1051-192 Prevention of Renal Function Worsening After Coronary Angioplasty: The Role of Acetylcysteine

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Recent studies have suggested that oral administration of acetylcysteine could prevent the reduction in renal function induced by radiographic contrast agents in patients with chronic renal failure. Our prospective, controlled, open-label study included 100 consecutive patients with baseline serum creatinine > 1.5 mg/dl and intravenous hydratation who underwent coronary angiography. Baseline and peak post-procedure serum creatinine levels during the following 48 hours were compared in 50 patients with acetylcysteine (600 mg bid, before and after administration of the contrast agent) and 50 patients without acetylcysteine. The baseline clinical characteristics, creatinine levels (2.1+/-1.2 vs 1.8+/-0.4 mg/dl) and constrast volume (171+/-72 vs 182+/-83 ml) of the 2 groups were similar. The mean changes in creatinine after 24 and 48 hours were -0.1+/-0.2 and 0+/-0.3 mg/dl in the acetylcysteine group vs 0+/-0.2 and 0+/-0.4 mg/dl in the control group (NS). A contrast-agent-induced renal dysfunction, defined as 25% increase in creatinine levels, occurred in 2 patients of the acetylcysteine group and 2 patients of the control group.

Conclusions : A contrast-agent-induced renal dysfunction is rare in patients with intravenous hydratation and low volumes of contrast-agent. Our study does not confirm the prophylactic effect of acetylcysteine in the prevention of contrast-agent-induced reduction in renal function after coronary angiography.

1051-193 Do the Ethnic Differences in Presentation and Treatment Strategy Influence Outcomes of Contemporary Percutaneous Coronary Intervention? A Report From the National Heart, Lung, and Blood Institute Dynamic Registry

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Background/Methods: Information about the impact of race/ethnicity on outcomes following percutaneous coronary interventions (PCI) in the modern era is limited. We investigated differences in clinical presentation, treatment strategy, and acute and 1-year outcomes between consecutive patients from different ethnic backgrounds (3669 white, 446 black, 301 Hispanic and 201 Asian) undergoing PCI between 1997 and 1999. The NHLBI Dynamic Registry was established to characterize contemporary PCI practice and was designed to incorporate an enriched sample of ethnic minorities. All statistical comparisons were made to whites.

Results: Other than mean age (63.5 years white vs 58.7 years black, 61.1 years Hispanic, 61.6 years Asian, all p<0.05), non-whites presented with a higher prevalence of the cardiovascular disease risk factors hypertension (58% white vs 79% black, 69% Hispanic, 69% Asian, all p<0.01) and diabetes (25% white vs 41% black, 45% Hispanic, 34% Asian; all p<0.01). Unstable angina was common in all groups although blacks were more likely to present with an acute MI (29.4% vs 21.4%, p<0.001). Extent of vessel disease was similar to whites. While the rate of stent implantation was lower in blacks (63% vs 74%, p<0.001), angiographic and procedural success rates were high (>95%) and did not differ by race/ethnicity. In-hospital mortality was lower in blacks (0.2% vs 1.7%, p<0.05), however after adjustment for important baseline factors, the risk of in-hospital mortality between blacks and whites was attenuated and not different (OR 0.13; 95% CI 0.02-1.09). In-hospital death/MI rates were similar (4.3% white, 2.7% black, 2.7% Hispanic, 5.0% Asian). At 1-year, cumulative death (5.2% white, 4.0% black, 6.3% Hispanic, 7.6% Asian) and repeat PCI/CABG (19.3% white, 18.7% black, 14.5% Hispanic, 22.5% Asian) rates among the minority/ethnic groups did not differ from whites.

Conclusions: Considerable differences in patient demographics, clinical presentation, angiographic characteristics and treatment strategies by ethnic minority groups existed. Despite these differences, the incidence of acute complications and one-year adverse outcomes among minority groups was similar to whites.

1051-194 Angioplasty Versus Coronary Artery Bypass Surgery in Patients With Chronic Kidney Disease

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Background: Patients with chronic kidney disease (CKD) are at increased risk of death following PCI or CABG. There is limited data comparing these two strategies in patients with CKD. **Methods:** We analyzed the PCI and CABG registries. CKD was categorized by creatinine clearance (CrCl) into stages1(CrCl >90ml/min), 2 (60-89ml/min),3(30-59ml/min), 4(15-29ml/min) and 5(<15ml/min or on hemodialysis). Patients included in the PCI cohort had at least 2 vessel coronary artery disease (CAD) with the involvement of Left Anterior Descending artery. Patients with left main CAD,prior CABG or PCI were excluded. Using the following variables-age,gender,diabetes, LV function, number of diseased vessels, hypertension, congestive heart failure, acute myocardial infarction or unstable angina, we developed a propensity score to calculate the probability of undergoing PCI. Logistic regression analysis with propensity score adjustment was done to assess the impact of CKD on 1year mortality. **Results:** 2,117 patients in PCI and 1,486 patients in CABG cohort were studied. The CABG group was younger, more likely diabetic, had decreased LV function, and unstable angina. No difference in number of diseased vessels and congestive heart failure. By multivariate logistic regression analysis there was no difference in 1-year mortality between PCI and CABG cohorts in all stages of CKD (see table).

CKD stage(Number of patients)	OR for death (95% CI) P=NS PCI versus CABG
Stage 5(25)	0.9(0.04-19)
4(190)	2.1(0.8-5.3)
3(1453)	1.0(0.6-1.6)
2(1302)	1.3(0.6-2.6)
1(427)	7.9(0.8-74)

Conclusion: There was not an increased hazard of mortality with increasing CKD stages for patients undergoing PCI compared with CABG.

1051-195 Prevention of Rheolytic Thrombectomy Induced Bradyarrhythmias With Aminophylline

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Background: Previous studies have shown that rheolytic thrombectomy results in adenosine release by hemolyzed red blood cells. Adenosine is the proposed agent that causes bradycardia and asystole known to be associated with rheolytic thrombectomy. Aminophylline has been shown to block adenosine receptors in cardiac tissue. This retrospective study evaluated whether administration of aminophylline prior to rheolytic thrombectomy prevented bradycardia.

Methods: The study group consisted of 39 patients presenting with an acute coronary syndrome who were divided into a non-aminophylline group (18 patients) and an aminophylline group (21 patients). Records were reviewed for the frequency of treatment for hemodynamically significant bradycardia.

Results: Of the 18 patients in the non-aminophylline group, temporary pacemakers were prophylactically placed in 11 (61%). Of the other 7 patients, 3 patients required treatment with atropine. In 21 patients receiving aminophylline, 15 (72%) experienced no dysrhythmias, 3 (14%) experienced bradycardia not requiring treatment and 3 (14%) experienced bradycardia requiring atropine. Of all 39 patients, 37 were procedural successes by TIMI definition (Grade 3 perfusion), one had TIMI 2 flow and only one was left with TIMI 0 flow. Therefore, 14/18 non-aminophylline compared with 3/21 aminophylline treated patients received treatment for bradycardia.

Conclusion: Aminophylline appears to obviate the need for a prophylactic temporary pacemaker and may become the preferred primary method for prevention of bradycardia during rheolytic thrombectomy.

1051-196 Triple Antiplatelet Therapy Does Not Increase Femoral Access Bleeding With Vascular Closure Devices: Results From TARGET

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Background: The use of closure devices (CD) to achieve hemostasis after femoral artery access in PCI is steadily increasing. However, the safety information with these devices in the era of triple antiplatelet therapy is limited. We reviewed the prospectively collected data from the TARGET trial, being the largest such PCI dataset using concomitant ASA, clopidogrel and IIb/IIIa therapy.

Methods: Patients randomly received abciximab or tirofiban, along with pre-procedural aspirin and clopidogrel loading. All patients received heparin aiming for an ACT of ≥ 250 seconds. At the treating physician's discretion, manual compression (MC) or vascular device hemostasis was selected following femoral angiography. Patients receiving MC were to have sheaths removed 2-6 hours post-procedure when the ACT was ≤ 175s or aPTT ≤ 50s.

Results: Of TARGET's 4809 patients, 4736 had femoral access, and 985 of these had a CD (Perclose 46.8%, Angioseal 43.5%, VasoSeal 4.7%, other 5.0%). The two groups were similar regarding most demographic characteristics including age, SBP and weight, but those with MC were more often female, diabetic, and had history of PVD. Patients with CD had a lower ischemic event rate suggesting they were a lower risk cohort overall. Importantly, there were no differences in major bleeding, minor bleeding or transfusions (Table).

	CD (n=985)	MC (n=3747)	P
30 day Death, MI, TVR n (%)	44 (4.5)	275 (7.4)	0.002
Minor bleeding n (%)	42 (4.3)	126 (3.4)	0.174
Major bleeding n (%)	6 (0.6)	33 (0.9)	0.402
Transfusions n (%)	11 (1.1)	60 (1.6)	0.266

Conclusion: In contemporary PCI practice, with appropriate patient selection, CD can be safely utilized despite aggressive polypharmacy for procedural anticoagulation.