COMENTÁRIO EDITORIAL

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New directions for the management of dual antiplatelet therapy in patients with coronary stents undergoing non-cardiac surgery

Dual antiplatelet therapy (DAPT), the combination of aspirin and a P2Y12 inhibitor, is now one of the most widely used treatments for secondary prevention in patients with coronary artery disease (CAD) suffering an acute coronary syndrome (ACS) or undergoing coronary stent implantation. A significant number of these patients undergo noncardiac surgery within the first 12 months and may require DAPT interruption. This poses a clinical dilemma because interruption exposes patients to the potential risk of stent thrombosis, perioperative myocardial infarction, or both and continuing may be associated with bleeding complications. Given the complexity of these decisions and the possible consequences of delaying the surgical procedure, a multidisciplinary approach is required to choose the best management strategy. Data in this area are conflicting.

The 2017 ESC/EACTS focused update on DAPT duration provides a novel approach to decision-making based on a four-layer scheme focusing on treatment individualization. The main factors to be considered for DAPT duration are clinical presentation (stable CAD or ACS), type of procedure (percutaneous coronary intervention [PCI], coronary artery bypass or medical treatment), device used (drug-eluting stent [DES], bare-metal stent [BMS], bioresorbable vascular scaffold [BVS], drug-eluting balloon [DEB], plain old ballon angioplasty [POBA]) and bleeding risk.

The clinical presentation at the time of the coronary event represents the first major determinant of the baseline ischaemic risk. Patients presenting with ACS are at higher ischaemic risk and remain at higher ischaemic risk for a longer period of time after the index event, hence justifying more potent and prolonged antiplatelet treatment. Guidelines now provide different recommendations for DAPT duration based on clinical presentation: 6 months of DAPT after PCI in patients with stable CAD and 12 months in patients with ACS.

Unlike in the past, the choice between a BMS and DES is no longer a driver for differences in treatment duration. In fact, a DES is recommended as the default treatment strategy and no specific preference for a BMS is based on anticipated DAPT duration. BVSs are now recognized as more thrombogenic devices requiring longer treatment.

PCI complexity, defined as at least three stents implanted, at least three lesions treated, bifurcation stenting, total stent length >60 mm and chronic total occlusion as target lesion, has always been considered a major determinant for DAPT duration. Patients with complex PCI, prior stent thrombosis and patients with lower-extremities artery disease should be considered for prolonged DAPT duration.

A novel set of recommendations now supports specific decision-making for the timing of elective surgery and the time of withdrawal of the P2Y12 inhibitor. It is recommended to maintain treatment with aspirin perioperatively in most of the situations when surgical bleeding risk allows. The need to interrupt the P2Y12 inhibitor represents in most cases the limiting step for early elective surgery after PCI. Elective, nonemergency surgery requiring P2Y12 inhibitor interruption should be delayed for at least 1 month after stenting, and a delay of 6 months is recommended whenever possible to reduce the risk for recurrent ischaemic events. When a 6-month delay is not feasible, European guidelines recommend that early surgery (1–6 months after-PCI) should be considered in patients initially treated for stable CAD, and may be considered in those treated for an ACS.[1,2] American guidelines (2016)[3] are less permissive and differentiate between DES and BMS (Table 6[4]). However, such surgical procedures should be performed in hospitals where catheterization laboratories are available 24/7, so as to treat patients immediately in case of perioperative thrombotic events.[1]

In order to reduce intra-operative bleeding, ticagrelor should be interrupted at least 3 days, clopidogrel at least 5 days and prasugrel at least 7 days before surgery. If both oral antiplatelet agents have to be discontinued perioperatively, a bridging strategy with intravenous, reversible glycoprotein inhibitors, such as eptifibatide or tirofiban, may be considered especially if surgery has to be performed within 1 month after stent implantation

or patients with a very high risk of stent thrombosis. The P2Y12 inhibitor, when still indicated, should be restarted as soon as deemed safe and when the operative bleeding risk is controlled.[1,2]

Therefore, a dedicated perioperative protocol[4] that summarizes the evidence and provides a pragmatic guide for everyday clinical practice is welcome, showing the need for an update on Anesthesiology recommendations on this topic.[5,6,7] However, a multidisciplinary approach is always appropriate to determine the best individual strategy.

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