Response to Letter Regarding Article, “Increased Risk of Bleeding in Patients on Clopidogrel Therapy After Drug-Eluting Stents Implantation: Insights From the HMO Research Network-Stent Registry (HMORN-Stent)”

We agree with Drs Lozano, Garcia, and Barriales that dual antiplatelet therapy should be recommended for 12 months after drug-eluting stent (DES) placement. We also agree with ACC/AHA PCI guidelines that included a provision of 12 months of clopidogrel therapy for patients not at high risk of bleeding. As shown in our report, the lower risk of ischemic complications on dual antiplatelet therapy (DAPT) must be balanced with the increased bleeding risk. Accordingly, a multidimensional approach is needed to address the risks and benefits of DAPT that takes into account the following: (1) appropriate patient selection to maximize the benefit while minimizing risks of DES and DAPT; (2) prevention of bleeding on DAPT; and (3) strategies to minimize stent thrombosis beyond continuation of DAPT.

Patient selection is important to optimize the benefits of DES, particularly for those at increased risk of restenosis from bare metal stents while weighing the risks of bleeding and/or stent thrombosis related to DAPT. Patient and lesion characteristics have been identified as risk factors for bare metal stent restenosis (diabetics, small vessels, and long lesions) as well as factors associated with bleeding (eg, female, advanced age, warfarin, chronic kidney disease, and cancer). Prospective clinical tools that help the provider weigh these factors at the bedside before stent implantation will be of great value.

Studies have shown that short- and long-term bleeding after DES placement result in a high risk of subsequent death and myocardial infarction. Ko et al found that being hospitalized for a major bleeding episode after DES placement resulted in a greater than 3-fold risk of death. More than 50% of late bleeding after DES placement was due to gastrointestinal bleeds. Therapeutic strategies to decrease the incidence of GI bleeds after percutaneous coronary intervention are needed, especially with introduction of more potent antiplatelet drugs such as prasugrel and ticagrelor.

Finally, research is needed to examine causes of stent thrombosis beyond early discontinuation of antiplatelet therapy. In one study, the population-attributable risk associated with clopidogrel discontinuation was only 31.6%, suggesting that factors such as antiplatelet resistance, delayed reendothelialization, and mechanical issues after DES placement may have an impact. Therefore, once a DES is placed, at least 12 months of dual antiplatelet therapy is ideal; however, a multipronged approach of appropriate patient selection, therapy to minimize the risk of bleeding on DAPT, and advancement in stent technologies to minimize the risks of stent thrombosis are urgently needed.

Disclosures

None.

References


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