PCI is safe and might improve results obtained through the standard intravenous route.

Conclusions:

In 3 cases, all in the intravenous bolus group (P = 0.002), higher rates of ≥70% ST resolution (72.1 vs 44.5%, p < 0.001), lower incidence of no-reflow (7.0 vs 13.5%, p < 0.011) and a trend for lower postprocedural peak CK-MB levels (140.0 [53.7-235.5] vs 159.2 [64.3-269.9] UI/dL, p = 0.08). Moreover acute stent thrombosis (<24 after PCI) was observed in 11 cases, in all the UFH/GPI group (p = 0.009). Intracoronary bivalirudin administration was safe, with less internal bleedings (3.7 vs 11.2%, p = 0.001) and less need for transfusion (4.6 vs 1.1%, p = 0.012). The results were substantially confirmed when the analysis was restricted to patients with an occluded infarct related artery before PCI.

Conclusions: In the population studied intracoronary bivalirudin during primary PCI was safe and might improve postprocedural coronary flow, clinical myocardial reperfusion and acute stent thrombosis rates, in comparison with the UFH plus provisional GPI treatment.

TCT-465

Safety and efficacy of intracoronary bivalirudin administration during primary angioplasty in comparison with a standard treatment with heparin and provisional GP2b3a inhibitors

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Background: Bivalirudin efficacy in the very first hours after primary PCI has been questioned, due to increased acute stent thrombosis rates. Intracoronary administration of the bivalirudin bolus might furnish an extremely high concentration without changing the global dose administered to the patient, with a potential favorable effect over the pro-thrombotic milieu of the infarct related artery.

We prospectively investigated the feasibility and safety of intracoronary bivalirudin bolus administration during primary percutaneous coronary interventions (PCI), comparing this strategy with the standard treatment based upon unfractionated heparin (UFH) with provisional GP2B3A inhibitors (GPI) given through the intravenous route.

Methods: In 273 consecutive patients treated with primary PCI we administered intracoronary bivalirudin bolus followed by standard intravenous infusion. Postprocedural coronary flow indexes and clinical reperfusion markers of these patients were compared with a propensity score-match cohort of primary PCI patients treated with standard treatment with intravenous UFH 70Ui/Kg (eventually with supplementary boluses to achieve an ACT>250sec) plus provisional GPI.

Results: In the intracoronary bivalirudin group we observed better TIMI frame count values (14.3±6.5 vs 16.9±9.3, P=0.002), higher rates of ≥70% ST resolution (72.1 vs 44.5%, p < 0.001), lower incidence of no-reflow (7.0 vs 13.5%, p < 0.011) and a trend for lower postprocedural peak CK-MB levels (140.0 [53.7-235.5] vs 159.2 [64.3-269.9] UI/dL, p = 0.08). Moreover acute stent thrombosis (<24 after PCI) was observed in 11 cases, in all the UFH/GPI group (p = 0.009). Intracoronary bivalirudin administration was safe, with less internal bleedings (3.7 vs 11.2%, p = 0.001) and less need for transfusion (4.6 vs 1.1%, p = 0.012). The results were substantially confirmed when the analysis was restricted to patients with an occluded infarct related artery before PCI.

Conclusions: In the population studied intracoronary bivalirudin during primary PCI was safe and might improve postprocedural coronary flow, clinical myocardial reperfusion and acute stent thrombosis rates, in comparison with the UFH plus provisional GPI treatment.

TCT-466

Bivalirudin Is Associated With Improved In-Hospital Outcomes After Peripheral Arterial Interventions: An Observational Analysis On 23,934 Patients From The PREMIER Hospital Database

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Background: Bivalirudin has been shown to reduce bleeding complications and improve clinical outcomes in percutaneous coronary interventions but has not been well studied in peripheral arterial interventions (PAI). We sought to evaluate the efficacy and safety of bivalirudin as compared with unfractionated heparin (UFH) in patients undergoing PAI by evaluating in-hospital outcomes from a large, real-world, US hospital database of over 600 hospitals.

Methods: We identified all patients (n=23,934) entered from 1/08-12/12 in the PREMIER hospital database following PPI of the extremities and who were treated with bivalirudin or UFH. In-hospital outcomes that were compared according to treatment included death, myocardial infarction (MI), transfusion, stroke, amputation, Major Adverse Cardiac Events (MACE: death, MI, stroke or amputation) and Net Adverse Cardiac Events (NACE: MACE and transfusion). Propensity score matching (PSM) was performed to control for selection bias.

Results: In-hospital outcomes for both the unadjusted population and the 3,649 PSM pairs are shown in the Table. After PSM, bivalirudin was still associated with reduced clinical and mortality endpoints (adjusted HR [95% CI]: 0.68 [0.51, 0.90] for death, 0.73 [0.58, 0.93] for myocardial infarction, 0.62 [0.48, 0.80] for stroke, 0.65 [0.53, 0.80] for transfusion, 0.69 [0.56, 0.85] for amputation, 0.73 [0.58, 0.93] for cardiac death, 0.70 [0.56, 0.89] for any death, and 0.71 [0.56, 0.89] for any mortality). The NACE rates were reduced with bivalirudin, in both the unadjusted (0.54 vs. 0.63) and the PSM population (0.53 vs. 0.65). Subgroup analysis in the PSM population showed consistent treatment effect for all outcomes among subgroups.