Letter by Calabrò and Gragnano Regarding Article, “Dual Antiplatelet Therapy Continuation Beyond 1 Year After Drug-Eluting Stents: A Meta-Analysis of Randomized Trials”

To the Editor:

We have read with great interest the recent publication by Ferrante et al1 regarding dual antiplatelet therapy (DAPT) continuation beyond 1 year after drug-eluting stent implantation. The authors reported that (1) extended DAPT was associated with a reduction in the risk of myocardial infarction and an increase in the risk of major bleeding; (2) DAPT prolongation had no substantial effect on mortality, stent thrombosis, and stroke; (3) there is an unmet need in patients treated with drug-eluting stents to identify who may benefit most from prolonging DAPT beyond 1 year. This article adds relevant data on this controversial issue, underlying the absence of standardized approach defining optimal DAPT duration in clinical practice.

International guidelines2 recommend DAPT (with low-dose aspirin and a P2Y12 inhibitor) after drug-eluting stent implantation for a standard duration of at least 6 months in elective percutaneous coronary intervention (PCI) and 12 months in acute coronary syndrome, giving the opportunity for shortening or prolonging this duration based on the individual’s ischemic and bleeding risk. Currently, we have 2 alternatives to extend DAPT, combining aspirin with clopidogrel or ticagrelor 60 mg (restricted to patients with previous myocardial infarction, fulfilling PEGASUS study criteria3; Prevention of Cardiovascular Events in Patients With Prior Heart Attack Using Ticagrelor Compared to Placebo on a Background of Aspirin). However, definite algorithms to identify patients who may benefit from prolonged DAPT lack, and predictors of ischemic and bleeding risk often overlap (ie, advanced age, reduced estimated glomerular filtration rate).4,5

Triple check procedure prevents chemotherapy errors in oncology. In our opinion, a decisional algorithm with a triple check approach may also be considered in cardiology to select patients with PCI who may benefit from DAPT continuation. The first bleeding-focused step primarily assesses the safety of extended therapy with the PRECISE-DAPT score (Predicting Bleeding Complications in Patients Undergoing Stent Implantation and Subsequent Dual Anti-Platelet Therapy),6 a 5-item score evaluating the risk of out-of-hospital bleeding in patients with PCI on DAPT, independently from clinical presentation (acute coronary syndrome or elective PCI). A website calculator is available (http://www.precisedaptscore.com/predapt/webcalculator.html). In the presence of high bleeding risk (≥25), clinicians should recommend a standard (or might consider even shorter) DAPT duration. Conversely, patients with a score <25 (low-to-moderate bleeding risk) should be evaluated in the next step. The second ischemic-focused step furtherly assesses the benefit-harm balance, with the aim to identify patients with greater expected benefit from DAPT prolongation. In patients with PEGASUS-like features (fulfilling the PEGASUS inclusion criteria7) or DAPT score ≥22, a longer DAPT duration (respectively with ticagrelor 60 mg/die or clopidogrel) might be considered. Conversely, in non-PEGASUS-like patients or with DAPT score <1, clinicians should continue to the third step. The final PCI-focused step specifically evaluates angiographic characteristics. In the case of complex PCI (ie, left main, bifurcation) or incomplete revascularization (residual Syntax score ≥0), prolonged DAPT might be considered. Otherwise, standard DAPT duration should be recommended, lacking clear indication for longer duration DAPT. This multistep algorithm allows multiple reassessments of the benefit/risk ratio and permits to select upfront the optimal duration of DAPT, trying to prevent DAPT-related complications. Finally, clinicians must remain aware that ischemic and bleeding risks are both dynamic, and continuous monitoring with periodical reassessment during follow-up is necessary to define optimal DAPT duration.

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Disclosures

None.

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References


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