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REPLY: Prognosis of MPN Patients Experiencing Acute Thrombotic Events and the Potential Role of Cytoreduction

We appreciate the letter to the editor by Drs Krecak and Lucijanic, regarding our paper.[1] Thrombotic events, including acute myocardial infarction (AMI), in patients with myeloproliferative neoplasms (MPNs) contribute to significant morbidity and mortality. Cytoreduction is used in MPNs, particularly in polycythemia vera (PV) and essential thrombocytosis (ET), to reduce the risk of thrombosis. In 1 study of MPNs and AMI, cytoreduction was not associated with a reduction in death or cardiovascular events.[2] However, larger studies among patients with PV or ET have suggested that hydroxyurea, in combination with antithrombotic agents, reduced rates of recurrent thrombotic events.[3] Among patients with PV or myelofibrosis, treatment with ruxolitinib was associated with a reduced risk of thrombosis.[3] Therefore, cytoreduction should be considered among patients with MPN with prior thrombosis. However, the role of cytoreduction immediately post-AMI is unclear given the lack of data in the literature.

One unanswered question is the optimal management of antiplatelet therapy, particularly dual antiplatelet therapy (DAPT). The utility of DAPT with P2Y12 inhibitor and aspirin in order to reduce the risk of subsequent AMI is well-known after percutaneous coronary intervention (PCI). Potent P2Y12 inhibitors (ticagrelor/prasugrel) reduce major adverse cardiovascular events in patients at the expense of increased risk of bleeding compared with clopidogrel.[4] A shorter duration of DAPT reduces the risk of bleeding among patients at high bleeding risk.[4] MPNs pose a clinical conundrum and are at an increased risk of thrombosis and recurrent thrombotic events but also an increased risk of bleeding (particularly in patients with myelofibrosis or ET with extreme thrombocytosis).[5] Currently, data are lacking to inform clinical practice, including antiplatelet choice and DAPT duration, after AMI and PCI in patients with MPNs. We hope our studies and others will spur further investigation into this and other unanswered questions regarding the management of patients with MPNs and cardiovascular disease (**Figure 1**).

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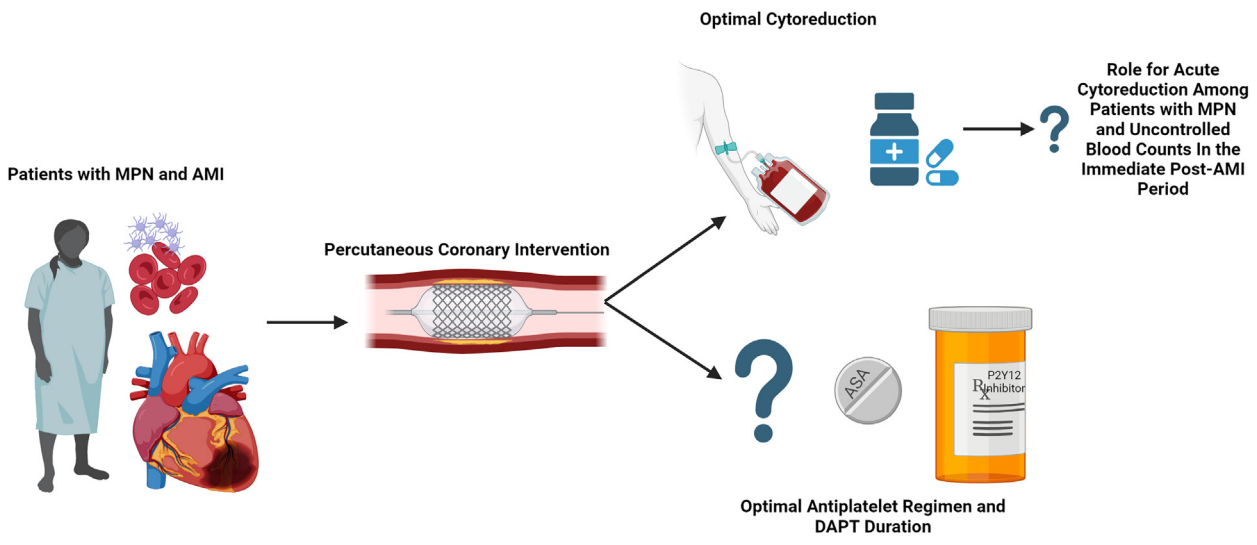
FIGURE 1 Management of Patients With MPNs and AMI



Patients with acute myocardial infarction (AMI) are treated with percutaneous coronary interventions. Cytoreduction may reduce the risk of recurrent thrombosis in myeloproliferative neoplasms (MPNs), but the timing of the initiation of cytoreduction and antithrombotic strategies after percutaneous coronary intervention remain unanswered questions. DAPT = dual antiplatelet therapy.

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The authors attest they are in compliance with human studies committees and animal welfare regulations of the authors' institutions and Food and Drug Administration guidelines, including patient consent where appropriate. For more information, visit the Author Center.

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