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Comparison of Two Potent Antithrombotic Regimens in ACS Patients : PLATO vs. ATLAS-TIMI 51


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Potent platelet inhibition is a cornerstone in the management of acute coronary syndrome (ACS). Ticagrelor has demonstrated survival benefits for patients with ACS and has been recommended as a drug of choice in the current practice guidelines [1-3]. However, a recent study suggests that the addition of very low-dose (VLD) rivaroxaban to aspirin and thienopyridine reduces cardiac and all-cause mortality compared to that achieved using a dual therapy of aspirin and thienopyridine [4,5], and the role of thrombin beyond platelets has been revisited in the management of patients with ACS.

ACS arises from coronary atherosclerosis with superimposed thrombosis. Shear stress-induced platelet activation has been reported as one of the main mechanisms [6,7]. Current platelet function tests, such as VerifyNow® (Accriva Diagnostics, Inc., San Diego, CA), show the degree of ex vivo platelet activation by chemical agonists. However, this methodology cannot reflect shear stress conditions in ACS nor can it evaluate the effect of anticoagulants. The global thrombosis test (GTT; Thromboquest Ltd., London, UK) is a comprehensive test of platelet reactivity, thrombin generation, and endogenous thrombolytic activity. This system evaluates both high shear-induced thrombotic reactions and subsequent thrombolysis under physiological conditions by using non-anticoagulated blood samples [8]. Ticagrelor is the most commonly recommended P2Y₁₂ receptor inhibitor in ACS, while VLD rivaroxaban is currently the only proven oral direct thrombin inhibitor in ACS. However, a direct comparison of the antithrombotic efficacy between ticagrelor and VLD rivaroxaban with clopidogrel is lacking. In this talk, I would like to introduce the data which compared the antithrombotic effects of ticagrelor and VLD rivaroxaban with clopidogrel using both a conventional platelet function test (VerifyNow®) and the GTT.

► Reference

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