical aspects of a specific disease, to characterize diagnostic and therapeutic management, and to assess prognosis. They reveal adherence to clinical guidelines and allow monitoring of the impact of measures implemented for improvement, thus fitting into the cycle of therapeutic development.[1,2] Clinical registries provide data that generate new lines of research and enable more pragmatic (registry-based) randomized controlled trials to be performed, as demonstrated by SWEDEHEART.[3]

The Portuguese Society of Cardiology has been doing remarkable work in this field since 2002, with the establishment of the National Center for Data Collection in Cardiology (CNCDC) in Coimbra and the launch of the continuous prospective Portuguese Registry on Acute Coronary Syndromes (ProACS) and the Portuguese Registry on Interventional Cardiology (PRIC).[4,5]

In this issue of the *Journal*, Caldeira et al. describe contemporaneous use of antithrombotic therapy in patients with ST-elevation myocardial infarction (STEMI) undergoing primary percutaneous coronary intervention (PCI).[6] Data were extracted on periprocedural antithrombotic therapy administered to 2697 patients enrolled in 2016 in PRIC and data on post-procedural antithrombotic therapy were obtained on 534 patients included in ProACS in the same year. These numbers reflect the low representativeness of ProACS, which constitutes only one fifth of the equivalent population included in PRIC. The success of PRIC is based on the periprocedural completion of a database form (Cardiobase®), attached to the hospital electronic record, by physicians, nurses and cardiopulmonary technicians, which enables data to be immediately exported to the CNCDC. This model could be reproduced in ProACS.

The median system delay for primary PCI was significantly longer in ProACS (54 min) than in PRIC (10 min). This difference can be explained by the higher proportion of patients transferred from a non-primary PCI center in ProACS (37% vs. 8% in PRIC). Although the median system delay for primary PCI is within the window (<120 min) recommended by the European guidelines[7] for transferred patients, more than 25% of patients included in ProACS do not meet this important quality indicator. The development of quality indicators and outcome measures is intended to reflect the quality of care and to serve as a reference for the implementation of initiatives for quality improvement.[2,7] Defining quality indicators and adjusted outcome measures and incorporating them into clinical registries could represent an important step in reducing the gap between optimal and actual care in patients with STEMI.

It would have been interesting to assess the long-term effect on mortality of full versus partial compliance with the quality indicators recommended by the Euro-

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pean guidelines.[7] However, this is not possible because the long-term follow-up data in ProACS and PRIC records are incomplete. Long-term follow-up data are a valuable complement of clinical registries, but their implementation requires at least one dedicated investigator in each participating center. The establishment of a network of associated researchers supported by the CNCDC could overcome this limitation.

Virtually all patients were treated with aspirin, but surprisingly, 20% of patients did not receive any anticoagulant during the procedure and 25% did not receive a $P2Y_{12}$ inhibitor during hospital stay. The authors suggest as a possible explanation for this underuse of class I indication treatments recommended by the European guidelines[7] the incomplete filling of records or missing data. The problem of missing data reduces the quality of clinical registries and can be improved by central data monitoring, queries and auditing of participating centers performed by a network of associated researchers.

Notwithstanding these facts, the investigators of ProACS and PRIC should be congratulated for their intense efforts to keep these continuous clinical registries active. They also reveal strengths, like the use of radial access for primary PCI in at least 80% of patients. These numbers reflect practice in 2016, prior to the 2017 European guidelines,[7] which changed the recommendation for routine radial access from class IIa to class I. The use of radial rather than femoral access has reduced major bleeding, vascular complications and mortality in clinical trials of primary PCI, and this robust evidence is reflected in a high utilization rate in daily clinical practice in Portugal.

Conflicts of interest

The author has no conflicts of interest to declare.

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