In the bivalirudin era, are we still looking for a potent antiplatelet agent?

Thrombin a key modulator of the complex process involved in coronary obstruction during acute ST-segment elevation myocardial infarction. A correct and complete thrombin inhibition has to be achieved early in this setting and is complementary with fast and potent antiplatelet treatment. Bivalirudin, a direct thrombin inhibitor, has clearly shown to be an effective tool for acute coronary syndromes managed invasively, contemporarily causing fewer hemorrhages. However, its efficacy has been questioned, mostly in cases of inadequate platelet inhibition and during primary PCI if compared with therapy with heparin and glycoprotein IIb/IIIa inhibitors due to an increase in acute stent thrombosis. Other modalities of infusion have been shown to improve the antithrombotic properties of bivalirudin, maintaining its safety profile. In this article, we discuss on the most recent studies on this drug in the catheterization laboratory during acute myocardial infarction.