Impact of preoperative antiplatelet therapy on in-hospital outcomes after coronary artery bypass grafting

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We read with great interest the article authored by Miceli et al. [1] regarding the most correct timing for dual antiplatelet therapy withdrawal before surgical myocardial revascularization.

The rationale of the study was to determine whether different strategies to wash-out the association of clopidogrel + aspirin might play a role in preventing the occurrence of perioperative complications.

In the most recent AHA/ACC guidelines, either for urgent or for elective coronary surgery, there is no Class IA recommendation regarding how to stop antiplatelet drugs before surgery [2, 3]. Therefore, in the absence of double-blind, randomized controlled trials, the study described by Miceli et al. further spreads light over an argument that is still controversial. Apart from the detailed argumentation made by the authors, this study suggests additional points for discussion.

In particular, when the incidence of perioperative myocardial infarction is considered, it should be noted that patients in the three groups differ for several preoperative characteristics. Specifically, patients in Group A (clopidogrel <5 days + aspirin <2 days) had significantly higher incidence of acute coronary syndromes and recent myocardial infarction, and were more often operated urgently compared with Group B patients (wash-out of only one antiplatelet agent) and with controls.

Further details on the complexity of the coronary anatomy (e.g. SYNTAX score) might have contributed to control for the effects of selection bias: in case of homogeneity of the groups, the hypothesis of the authors would have been corroborated. It should be noted, however, that the data collection was started before the first results of the Syntax trial had been published, but the inclusion of such score in a subgroup analysis of a more recent cohort of patients could have filled the gap, as recognized by the authors in the ‘Limitation’ section of the paper. Furthermore, it is not clear how many patients were referred to surgery after failed percutaneous coronary interventions.

Finally, it is common experience that even high-dose antiplatelet therapy is not responsible, per se, for the bleeding complications observed in the perioperative period. The main determinant is the variable individual response to the drug [4]. A more clinically relevant analysis of preoperative platelet function testing might thus contribute to redefine the patients no more as responder/non-responder, but as prone/not prone to bleeding. This could certainly improve the clinical practice, suggesting a more efficient planning of the operative programmes to limit the use of blood products. Other preoperative patient features, such as age, body surface, renal function, along with specific comorbidities (e.g. liver disease), should be taken into account in this perspective, in order to minimize the risk of transfusion or the amount of transfusions required, as the negative impact on the postoperative outcome has been recently suggested to be dose-dependent [5].

Certainly, Miceli et al. [1] should be complimented for their accurate assessment of the impact of preoperative antiplatelet therapy on postoperative complications after coronary artery bypass graft (CABG). The definition of novel diagnostic and management strategies will certainly help to improve the risk stratification for patients undergoing CABG under dual antiplatelet therapy.

REFERENCES