	Age (Y)	Contrast (ml)	Diabetes	Mean EF (%)	Mean ECC ml/min	CIN
NAC N= 48	73±8	151±49	35%	52	37	0
Control N=137	75±6	164±67	34%	51	41	8 (6.6%)
p	ns	ns	ns	ns	<0.001	<0.00001

Conclusions: There was no incidence of CIN in the patients receiving NAC despite a lower ECC compared to the control group. Oral administration of NAC immediately prior to PCP appears to ameliorate CIN in patients with ECC < 50ml/min. A larger randomized prospective study is required to validate the utility of this new strategy.

1174-189 Tirofiban Does Not Attenuate the Acute Inflammatory Response Triggered by Percutaneous Coronary Interventions

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Background: Percutaneous coronary intervention (PCI) triggers an inflammatory response which is incriminated in the pathogenesis of future adverse cardiac events. Tirofiban improves the outcome of PCI by inhibiting platelets aggregation, but its effect on the inflammatory response remains unknown. **Methods:** Patients with stable coronary artery disease and no known inflammatory conditions who were undergoing PCI, were randomized to receive a bolus and a 24-hour infusion of tirofiban vs. saline. High sensitivity C-reactive protein (hs-CRP), interleukin-6 (IL-6), tumor necrosis factor alpha (TNF), and soluble intracellular adhesion molecules (sICAM) were measured at baseline and 48 hours after the procedure. **Results:** Forty patients were enrolled, 21 in the tirofiban group and 19 in the saline group. Stenting was performed in all but 1 patient who had balloon angioplasty. Troponin T was undetectable in all patients at baseline and 24 hours later. Levels of hs-CRP, IL-6, and TNF increased following PCI (hs-CRP: 9.1±13.8 mg/dL vs. 18.5±15.5 mg/dL, p<0.001; IL-6: 4.4±2.4 pg/mL vs. 6.3±4.5 pg/mL, p=0.01; TNF: 4.7±2 pg/mL vs. 7.3±10.4 pg/mL, p=0.09). Levels of sICAM did not change (219±10 ng/mL vs. 221±10 ng/mL, p=NS). None of the changes in the 4 markers was significantly affected by the use of tirofiban (table). **Conclusion:** hs-CRP, IL-6 (and probably TNF) but not sICAM are increased 48 hours after PCI. This acute inflammatory response however, is not attenuated by the use of tirofiban.

Markers' mean changes. Data are expressed as mean +/- SD

	hs-CRP (mg/dL)	IL-6 (pg/mL)	TNF (pg/mL)	sICAM (ng/mL)
Tirofiban	10.9±11.9	2.7±5	4.2±12.3	-1±24
Saline	7.7±8.5	0.9±3.5	0.9±4.8	6±30
P value	NS	NS	NS	NS

1174-190 Elective Coronary Angioplasty and Percutaneous Coronary Intervention During Uninterrupted Warfarin Therapy

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Background: The management of patients anticoagulated with warfarin and referred for coronary angiography presents a substantial challenge to the physician who must balance the risks of periprocedural hemorrhage with thromboembolism. The aim of this study was to evaluate the feasibility and safety of diagnostic coronary angiography and percutaneous coronary intervention (PCI) during uninterrupted warfarin therapy.
Methods: Patients treated with warfarin were prospectively identified and enrolled in the study. Coronary angiography was performed in the usual fashion using a femoral approach without interrupting warfarin. PCI was performed as clinically indicated.
Results: Nineteen diagnostic cardiac catheterizations and 6 percutaneous coronary interventions were performed in 23 patients. The mean age was 72 (+/-9) years and 12 (52%) were male. The primary indication for anticoagulation was atrial fibrillation in 11 (48%), mechanical valve in 5 (22%), deep venous thrombosis in 5 (22%) and stroke in 2 (9%). The mean international normalized ratio (INR) was 2.4 (+/-0.5, range 1.8-3.5). The primary indication for catheterization was acute coronary syndrome in 16 (64%), elective coronary evaluation in 4 (16%), valvular heart disease in 2 (8%), congestive heart failure in 2 (8%) and atrial septal defect in 1 (4%). Seventeen (68%) procedures were performed during inpatient hospitalization. Venous sheaths were used in 10 (44%) procedures. Hemostasis was achieved with the AngioSeal device following 21 (84%) procedures and with the Perclose device following 4 (16%) procedures. No patient experienced a predefined endpoint. Specifically, no patient experienced procedure related myocardial infarction, TIMI major or minor bleeding, or hemodynamic compromise. There were no hematomas greater than 5 cm in diameter, and no incidences of vascular injury including pseudoaneurysm or AV fistula.
Conclusions: Cardiac catheterization and percutaneous coronary intervention may be considered in the setting of uninterrupted warfarin therapy.

1174-191 The Influence of Baseline Thrombocytopenia on the Outcomes of Percutaneous Coronary Interventions

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Background: Questions have arisen regarding the safety of performing PCI on patients with low platelet (plt) counts on admission, as there are few data regarding this issue. This study examined clinical outcomes in patients who had thrombocytopenia at presentation and then underwent PCI.
Methods: We studied 195 patients with admission plt counts of ≤ 150,000 and who had PCI at William Beaumont Hospital from 1993 to 2000. A control group (N=216) that had PCI during the same time period and had normal plt counts was randomly chosen. Prospectively collected in-hospital clinical outcomes (bleeding complications, reinfarction, stroke and death) were compared between the two groups.
Results: Mean plt counts were: study group (104±30K) and control (204±50K). The two groups had no differences in gender, history of smoking, diabetes, ulcer disease, or renal failure. The study group received more heparin post-PCI (19 vs 10%) and GP2b3a inhibitors (23 vs 13%) (p<0.05). Thrombocytopenic patients, compared to control, had similar rates of reinfarction (2.6 vs 2.8%, p=1.0), stroke (1 vs 0%, p=0.225), and death (3.6 vs 0.9%, p=0.092). Bleeding complications were higher in the study group with more groin hematomas (25 vs 15%, p=0.018) and transfusions (13 vs 3%, p<0.0001). Neither group had any retroperitoneal bleeding. There was no difference in CNS bleeding (0.5 vs 0%, p=0.475). Other bleeding did occur more frequently in the study group (6.0 vs 1.4%, p=0.018). Further analysis of patients with plt counts < 100,000 (N=77, mean count: 73±23K) showed similar outcomes. Multivariate analysis showed that plt count < 150K independently predicted groin hematoma (OR=2.05, p=0.009) and need for transfusion (OR=5.69, p=0.0007).
Conclusions: To our knowledge, this study is the first to demonstrate that PCI in patients with thrombocytopenia on presentation can be performed relatively safely as there is no difference in reinfarction, stroke, and death compared to patients with normal platelet counts. An increased bleeding risk was manifested in groin hematomas and an increased need for transfusion. This suggests that, although PCI is safe, caution should be used in these patients.

1174-192 Hydration Versus N-Acetylcysteine for Protection of Renal Function in Patients With Renal Insufficiency Undergoing Percutaneous Coronary Intervention

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Background: Patients with renal insufficiency are at higher risk for renal worsening after percutaneous coronary intervention (PCI). The efficacy of N-acetylcysteine (NAC) in preventing renal failure in patients undergoing PCI is controversial.
Methods: From a clinical and research database of PCI (Jan 2000-July 2002) and chart reviews, patients with renal insufficiency (creatinine≥1.2mg/dl and/or estimated creatinine clearance<80ml/min) were identified. Nonionic contrast dye was employed during PCI. Changes in serum creatinine concentration 24-28 hours after PCI were compared in those patients who received NAC and hydration, hydration alone, and in those who received neither. Data were analyzed using Student's t-tests.
Results: Of 85 patients with renal insufficiency and who had baseline and follow up creatinine levels, NAC and hydration were used in 28 (mean creatinine prior to PCI 2.46±1.5 mg/dl compared to 3.41±2.73 mg/dl in those who did not receive NAC,p=0.09). 28 of patients received hydration alone, and 29 had neither NAC nor hydration. The mean creatinine decreased by 0.06±0.39 mg/dl in patients who received NAC and hydration compared to an increase of 0.56±1.38 mg/dl in patients who did not receive either,p=0.031. In patients who received hydration alone, the mean creatinine decreased by 0.13±0.40 mg/dl,p=0.015. However, there was no statistical significance in patients who received NAC and hydration compared to those who only received hydration,p=0.48.
Conclusion: In patients with chronic renal insufficiency undergoing PCI, the use of NAC along with hydration, and hydration alone were both associated with a significant protection of renal function. There was no statistical significance in protection of renal function in patients who had NAC and hydration compared to hydration alone. A prospective randomization of NAC in addition to hydration is warranted to determine whether there is additional benefit of NAC in PCI.

1174-193 Gadolinium Enhanced Coronary Angiography in Patients With Impaired Renal Function: A Pilot Study

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Background: Deterioration of renal function is a major concern in predisposed patients undergoing coronary angiography. Gadolinium is a contrast agent, used routinely for magnetic resonance imaging. It is safe and has shown no nephrotoxicity. However, significant limitations in image quality are encountered when this drug is used alone, even at the maximum recommended dose. The aim of this prospective pilot study was to evaluate the efficacy and the safety of Gadolinium enhanced with low-dose non-ionic contrast agent for coronary angiography in patients with impaired renal function. **Methods:** We performed coronary angiography in 15 patients at high-risk for renal failure by mixing gadolinium with a small quantity of non-ionic contrast agent. **Results:** The mean volume of Gadolinium used per patient was 44 mL (0.6 ± 0.2 mL/kg of body weight) and the mean volume of non-ionic contrast agent was 22 mL (0.32± 0.2 mL/kg of body weight). Good quality images were obtained in all cases. Renal function tests remained unchanged before and after the procedure. Mean pre-procedural and post-procedural serum creatinine were 220±68 micromol/L and 216±77 micromol/L, respectively (p=0.36). Mean pre-procedural and post-procedural creatinine clearance were 29±8 mL/min and 31±10 mL/min, respectively (p=0.36). No adverse cardiac effects were