Findings from the BRIGHT trial published

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Data from the BRIGHT trial published today in the *Journal of the American Medical Association* demonstrated that bivalirudin was superior to both heparin monotherapy and heparin plus tirofiban for patients with acute myocardial infarction (AMI) undergoing percutaneous coronary intervention (PCI). Findings were first reported at last year's Transcatheter Cardiovascular Therapeutics (TCT), the annual scientific symposium of the Cardiovascular Research Foundation (CRF).

There has been recent controversy surrounding the optimal anticoagulant strategy for patients with AMI. Previous multicenter trials, such as HORIZONS-AMI and EUROMAX, have demonstrated superiority of bivalirudin to heparin plus glycoprotein IIb/IIIa inhibitors (GPI), but a recent single center trial, HEAT-PPCI, demonstrated the superiority of heparin monotherapy over bivalirudin alone, with concern for an increased rate of stent thrombosis observed in bivalirudin-treated patients. Due to these disparate results, the safety and efficacy of bivalirudin in patients with AMI undergoing PCI in contemporary practice is still controversial.

BRIGHT, a multicenter, open label trial was conducted with a 1:1:1 randomization that compared bivalirudin alone to heparin alone and heparin plus tirofiban in patients with AMI undergoing PCI. The trial randomized 2,194 patients with AMI eligible for emergency PCI from 82 Chinese sites to receive either bivalirudin with a post-PCI infusion (n=735), heparin alone (n=729), or heparin plus tirofiban with a post-PCI infusion (n=730).

The primary endpoint was 30-day net adverse clinical events (NACE), a composite of major adverse cardiac and cerebral events (MACCE; all-cause death, reinfarction, ischemia-driven target vessel revascularization, or stroke) or any bleeding as defined by the Bleeding Academic Research Consortium (BARC) definition. The secondary endpoints were NACE at one year, as well as MACCE and bleeding at 30 days and one year.

After 30 days, NACE occurred in 65 (8.8%) bivalirudin-treated patients compared to 96 (13.2%) heparin-treated patients (relative risk [RR]: 0.67, 95%CI: 0.50-0.90; difference: -4.3%, 95%CI: -7.5% - -1.1%; P=0.008); and 124 (17.0%) heparin plus tirofiban-treated patients (RR for bivalirudin vs. heparin plus tirofiban: 0.52, 95%CI: 0.39-0.69; difference: -8.1%, 95%CI: -11.6% - -4.7%; P