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Acute Coronary Syndromes

IMPACT OF LONG-TERM STATIN THERAPY ON POST-PROCEDURAL CONTRAST-INDUCED NEPHROPATHY IN PATIENTS UNDERGOING NON-EMERGENCY PERCUTANEOUS CORONARY INTERVENTION

Poster Contributions
Hall C
Sunday, March 30, 2014, 3:45 p.m.-4:30 p.m.

Session Title: Acute Coronary Syndromes: Treatment Considerations
Abstract Category: 1. Acute Coronary Syndromes: Clinical
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Background: Following non-emergent PCI, contrast-induced nephropathy (CIN) occurs in 2-20% of patients and is associated with poor long-term outcomes. Peri-procedural statin loading may be effective at reducing CIN, however, the impact of long-term chronic statin therapy on CIN is currently unknown.

Methods: Using the 2004-2005 Cornell Angioplasty Registry, we examined 1,171 consecutive patients undergoing elective or urgent PCI. The population was divided into 2 groups: (1) patients on long-term (>7 days) statin therapy before PCI (n=874) and (2) patients not on long-term statin regimen (n=297). CIN was defined as ≥25% baseline and/or ≥0.5mg/dL elevation in serum creatinine during hospitalization. The effect of chronic statin therapy on CIN was examined using multivariable Cox regression analysis.

Results: Patients on chronic statin therapy were more likely to have diabetes mellitus, previous MI, previous PCI, and previous CABG surgery. Statin users were also more likely to be taking long-term aspirin therapy (77.8% vs. 59.6%, p<0.001) and clopidogrel therapy (29.9% vs. 14.1%, p<0.001). Baseline creatinine clearance (74.8 ml/min vs. 77.6 ml/min, p=ns) and procedural characteristics were comparable between the 2 groups. The incidence of CIN following PCI was similar in those on long-term statin therapy and those without (OR=0.78, 95% CI 0.43-1.42). Multivariable analysis confirmed that chronic statin therapy was not independently predictive of CIN, whereas previous CABG surgery was found to be the strongest predictor of CIN (OR=2.36, 95% CI 1.42-3.94, p=0.001).

Conclusions: Long-term statin therapy is not effective in reducing the rate of CIN following non-emergent PCI. Further randomized trials are needed to examine the role for high-dose statin loading in CIN prevention.