Results: 38 patients receiving dabigatran or rivaroxaban (6 and 32 respectively) were included in the BIG-ROX-P trial and platelet function was assessed. 35 patients (92%) suffered from AF, 3 patients (8%) were anticoagulated due to pulmonary embolism. Dabigatran doses were 110 mg or 150 mg twice daily, while rivaroxaban doses were from 2.5 mg twice daily to 20 mg per day. 18 patients (47%) received concomitant platelet inhibitors. TRAP, ADP or AA induced platelet aggregation was assessed at different time points before and after application of dabigatran or rivaroxaban, respectively. In patients receiving concomitant platelet inhibitors no difference of TRAP, ADP or AA induced platelet aggregation was observed before and after application of dabigatran or rivaroxaban, respectively.

Conclusion: Dabigatran or rivaroxaban had no influence on TRAP, ADP and AA induced platelet aggregation. Furthermore, they did not modulate the effect of concomitant platelet inhibitors.

P4869 | BENCH
Pleiotropic effect of factor Xa inhibitor: fondaparinux inhibits ROS-induced cell proliferation and augments cardioprotective cytokine production in mouse cardiac-derived fibroblast

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Purpose: Factor Xa inhibitors are anticoagulants to reduce in stroke and other thromboembolic events. Fondaparinux (FDP) is an approved indirect factor Xa inhibitor to prevent venous thromboembolism. It is known that the proliferation of cardiac fibroblasts leads the fibrosis of coronary vessels, which are closely associated with the progression of coronary atherosclerosis, and cardiac remodeling to cause heart failure in clinical settings. However, the effect of FDP in cardiac fibroblasts for the development of atherosclerosis and cardiac remodeling is still remaining unclear. Therefore, we aim to evaluate the functional role of FDP in FDP mouse cardiac fibroblasts stimulated by hydrogen peroxide (H2O2).

Materials and methods: Confluent fibroblasts were pretreated with or without FDP (0.034 μM) for 6 hours, and then stimulated by H2O2 in various in vitro and in vivo settings. Reactive oxygen species (ROS) were measured by DCFDA method. Cell proliferation was measured by MTT assay after 12 and 24 hours of H2O2 stimulation (25 μM). Tumor necrosis factor (TNF)-a, and tissue growth factor (TGF)-β productions were evaluated by ELISA after 12, 24 and 48 hours of H2O2 stimulation (25 μM), respectively.

Results: H2O2 stimulation by itself induced excessive ROS production and cell proliferation in mouse cardiac fibroblast. H2O2 (25 mM) induced cell proliferation was significantly decreased in FDP-pretreated cardiac fibroblasts compared to cells without FDP (86% decrease in 24 hours). Although H2O2 had no effect in TNF-a and TGF-β production, IL-6 production was significantly enhanced by FDP pretreatment (84% increase in 48 hours).

Conclusion: These data suggest that the pleiotropic effects of factor Xa inhibitor may provide favorable effects on cardiovascular disease prevention, at least part of in vitro model.

P4870 | BEDSIDE
Real life efficacy and safety of rivaroxaban for stroke prevention in atrial fibrillation: updated results of the prospective NOAC registry (NCT01588119)

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Background: In the RELY trial, the novel oral anticoagulant (NOAC) dabigatran has been found to be at least as effective and safe as warfarin for stroke prevention in atrial fibrillation (SPAF). As a consequence, dabigatran has become approved in many countries. However, patients in RCT’s present a selected population which is treated under a strict protocol and followed for a short period of time. Consequently, efficacy and safety of dabigatran need to be confirmed in unselected patients in daily care.

Objectives: To evaluate the efficacy, safety and management issues of dabigatran anticoagulation in AF in daily care.

Patients and methods: In the prospective, non-interventional Dresden NOAC registry a network of more than 230 physicians enrol eligible patients. Up to 2000 patients receive prospective follow up by phone visits by the registry office. All events are centrally adjudicated using standard definitions.

Results: Until December 31th 2012, 1665 patients were registered. Of these, 303 patients received dabigatran for SPAF (50.5% male, mean age 74.9 years, mean CHADS-Score 2.6; 61.4% newly anticoagulated). Treatment adherence was acceptable with 73.6% of patients still taking dabigatran at 9 month. 18.4% of patients were switched to other anticoagulants (side effects, incompliance, costs).

In total, 9 major cardiovascular events were observed (5.8 per 100 patient years; 4 TIA, 1 stroke, 2 ACS, 1 limb ischemia, see table 1). Furthermore, 84 bleeding events occurred, of which only 5 events were major bleedings (3.2 per 100 patient years). No fatal bleeding was observed. 2 patients died (1.3 per 100 patient years), both of sudden cardiac death.

Conclusion: In unselected patients in daily care, dabigatran is effective and safe with low rates of cardiovascular or major bleeding events and high treatment adherence. Data on bleeding pattern and management will be presented.

P4871 | BEDSIDE
The impact of personalized antiplatelet treatment on early adverse events in PCI-treated patients with high on-clopidogrel platelet reactivity: results of the ISAR-HPR registry

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Purpose: In clopidogrel treated patients undergoing percutaneous coronary intervention (PCI), high platelet reactivity (HPR) is associated with a higher risk for thrombotic events including stent thrombosis. Prasugrel may be advantageous over clopidogrel especially in HPR patients but data is limited in support for this hypothesis. Hereby, we report the results of the ISAR-HPR registry based on routine platelet function testing for guidance of tailored antiplatelet treatment in our center.

Methods: Outcomes were compared between two cohorts. We identified 428 HPR patients (AU x min ≤468 on the Multiplate analyzer) between 2007-2008 without any modification of antiplatelet treatment. This group served as a control cohort. Both bleedings (2.2 per 100 patients per year), one fatal bleeding (0.4 per 100 patients per year) were observed. 4 patients died (1.3 per 100 patient years; 4 sudden cardiac death, 1 fatal bleeding, 1 aortic perforation, 8 of underlying diseases).

Conclusion: In unselected patients in daily care, dabigatran is effective and safe with low rates of cardiovascular or major bleeding events and high treatment adherence. Data on bleeding pattern and management will be presented.