Optimizing outcomes after coronary artery bypass grafting: The argument for dual antiplatelet therapy

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In this month’s issue of the Journal, Yanagawa and colleagues highlight an important topic that is frequently overlooked by surgeons. Numerous trials have shown improved cardiovascular outcomes for patients treated with dual antiplatelet therapy (DAPT) after presenting with acute coronary syndrome (ACS). In this survey of 75 Canadian cardiac surgeons, only 45% reinitiate DAPT after a routine coronary artery bypass grafting (CABG) in patients with ACS. Only 60% were aware of the current guidelines about DAPT in patients presenting with an ACS, and only 64% of respondents believed that the ACS patients treated with CABG can benefit from DAPT. The guidelines are hardly compelling. The American Heart Association/American College of Cardiology guidelines recommend that patients with prior CABG and non-ST elevation ACS should receive antiplatelet therapy according to guideline-directed medical therapy but do not provide specifics. The European Society of Cardiology recommends restarting P2Y12 inhibitors after CABG when safe. Neither of these recommendations comments on the timing or duration of DAPT. The Canadian Cardiovascular Society offers the strongest recommendation that “DAPT should be restarted after surgery and continued for 12 months to decrease the risk of recurrent ACS.” Although this survey by Yanagawa and colleagues was limited to Canadian surgeons, the results very likely apply to those of us south of the border and beyond.

The reluctance of surgeons to reinitiate DAPT is understandable for 2 key reasons: concerns for bleeding and lack of data that apply specifically to patients undergoing CABG, especially level-A or even level-B evidence.

Most of the clinical trial data comparing DAPT to aspirin alone for patients presenting with ACS included a heterogeneous group of patients treated with medical; percutaneous; or, less often, surgical therapy. This includes well-known trials such as Clopidogrel in unstable angina to prevent recurrent events trial (CURE), PLATElet inhibition and patient Outcomes trial (PLATO), and Evaluation of prasugrel compared with clopidogrel in patients with acute coronary syndromes: design and rationale for the TRial to assess Improvement in Therapeutic Outcomes by optimizing platelet InhibitioN with prasugrel Thrombolysis In Myocardial Infarction (TRITON-TIMI). Post-hoc analyses in CABG subgroups suggested a benefit of DAPT, but several studies have shown no benefit.

Central Message
Dual antiplatelet therapy may improve outcomes after CABG, provided that the risk of bleeding does not exceed the risk of ischemia.

See Article page 1548.
Given the paucity of clinical trials evaluating DAPT for patients with ACS undergoing CABG, what can we conclude? Undoubtedly there are patients undergoing CABG with poor distal targets, severe diffuse disease, incompletely revascularized territories, or other significant risk factors (including presentation with ACS) for recurrent ischemic coronary events that would likely benefit from prolonged DAPT therapy after CABG. In patients with uncomplicated pathology with a low risk of bleeding complications, there may also be a subtle yet significant benefit with DAPT. However, until definitive trial data become available, surgeon discretion will ultimately be the decisive factor. This needs to be based on the risks of postoperative bleeding complications versus the risk for recurrent ischemic events.

References