Clopidogrel is Adequate in Most Patients With ACS Young-Hoon JEONG

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The PEGASUS-TIMI 54¹ and DAPT² trials have both shown that intensified platelet inhibition with dual antiplatelet therapy (P2Y₁₂ antagonist plus aspirin) after 1 year effectively reduces the risk of ischemic events in patients with high-risk coronary artery disease at the expense of clinically serious bleeding. Therefore, a personalized antiplatelet strategy that is based on a risk-profile analysis including a therapeutic-window concept for platelet reactivity may improve the balance between efficacy and safety during long-term dual antiplatelet therapy.³

East Asians have less thrombophilia and a greater bleeding tendency than do Western populations during antiplatelet therapy.^{4,5} Furthermore, active metabolite concentrations of prasugrel and ticagrelor are up to 50% greater among East Asians than among white patients, findings that translate into more potent platelet inhibition among East Asians.⁵ In PEGASUS-TIMI 54, the net clinical benefit of the addition of long-term ticagrelor among Asian patients (East Asians: about three-quarters of Asian cohort) appears to be less favorable than among white patients (Fig. 1). A more judicious approach in adapting the strategy outlined in the PEGASUS-TIMI 54 trial for Asians without further dedicated studies in the Asian population will be an essential challenge, given these observations.

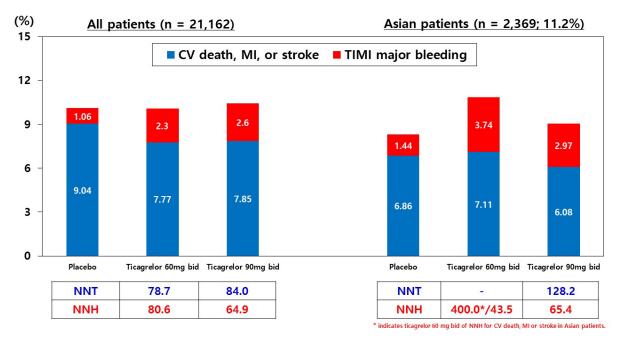


Figure 1. Net Clinical Benefit for Asian Patients, as Compared with All Patients, in the PEGASUS-TIMI 54 Trial.

Shown are the percentages of Asian patients, as compared with all patients, who had a composite cardiovascular event (death from cardiovascular [CV] death, causes or nonfatal myocardial infarction [MI], or stroke through 3 years) or who had a major bleeding episode (as defined by the Thrombolysis in Myocardial Infarction [TIMI] criteria through 3 years), according to the dose of ticagrelor or placebo. The values below the graph show the number of patients who would have need to be treated (NNT) to prevent one cardiovascular event and the number of patients who would need to be harmed (NNH) to cause one cardiovascular or bleeding event.

REFERENCES

1. Bonaca MP, Bhatt DL, Cohen M, et al.; PEGASUS-TIMI 54 Steering Committee and Investigators. Long-Term Use of Ticagrelor in Patients with Prior Myocardial Infarction. N Engl J Med 2015;372:1791-800.

- 2. Mauri L, Kereiakes DJ, Yeh RW, et al.; DAPT Study Investigators. Twelve or 30 months of dual antiplatelet therapy after drug-eluting stents. N Engl J Med 2014;371:2155-66.
- 3. Tantry US, Bonello L, Aradi D, et al.; Working Group on On-Treatment Platelet Reactivity. Consensus and update on the definition of on-treatment platelet reactivity to adenosine diphosphate associated with ischemia and bleeding. J Am Coll Cardiol 2013;62:2261-73.
- 4. Jeong YH. "East asian paradox": challenge for the current antiplatelet strategy of "one-guideline-fits-all races" in acute coronary syndrome. Curr Cardiol Rep. 2014;16(5):485.
- 5. Levine GN, Jeong YH, Goto S, et al. Expert consensus document: World Heart Federation expert consensus statement on antiplatelet therapy in East Asian patients with ACS or undergoing PCI. Nat Rev Cardiol 2014;11:597-606.